September 2001

Review of Transco's Price Control from 2002

Final Proposals

Summary

This document sets out final proposals for new price controls to apply to Transco from 1 April 2002. It proposes that separate price controls should apply to each of the following of Transco's activities:

- the National Transmission System (NTS) in its role as transmission asset owner (TO);
- the 12 local distribution zones (LDZs) in aggregate; and
- metering and meter reading.

Transco is expected to continue to face uncertainty over the level and pattern of gas flows across the NTS. This document sets out proposals for an NTS TO price control based on projections of expenditure consistent with pre-defined baseline output measures for NTS entry capacity, exit capacity and linepack. Earlier in September 2001 Ofgem published initial proposals for NTS System Operator (SO) incentive arrangements. Final proposals with respect to these matters will be published in December 2001. The combination of these arrangements should provide clearly defined output measures as the basis of the price control and reward Transco for more efficient performance. In particular, consumers, the industry and Transco will benefit from:

- a gas transmission system that meets their changing needs more effectively, enhancing security of supply and lowering SO costs;
- the prospect for shippers of buying capacity on a long term basis to meet their needs; and
- better signals for Transco to guide investment, and additional revenue if it exceeds its SO targets.

RPI-X regulation has proven effective in providing clear targets for companies and has led to significant price reductions for consumers. In the light of these considerations the final proposals are for five year RPI-X price controls for the NTS TO and the LDZs. During the period of these price controls further work will be undertaken with the intention of separating the overall price control for the LDZs in to 12 separate controls, consistent with the present regional structure of the LDZs.

In markets making the transition to competition, as in metering and meter reading, different considerations apply. For metering and meter reading, the RPI-X controls will

be replaced by a set of tariff caps for certain services, and a non-discrimination condition. This will continue to protect consumers' interests during this transition, while allowing tariff caps to be lifted where competition has sufficiently developed.

Consumers are interested in quality of service as well as prices. Therefore the price control review has involved consideration of the appropriate guaranteed and overall standards of performance and other quality of service indicators. In addition it is proposed to develop an incentive scheme based on the number and duration of interruptions, for implementation in 2004. This should help ensure that Transco has a balance of incentives between efficiency and providing an appropriate quality of service.

In setting an RPI-X price control it is appropriate to consider the level of revenue that will be required to finance the regulated activities. This can be derived by making projections of expenditures, an allowance for depreciation and the appropriate level of return for capital already invested in the business.

Future levels of operating, capital and replacement expenditure have been assessed in the light of evidence from a range of sources. These have included Transco's own business plans, advice from accountancy, engineering and economic consultants, Transco's comments on that advice and its past performance as well as responses to previous consultation papers.

Over the period of the existing price control Transco is expected to make real reductions in controllable operating costs of about 3.6 per cent per year. Transco's business plans forecast increases in costs over the next price control period, giving a total of £5.9 billion over the five years. The draft proposals assumed that controllable operating costs would fall at 3.5 per cent per year in real terms, giving a total of about £4.3 billion. These final proposals assume a real rate of reduction of 2.5 per cent, giving a total for the five year period of £4.6 billion. This should ensure that Transco has sufficient resources to provide an appropriate quality of service and establishes targets that will reward efficient management.

Transco is expected to invest about £3.1 billion over the period of the existing price control. This expenditure will complete major investment programmes in transmission assets, information systems and metering. Ofgem's projections for next price control period show a reduction to about £2.3 billion against Transco's forecast of about £3.0 billion. The reductions from Transco's forecasts reflect Ofgem's projections of efficiency

gains in the procurement and implementation of projects, a matching of NTS expenditure to the defined outputs, and an assessment of the level of meter exchanges and meter unit costs.

Replacement expenditure is projected to increase significantly. In part this results from a decision of the HSE to require Transco to replace all cast and ductile iron mains within 30 metres of premises over a 30 year period. During the present price control period Transco is expected to spend about £1.3 billion. Ofgem's projections for the next period show an increase to around £2.1 billion. This is about £300 million below Transco's forecasts, representing savings in unit costs rather than the length of mains to be replaced.

As replacement expenditure is projected to increase significantly a key issue becomes the method of financing this enhanced level. The renewal programme is primarily concerned with present safety requirements rather than increasing the network's capacity or functionality for the benefit of future consumers, suggesting these costs should be expensed and met within the price control period. Nevertheless there will be some advantages to consumers in the future as replacement spending will be lower and newer assets tend to require less repair and maintenance. To deal with these tensions, ensure that Transco is able to finance its activities and ensure that price reductions are sustainable beyond the next price control period, 50 per cent of replacement spending over the next price control period will be expensed in the year that it is incurred and 50 per cent will be treated as capital and added to the regulatory asset base.

The draft proposals published in June 2001 dealt with the value of capital already invested in the business and these proposals retain an unfocused approach to asset valuation. The approach to calculating regulatory depreciation is broadly in the line with that proposed by the Monopolies and Mergers Commission (MMC) in 1997, but the calculations are simplified and made more transparent.

In assessing the cost of capital consideration has been given to market based information, the views of respondents to previous consultation papers and the precedents established by the MMC. It has also been appropriate to take account of other aspects of these proposals, including the changes in the way replacement expenditure will be financed and the retention of the unfocused approach to asset valuation, which are designed to reduce the risks to which Transco is exposed. In the light of these factors, the final proposals are based on a 6.25 per cent cost of capital for

transportation activities and 7 per cent for metering activities. The extra allowance for metering reflects the influence of competitive pressures.

The draft proposals included a base case, setting out the maximum reductions in Transco's revenues but noting that a number of uncertainties remained to be resolved and these could put upward pressure on prices. For Transco's regulated activities the draft proposals suggested a maximum real reduction in prices of 14 per cent in 2002/03 followed by further real price reductions of 2 per cent per year for the period 2003/04 to 2006/07. The resolution of these uncertainties has led to a 10 per cent increase in the level of revenue Transco is likely to require over the period, giving an initial real price reduction of 4 per cent rather than 14 per cent. This 10 per cent increase comprises the following elements:

- the need to change the funding and level of replacement expenditure will increase requirements for revenue by about 6 per cent;
- changes to the projections of operating costs about 2 per cent;
- increasing the projections of capital expenditure about 1 per cent; and
- changes to the cost of capital about 1 per cent.

The following table summarises Transco's business plans, the draft proposals and the final proposals.

	Draft Proposals	**Final Proposals**	**Transco Business Plans[3]**
Regulatory asset value	Unfocused	Unfocused	Unfocused
Cost of capital	6% to 6¼%	6¼%	At least 7%
Total controllable opex[1]	£4.3 billion	£4.6 billion	£5.9 billion
Controllable opex [2]	(3.5%)	(2.5%)	1.2%
Total capex[1]	£1.9 billion	£2.3 billion	£3.0 billion
Total repex[1]	£1.7 billion	£2 billion	£2.4 billion
Initial revenue reduction	14	4	
X value	2	2	

(1) Five year totals in 2000 prices
(2) Compound Annual Growth Rate (CAGR)
(3) Since the BPQ, Transco has set out revised forecasts in the SBP, and updates of its replacement and NTS capital expenditure.

The proposals set out in this document provide for real reductions in Transco's charges for each of the next five years. In addition they allow for a significant increase in the

level of replacement expenditure and for additional investment in the NTS over and above the minimum statutory requirements. The incentives on Transco to provide an appropriate quality of service have also been strengthened.

Transco has until the 26 October 2001 to decide whether it will accept these proposals. If Transco accepts then it will be necessary to finalise the outline licence modifications set out in appendix 5 so that the revised price control can be incorporated in Transco's licence with effect from 1 April 2002. If Transco does not accept these proposals then it will be necessary to make a reference to the Competition Commission, which will consider these matters and report in due course. Ofgem would then bring forward the necessary licence modifications to put into effect the recommendations of the Competition Commission.

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1. Introduction

1.1 Transco's network constitutes an effective monopoly for the transportation of gas to a large majority of consumers in Great Britain. In order to protect consumers from the potential abuse of monopoly power Transco's licensed business is subject to controls on the prices it can charge and the quality of service it must provide. The existing Transco price controls are due for revision from 1 April 2002. Following an extensive and wide ranging consultation process this document sets out proposals for new controls to apply from that date. It builds on analysis set out in previous documents and at public seminars, in particular:

- the May 2000 initial consultation paper[1] and August 2000 seminar;
- the November 2000 update paper[2] and December 2000 seminar on the development of the quality of supply and outputs framework;
- the February 2001 consultation paper[3] (which included a detailed discussion of Guaranteed and Overall Standards of Performance) and April 2001 seminar;
- the June 2001 draft propsals[4] and August 2001 seminar; and
- the September 2001 initial proposals[5] for additional incentives on Transco's operation of the National Transmission System (NTS).

1.2 In formulating these proposals Ofgem has been guided by its statutory duties to protect the interests of consumers, wherever appropriate by promoting effective competition. In addition to these principal objectives Ofgem must have regard to the need to secure that as far as it is economical to do so all reasonable demands for gas are met and the need to secure that licence holders are able to finance their activities. Consistent with these duties the objectives of the price control review have included the strengthening of incentives on Transco to increase efficiency and reduce costs so that prices to consumers can be lowered.

[1] Review of Transco's price control from 2002, Initial Consultation Document, Ofgem, May 2000
[2] Review of Transco's price control from 2002, Update Paper, Ofgem, November 2000
[3] Review of Transco's price control from 2002, Consultation Document, Ofgem, February 2001
[4] Review of Transco's price control from 2002, Draft Proposals, Ofgem, June 2001
[5] Transco's National Transmission System, System operator incentives 2002-2007, Initial proposals, Ofgem, September 2001

In addition it has been appropriate to recognise that sufficient revenue must be raised to maintain quality of service, ensure the safe operation of the network and finance required investment.

1.3 At present Transco's transportation and metering and meter reading activities are each subject to separate RPI-X price controls. This form of regulation has proven effective in providing clear targets for companies and has led to significant price reductions for consumers. In the light of these considerations it is proposed to establish separate RPI-X controls for the different activities that make up Transco's licensed transportation business:

- the NTS; and
- Local Distribution Zones (LDZs).

For metering and meter reading, the RPI-X controls will be replaced by a set of tariff caps for certain services, and a non-discrimination condition. This will continue to protect consumers' interests during the transition, whilst allowing tariff caps to be lifted where competition has sufficiently developed.

1.4 During the course of the next price control period (2002/03 to 2006/07) Ofgem will consult on separating the LDZ price control into 12 separate price controls, consistent with the present regional structure of the LDZs, and bring forward proposals based on this consultation.

1.5 Ofgem's proposals strengthen the regulation of quality of service, establish a full range of output measures, where practicable encourage competition and take account of a number of recent developments in the gas industry. In particular:

- in March 2001 Ofgem published the conclusions of its review of long term investment incentives and signals on the NTS[6]. This suggested that in future it would be necessary to establish a range of output measures to operate along side the price control, long term capacity auctions and improved financial incentives on Transco based around the output measures. These would provide incentives on Transco to invest in a timely manner in response to changes in demand. The NTS outputs define the capacity and

[6] Long Term Signals and Incentives for Investment in Transmission Capacity on Transco's National Transmission System - The New Regime, Ofgem, March 2001

capability of entry and exit points across the network. Initial proposals in relation to these matters were published in September 2001. Final proposals will be published in December 2001. In addition as part of the development of new gas trading arrangements (NGTA) Ofgem has also consulted on reforms to Transco's NTS exit capacity, interruptible capacity, LNG regimes and gas balancing[7]. If reforms in these areas impact on Transco's costs or revenues it may be necessary to suggest changes to these proposals to take account of relevant changes;

- the proposal for an aggregated LDZ price control is complemented by output measures and Standards of Performance for each LDZ. The key LDZ output measures will be the number and duration of non-contractual interruptions (excluding NTS and metering faults) experienced by consumers. Additional incentives relating to the number and duration of interruptions across all the LDZs will be developed for operation from 2004/05. The operation of these incentive schemes may lead to adjustments to the base level of LDZ revenue of up to 2 per cent.

- in March 2001, Ofgem published its metering strategy[8] which set out a range of measures designed to promote effective competition in metering and meter reading services. The proposals for Transco's metering price control, as set out in this document, form part of Ofgem's wider strategy for metering.

1.6 In setting Transco's price control it has been appropriate to consider estimates of the revenue that would be sufficient to finance an efficient business. Therefore, it has been necessary to make projections of operating and capital expenditure and develop assumptions on the financing, over the period of the new control and beyond.

1.7 As part of the price control review, Ofgem has taken advice from a range of consultants and advisers. Mazars Neville Russell have advised on efficient levels of costs for the Transco business over the next control period. Mazars appointed Petroleum Development Consultants as technical advisers and Europe

[7] The New Gas Trading Arrangements - Further reform of the gas balancing regime - A Consultation Document, Ofgem, February 2001
[8] Ofgem's strategy for metering - A consultation paper, Ofgem, March 2001

Economics as economic consultants to assist them in this task. Arthur Andersen have provided advice on the overall level and allocation of costs. Ernst and Young have provided advice on financial modelling.

Rationale

1.8 In 1999/2000, Transco's allowed revenue from gas transportation, metering and meter reading charges was about £3 billion. For domestic consumers, these charges represent 35 to 40 per cent of the final price, with a somewhat lower percentage applying to industrial and commercial users. They form a significant element of cost for households, particularly for those who find it difficult paying their bills.

1.9 The price control review provides the opportunity to consider whether the existing level of revenue and charges remain appropriate, whether quality of service should be improved, whether Transco's outputs could be more clearly defined and whether the price controls can be restructured to facilitate the development of competition in areas such as metering.

1.10 The direct costs to Ofgem of this price control review, including associated work on NTS incentives and the development of metering price controls, will be about £2 million.

Structure of the document

1.11 This document has the following structure:

- Chapter 2 describes the form of the NTS price control and output measures;
- Chapter 3 describes the form of the LDZ price control, output measures and proposals for Guaranteed and Overall Standards of Perfromance;
- Chapter 4 sets out an assessment of operating, capital and replacement expenditure;
- Chapter 5 presents an overview of financial issues;
- Chapter 6 sets out the calculations of the proposed price controls; and

- Chapter 7 deals with issues relating to metering and meter reading.

1.12 Appendix 1 is a summary of the responses to the June 2001 draft proposals paper. Appendix 2 is a summary of the August 2001 public seminar. Appendix 3 deals with NTS outputs. Appendix 4 deals with LDZ outputs. Appendix 5 provides a draft outline for the licence modifications that would be necessary to put these proposals into effect.

Timetable

1.13 Transco has until the 26 October 2001 to decide whether it will accept these proposals. If Transco accepts then it will be necessary to finalise the draft outline licence modifications set out in Appendix 5 so that the revised price control can be incorporated in Transco's licence with effect from 1 April 2002. If Transco does not accept these proposals then it will be necessary to make a reference to the Competition Commission, which will consider these matters and report in due course. Ofgem would then bring forward the necessary licence modifications to put into effect the recommendations of the Competition Commission.

2. NTS price control and incentive arrangements

Introduction

2.1 This Chapter sets out proposals for the form of the NTS TO price control and the associated base levels of outputs. Its also provides a high level summary of the initial proposals for Transco's NTS System Operator (SO) incentives, published at the start of September 2001[9]. Final proposals for the NTS SO incentive arrangements will be published in December 2001.

2.2 The combination of these arrangements should provide clearly defined output measures as the basis of the price control and reward Transco for more efficient performance. In particular, consumers and the industry will benefit from:

- a gas transmission system that meets their changing needs more effectively, enhancing security of supply and lowering SO costs; and
- the prospect for shippers of buying capacity on a long term basis to meet their needs.

2.3 Transco will benefit from:

- better signals to guide investment;
- extra revenues if it invests efficiently in response to customer demand; and
- earning extra revenue if it exceeds its SO targets.

2.4 While Transco will continue to assess capacity needs through its annual planning cycle, the initial SO proposals are designed to provide strong incentives on Transco to invest in the NTS in a timely fashion in response to its customers' changing needs. The initial proposals are also intended to improve the incentives on Transco to carry out the day-to-day operation of the NTS both economically and efficiently.

[9] Transco's National Transmission System, System operator incentives 2002-2007, Initial proposals, Ofgem, September 2001

2.5 Entry capacity will be sold through a series of long term auctions of firm, tradable capacity rights. Prices emerging from the auctions and the subsequent trading of capacity will improve the signals to Transco regarding the need for new capacity and hence additional investment. When participating in the long term auctions Transco's customers will need to clearly understand Transco's investment plans and the resulting output measures. For example, customers would be concerned if having bought capacity Transco was subsequently able to provide additional capacity, thereby reducing the value of that already purchased, without Transco undertaking significant further investment. Therefore, Transco will be required to publish an operating statement setting out its present investment plans and output measures, together with its forecasts of the future.

2.6 It is possible that the revenue Transco recovers from the sale of baseline output capacity will be different from that allowed under the NTS TO price control. Over-recoveries against annual allowed revenues under the present price control have already been seen as a result of the current short term entry capacity auctions. Thus far, the over-recoveries have been returned to participants each year via reductions in their transportation charges. The most appropriate method of dealing with over/under-recoveries is discussed in the SO incentives paper.

2.7 There is considerable uncertainty surrounding the future level and pattern of demand across the NTS. The baseline outputs set out below should therefore be seen as a reference point rather than a firm commitment for physical delivery, which is likely to evolve over the period of the price control. The capital and operating expenditure associated with the base line outputs is assessed in Chapter 4.

NTS TO form of control

2.8 The NTS TO price control will be an RPI-X revenue control. If in formulating final proposals for the NTS SO incentives it becomes clear that it is appropriate to incorporate in the NTS TO price control a revenue driver (such as maximum physical entry capacity) then these proposals will be brought forward along side final proposals for the NTS SO incentive arrangements. As explained in Chapter

3, Transco will also be allowed to pass through the costs of prescribed rates and its licence fees.

NTS TO Outputs

2.9 Transco has provided details of entry and exit capacity and linepack outputs under separate categories of capital expenditure. Entry capacity is defined in terms of the maximum physical capacity at an entry point. It is the maximum amount of gas that could be evacuated from a terminal for a given forecast of system demand, assuming that other terminal flows are constrained where necessary to ensure that the system remains within safe operating pressures. The statutory and summer flexibility categories are considered in turn, recognising that capital projects may provide more than one type of service and output. Statutory capital expenditure and outputs are driven by the minimum requirements necessary for Transco to meet its existing planning standards. Summer flexibility represents higher spending and outputs considered appropriate following consultation with shippers.

2.10 Transco has consulted shippers, producers and consumers on its investment plans and the associated output measures during the summer through its Transporting Britain's Energy document.

NTS entry capacity

2.11 Appendix 3 tables 1a, 1b and 1c set out the maximum physical capacities at each of the beach entry terminals and storage for the years 2002/3 to 2006/7 associated with statutory spending. Appendix 3 tables 2a and 2b set out the enhanced maximum physical capacities at each of the beach entry terminals for the years 2002/3 to 2006/7 associated with summer flexibility spending.

NTS exit capacity

2.12 Transco presently manages demand for network exit capacity by either investing in pipeline capacity, interrupting gas supply to those consumers with interruptible transportation agreements or by constraining the use of LNG storage capacity. The TO outputs relate to the maximum physical firm capacity

at each NTS connected off-take site. These levels of firm capacity are set out in Appendix 3 table 3.

NTS Linepack

2.13 Transco's NTS linepack output measures are set out in Appendix 3 tables 4 and 5. Although at present there is no explicit pricing of NTS linepack if a linepack service were agreed, Transco would be required to make available to the market at least this level of linepack.

NTS SO Incentives

Entry Capacity

2.14 The purpose of the entry capacity incentives will be to encourage Transco to respond to market signals regarding the need for investment. The initial proposals for NTS SO incentives suggest that the parameters for the entry capacity scheme should be set for the five years consistent with the duration of the NTS TO control.

2.15 The entry capacity incentives are concerned with incentives to build capacity in excess of the baseline outputs. Through retention of some auction revenue Transco would be able to earn a higher rate of return for the duration of the price control (2002/3 to 2006/7) where it invests to meet demand over and above the agreed baseline entry outputs. If the capacity auctions raise more revenue than would be required to fund the depreciation and financing allowance on further investment then the initial proposals suggest that Transco should be allowed to retain the excess revenue. This would be subject to a cap on returns of between 1½ and 3 times the cost of capital for the NTS TO price control. Transco's exposure, in the event that it invests above the baseline output measures and market demand for capacity is below that available would be limited to a 1 per cent reduction in the cost of capital.

Exit capacity

2.16 The exit capacity incentive regime would provide Transco with commercial incentives to consider the most effective means of meeting customer demand for exit capacity, including trade-offs between interruption, local storage

(constrained LNG) and additional pipeline investment. Transco would be set a target level of costs and where it is able to substitute pipeline investment for cheaper alternatives, such as interruption contracts with customers or local storage, it could keep up to 75 per cent of the savings, capped at £20 million for 2002/03.

2.17 Th initial proposals for the NTS SO incentives indicate that target values for the exit capacity scheme should be set for five years but the other parameters (sharing factors, caps and collars) for two years.

The day-to-day costs of sytem operation

2.18 Transco would be set a target level for the day-to-day costs of operating the system and if it manages to beat this target it would retain a share of the difference. If costs exceed the target, Transco would pay a proportion of the difference. Where significant uncertainty exists regarding the likely level of costs, Transco's potential profits and losses would be capped at around £30 million.

2.19 The SO's costs to be included in the day-to-day incentive schemes cover the costs of entry capacity buy-backs, system balancing and residual gas balancing. The initial proposals are for:

- one year incentives for both buy-back costs and residual gas balancing costs; and
- two year schemes for system balancing and residual gas balancing costs.

Internal costs

2.20 The initial proposals indicated that there should as far as possible be consistent incentives for both internal SO costs (such as staff and information systems costs) and external SO costs (such as entry capacity buy-back and system balancing costs).

2.21 Shipper services are not strictly an NTS SO internal cost – any improvements in performance in providing these services would not interact with the level of external costs incurred by the SO. For this reason, shipper services will remain

part of the TO price control. All other internal costs that the SO incurs in its SO role will be included within the SO incentive.

2.22 The interactions between internal and external SO costs are stronger than the interactions between the SO costs and the TO costs. Therefore the SO internal cost incentives should be aligned with the external costs associated with the day-to-day SO incentive schemes.

Revenue drivers

2.23 As noted above it may be appropriate to develop a revenue driver to operate in conjunction with the TO price control. This could reflect the incremental costs of providing capacity, derived either from Transco's Transcost model or the projections of Transco's investment programme. The revenue driver would then adjust NTS TO base revenue to take account of deviations from the base line output measures. The SO incentive arrangements would then determine, in the light of revenue accruing from the sale of capacity, the extent Transco's actual revenue would deviate from this base level.

Annual investment plan

Transco has proposed that Ofgem be granted a right of veto over its annual investment plan. This could be used to veto any projects where there was insufficient evidence of additional market demand to justify the investment. Transco has suggested that this would reduce perceptions of risk and would be consistent with Ofgem's view that the NTS is a relatively low risk business activity. There appears to be some force in Transco's arguments and a right of veto might be a useful transitional measure.

3. LDZ form of control, output measures and standards of performance

Introduction

3.1 This Chapter sets out final proposals for the form of the LDZ price control and associated LDZ quality of service targets. In particular, it covers the following issues:

- the structure of the price control to apply to Transco's LDZ gas transportation activities including final proposals for the form of the revenue driver, cost pass through items and a licence condition relating to the charges for the emergency service;
- LDZ and shipper service output measures and medium-term performance reporting including proposals for the frequency of outputs reporting, the form of the incentive scheme on interruptions and the timetable for the development of the incentive scheme;
- LDZ standards of performance including levels of compensation associated with the guaranteed standards of performance; and
- the future work programme for developing the outputs framework and standards of performance including the introduction of an audit framework for output measures, the development of the incentive scheme and consultation on the draft statutory instruments and regulations to implement the LDZ standards of performance.

The LDZ outputs on which the price control has been based are set out in Appendix 4. The detailed definitions of the output measures and guidance for reporting them will be set out in the revised Regulatory Instructions and Guidance (RIGs) paper.

Sructure of the LDZ control

Form of control

3.2 In the February and June papers, it was suggested that a separate price control should apply to the LDZs in aggregate. At the same time Ofgem recognised the potential benefits that might arise from individual LDZ controls provided that there was consistent and reliable information available on costs, performance and investment requirements, and provided that there had been sufficient consultation, particularly on the pricing implications of separate controls.

3.3 All respondents who discussed the issue favoured the introduction of separate NTS and LDZ controls with retention of the RPI-X form of control. A separate RPI-X price control with a five-year duration will be applied to the LDZs in aggregate, but with strengthened links between the price control and output measures.

Revenue Drivers

3.4 As well as linking revenues to inflation (the RPI) a price control can also link revenue to demand. This is sometimes called the revenue driver. The draft proposals suggested that 35 per cent of revenue should be related to the level of demand and 65 per cent should be fixed. This compares with the existing arrangements which are 50 per cent fixed and 50 per cent related to demand.

3.5 One respondent supported the removal of interruptible loads from the volume driver and one said that the appropriate weight for the volume driver might be less than 35 per cent. Another expressed concern that reducing the volume related revenue to 35 per cent would increase price volatility. Another was concerned that Transco's incentives to expand the network would be reduced.

3.6 Transco said that the proposal for 35 per cent volume driven revenue could distort incentives, although these difficulties might be dealt with by the introduction of separate drivers for different sizes and types of load.

3.7 In broad terms the arguments set out in the draft proposals remain valid. Nevertheless, in the light of comments from respondents it is appropriate to modify the proposed treatment of large loads in the revenue driver.

3.8 Transco has suggested separate drivers or weights for different sizes or types of load and provided information on the incremental costs of gas distribution for different types of load, including interruptible loads. Taking these factors into consideration there will be a large load threshold of 5860 MWh. All loads less than 5860 MWh are firm loads but loads greater than 5860 MWh can be interruptible. Large loads are generally, but not exclusively, connected to higher pressure tiers of the LDZ and will therefore utilise less of the LDZ network than smaller loads. For this reason and taking into account that some large loads are interruptible, large loads (excluding VLDMCs) will contribute 15 per cent of their actual volume to the calculation of the annual volume driver. For loads less than 5860 MWh the actual volumes will be included in the calculation of the volume driver.

3.9 Loads exceeding 1,465 GWh per year (VLDMCs) are usually connected to the NTS although local circumstances can sometimes dictate that they are connected to an LDZ network, generally utilising just the higher pressure tiers. Taking into account the continuing need for incentives regarding such sites, VLDMCs will contribute 5 per cent of their actual volume to the calculation of the annual volume driver.

3.10 The form of the revenue driver will only have a marginal impact on Transco's incentives to expand the network. Ofgem has recently published a consultation document[10] setting out proposals to to amend Regulation 2(a) of the Gas (Connection Charges) Regulations 1986 in order to stimulate the extension of gas networks to premises in remote areas.

Cost-pass through

3.11 The draft proposals suggested two areas of cost where it would be appropriate to allow Transco to pass costs through to its customers. These are:

- prescribed rates (set by the Government); and
- the gas transporter licence fees (set by Ofgem).

[10] "Amending the Gas Connection Charges Regulations – A consultation document"

3.12 Both transportation prescribed rates and gas transporter licence fees will be pass-through items and allocated to the NTS and LDZ price controls. Any rates applicable to meters should be borne by the metering business. There will also be an adjustment mechanism to deal with variances in the safety driven mains replacement programme. This is dealt with in Chapter 4.

Emergency service

3.13 The draft proposals said that separate price controls would not be appropriate for Transco's emergency service, but that an additional licence condition would provide an important additional discipline on Transco to ensure that its charges reflect the costs it incurs in providing the service. This will be brought forward together with the licence modification to put the price control in to effect.

Ouput measures and medium-term performance reporting

Summary of draft proposals

Outputs framework

3.14 The draft proposals indicated that the outputs framework should have three main elements:

(a) output measures linked to financial incentives under the price control that should cover the number and duration of non-contractual supply interruptions;

(b) output measures not linked to financial incentives, to monitor other areas of performance between reviews. These should cover gas safety (mains replacement), the reliability of the M-number CD-ROM service provided to shippers, the speed of resolution of shipper queries and capacity in each LDZ; and

(c) reports on the medium-term performance of the NTS and each of Transco's LDZ networks.

Draft definitions of the output measures

3.15 The high-level draft definition of each of the output measures is set out in Table 3.1 below. Detailed definitions were provided in the draft RIGs document.

Table 3.1 Draft proposals (including RIGs) – high-level definitions of the output measures

No.	Output	Definition	Purpose
1	Number of non-contractual supply interruptions	Number of non-contractual interruptions upstream of the meter per 100 LDZ consumers per year. This should be disaggregated by LDZ, cause and type of consumer.	Incentive scheme and monitoring performance
2	Duration of non-contractual supply of interruptions	Average number of consumer minutes lost per consumer connected to Transco's LDZ networks per year, resulting from non-contractual interruptions upstream of the meter. This should disaggregated by LDZ, cause and type of consumer.	Incentive scheme and monitoring performance
3	Resolution of shipper queries	(a) Percentage of queries resolved within 10 Business Days (Target:– 80%) (b) Percentage of queries resolved within 20 Business Days (Target:– 95%) (c) Mean time taken to resolve queries outstanding after 20 Business Days (Expected to reduce over time) Disaggregated by shipper and query type.	Monitoring performance
4	Reliability of M-number CD-ROM service provided to shippers	Transco should provide data to shippers in CD-ROM format in accordance with the agreed schedule. Transco should also report the number of instances of shippers reporting incorrect information on the CD-ROM and the number of meter points for which data has been corrected or validated since it was last issued.	Monitoring performance
5	Gas Safety/mains replacement	To reflect the mains replacement policy proposed by the HSE	Monitoring performance
6	LDZ capacity	Estimated 1 in 20 peak demand for the current reporting year for each LDZ Forecast 1 in 20 peak demand for the next ten years for each LDZ Transco to confirm that it has made sufficient capacity available to meet peak demand.	Monitoring performance

Supporting measures

3.16 In addition to output measures and medium-term performance reporting, it was suggested that Transco should report information on several supporting measures to facilitate the development of an expenditure monitoring framework.

Incentive scheme on interruptions

3.17 The draft proposals suggested that an incentive scheme based on non-contractual interruptions should be developed for implementation in 2004. The maximum revenue exposed under the scheme would be ± 2 per cent of Transco's LDZ revenue. The incentive scheme would be based on national performance targets while Transco's LDZ networks remain under a single LDZ price control. LDZ price control revenue would be set on the assumption that the number and duration of interruptions remain broadly level. An initial baseline for the number and duration of interruptions would then be determined using the first year's data collected as part of the outputs framework.

3.18 In addition to an incentive scheme on non-contractual interruptions, the draft proposals suggested introducing a guaranteed standard on restoring domestic consumers' supplies following unplanned interruptions. The draft proposals also discussed possible approaches for the treatment of compensation payments in the incentive scheme.

Auditing

3.19 The draft proposals suggested a high-level audit of Transco's processes and measurement systems for recording output data during 2002/03 to ensure that Transco provides accurate information. This would be followed by a more detailed audit of the interruption data during 2003/04 to enable accuracy targets to be set.

Licence condition for output reporting

3.20 It was suggested that the outputs reporting regime should be formalised in a new special licence condition setting out the high-level requirements for collecting and reporting output data and referring to the RIGs for more detailed definitions, instructions and guidance.

Medium-term performance

3.21 The draft proposals indicated that Transco should provide annual reports on the medium-term performance of the NTS and each of its LDZ networks. These reports should include information on a number of pre-specified medium-term

performance measures, accompanying narrative and an environmental report. The detailed requirements for these reports were addressed in the draft RIGs.

Responses to the draft proposals

3.22 Views were invited on a number of key issues concerning the development of the output reporting framework and the incentive scheme for interruptions. These were:

- the definitions of the output measures and reporting arrangements in the draft RIGs and associated costs;
- the proposed form of the incentives scheme on interruptions;
- the treatment of compensation payments in the incentive scheme;
- the timetable for the introduction of the incentive scheme; and
- the appropriate method for Transco to report on the medium-term performance of the NTS and each of its LDZ networks.

Definition of the output measures and reporting arrangements and associated costs

Respondents' views

3.23 Respondents broadly supported the initial definitions and coverage of the output measures, saying that they would lead to an increase in transparency and a reduction in uncertainty surrounding the price control. There were, however, some concerns regarding the detailed definitions of the safety, shipper query and data accessibility output measures.

3.24 Transco was concerned about the proposed diameter bands for reporting the mains replacement output measure, suggesting that any benefits from the proposed level of detail might be outweighed by the additional cost involved. It also suggested that the definition of the shipper query output measure in the draft RIGs might impede future improvements in processes for shipper query submission and resolution. Transco suggested that the RIGs should focus on reporting requirements for shipper query resolution and refer to the Transco

document "Standards Of Service for Management of Shipper Operational and Invoicing Queries" for more detailed information on the process for resolving queries.

3.25 One respondent noted that ConQuest (Transco's online system for enquiries and reconciliation information) was still a prototype and therefore did not believe it was appropriate as a standard for monitoring query management. Another respondent said that the reliability of the M-number CD-ROM service provided to shippers was not a suitable measure of data accessibility.

3.26 There appeared to be a broad consensus that outputs should be reported on an annual basis, with data on interruptions being reported more frequently during the development of the incentive scheme. Respondents believed that quarterly reporting of outputs would be unnecessarily costly and bureaucratic without yielding significant benefits for consumers.

Final proposals

3.27 Given the size of the replacement programme that is required by the HSE it is important that Transco provides detailed information on mains abandoned by diameter so that the replacement expenditure allowance in the price control can be matched to the actual profile of work carried out by Transco. These requirements are discussed further in Chapter 4 and will be set out in the revised RIGs.

3.28 The shipper query output measure and targets for shipper query resolution are not intended to unduly constrain the development of the query handling process. The RIGs will be modified in order to give Transco and shippers greater flexibility in modifying the query process.

3.29 The draft proposals explained that the reliability of the M-number CD-ROM service provided to shippers would be an interim measure of data accessibility. It should provide a useful indication of the work being carried out by Transco to improve the reliability of information provided to shippers. In addition to issuing the CD-ROM according to an agreed schedule, Transco will be required to report the number of instances of shippers reporting errors on the CD-ROM and the number of meter points for which data has been corrected or validated.

3.30 The proposals for LDZ price control revenue are based on assumptions regarding the amounts of peak capacity that will be provided each year in each LDZ, which are set out in Appendix 4. At the end of each reporting year Transco should report the estimated 1 in 20 peak demand for that year in each LDZ and the forecast 1 in 20 peak demand for the next ten years in each LDZ. Transco should also confirm that it has made sufficient capacity available to meet 1 in 20 peak demand. Detailed definitions, instructions and guidance for reporting the capacity output measure will be set out in the revised RIGs.

3.31 It is important for Transco to report interruption data on a quarterly basis during the development of the incentive scheme on interruptions and during the first year the scheme is implemented. However, it may be unduly onerous for Transco to report outputs data quarterly on an ongoing basis. Therefore, it is proposed that, after an initial period of quarterly reporting of interruption information, all outputs data should be reported on an annual basis.

3.32 Table 3.2 shows the estimated costs of developing systems and processes to monitor interruptions for the next price control period. These have been included in Ofgem's projections of operating expenditure.

Table 3.2 Cost of new processes to monitor interruptions

£ million	2002/03	2003/04	2004/05	2005/06	2006/07	Total
	2.7	0.8	0.5	0.5	0.5	5.0

Form of the incentive scheme on interruptions

Respondents' views

3.33 The majority of respondents who expressed an opinion supported output-based incentives for Transco's LDZ networks based on the number and duration of interruptions. However, there were mixed views on the form of the incentive scheme. Four respondents supported the development of an incentive scheme which allowed for both increases and decreases in Transco's revenue depending on its performance. Three respondents indicated that an asymmetric scheme would be more appropriate and said that Transco should not be allowed to earn more than 100 per cent of the revenue projected at the price control review.

3.34 Several respondents noted that the incentive scheme proposed for Transco was at variance with the asymmetric incentive scheme proposed for the electricity distribution businesses.

Final proposals

3.35 It is important to establish stronger incentives for quality of service improvements. One way of doing this is to introduce a symmetric incentive scheme which rewards Transco for improved performance on interruptions as well as penalising it for poor performance. This has the advantage of enabling allowed revenues for the LDZ price control to be set on the basis of existing performance. Targets for the incentive scheme on interruptions can then be set once more accurate information on interruptions becomes available. By contrast an asymmetric incentive scheme similar to that proposed for the electricity distribution businesses would require Ofgem to make a judgement in setting the price control on the improvements in performance on interruptions that Transco could realistically be expected to achieve over the next five years. Given the limited data that is currently available this would not appear to be practicable.

3.36 Therefore the final proposals are based on the assumption that a symmetric incentive scheme with maximum revenue exposure of ±2 per cent of LDZ allowed revenues will be introduced in 2004. Consumer research conducted by IFF on behalf of Ofgem suggests that in aggregate consumers would be willing to pay this amount for significant improvements in performance on interruptions.

3.37 As a number of respondents highlighted, Ofgem is developing an asymmetric incentive scheme to apply to the electricity distribution businesses from April 2002. At the last distribution price control review targets were set for the number and duration of interruptions. A lack of understanding about consumers' willingness to pay for improvements in quality, beyond the amount implied by the existing targets, means that Ofgem, does not presently consider it is appropriate to introduce a symmetric scheme for electricity distribution.

Treatment of compensation payments for interruptions in the incentive scheme

Respondents' views

3.38 Only three respondents commented on this issue. Two favoured a rule-based approach for the treatment of compensation payments for failure to meet the guaranteed standard on interruptions in the incentive scheme. One respondent did not favour netting off compensation payments against rewards in the incentive scheme, suggesting that this would dilute the incentives.

Final proposals

3.39 Further consideration needs to be given to the treatment of compensation payments and therefore this issue will be taken forwards as part of the detailed work to develop the incentive scheme in 2003.

Timetable for output-based incentives

Respondents' views

3.40 There were mixed views regarding the proposed timetable for introducing output-based incentives. Some respondents believed that it would be reasonable to consult on the development of the incentive scheme in 2003 and implement the scheme from 2004. However, a number of respondents felt that the introduction of incentives scheme should occur earlier.

Final proposals

3.41 Transco will need to develop new systems and processes to record data on the number and duration of non-contractual interruptions. The draft proposals indicated that Transco should start measuring information on the interruption measures during 2002/03. It will be necessary to consider this data as part of the process of developing the incentive scheme and it will also be important to conduct audits to ensure that the data is of sufficient quality to drive an incentive scheme. Therefore it would not be practicable to introduce output-based incentives for Transco's LDZ networks before April 2004.

Appropriate method for medium-term performance reporting

Respondents' views

3.42 The majority of respondents supported the draft proposals for medium-term performance reporting, including the definition of a set of pre-specified medium-term performance measures. Respondents specifically welcomed the inclusion of methane leakage, the accuracy of demand forecasts and the accuracy of quality of invoice critical data capture.

3.43 Two respondents were concerned about that the level of detail requested for the supporting narrative, suggesting that this might lead to unnecessary bureaucracy and costs. There were also concerns about a possible overlap between the proposed requirement of an environmental report for the NTS and each of the LDZs and information that is currently provided to the Environment Agency.

Final proposals

3.44 Given the overall importance of medium-term performance and the relative complexity of the issues involved it is necessary for Transco to provide detailed data and supporting narrative on the medium-term performance of its network.

3.45 Duplication of work should be avoided in the production of environmental reports. The draft proposals explained that Transco should take guidance from the Environment Agency in the production of such reports. Efficient reporting should avoid bureaucracy.

LDZ standards of performance

Summary of draft proposals for standards of performance

Draft standards of performance

3.46 The draft LDZ standards of performance were informed by the results of IFF's consumer survey. The final results of the survey are available on Ofgem's website (www.ofgem.gov.uk).

3.47 They included three new standards of performance:

- a guaranteed standard on reconnecting domestic consumers' supplies within 24 hours following unplanned interruptions regardless of the cause of the incident;

- a guaranteed standard on permanently reinstating consumers' premises within 10 days following work initiated by Transco; and

- an overall standard of performance on informing consumers of the expected reconnection programme following unplanned interruptions.

The remaining draft standards of performance were based on existing public or internal standards of service.

3.48 The draft proposals said that the standards should apply to all consumers directly connected to Transco's LDZ network, with the exception of the standard on reconnecting consumers' supplies where non-domestic consumers should continue to be covered by the Network Code compensation scheme.

3.49 Simple compensation schemes should be adopted for the guaranteed standards, with fixed levels of compensation for domestic and non-domestic consumers. The draft proposals included a range of possible compensation levels for each guaranteed standard. Ofgem noted that the final levels of compensation would be informed by the results of IFF's consumer survey.

3.50 The overall standards of performance should apply at both a national level and to each LDZ individually to ensure that consumers in each LDZ receive a similar level of protection. Further, Transco should report performance against guaranteed standards and overall standards for each LDZ.

Third-party and water ingress interruptions

3.51 The draft proposals indicated that the guaranteed standard of performance on the restoration of domestic consumers' supplies and the equivalent obligation in Transco's Network Code for non-domestic consumers should include third-party and water ingress interruptions.

Interruptions on Transco's system causing failure of an IGT network

3.52 It was suggested that if the level of compensation to consumers on Transco's network is raised, it might be appropriate to raise the minimum compensation to consumers on Independent Gas Transporter (IGT) networks accordingly.

Auditing of standards of performance

3.53 The draft proposals noted that it would be important for standards of performance data to be audited and that two options were considered:

- Transco could commission an independent audit of its standards of performance with rules for the appointment of an auditor approved by Ofgem; or
- Ofgem could appoint an independent auditor.

Responses to the draft proposals

3.54 Views were invited on number of key issues including:

- the draft standards of performance;
- appropriate levels of compensation for guaranteed standards of performance;
- the treatment of third-party and water ingress interruptions;
- the treatment of incidents on Transco's network causing interruptions on an IGT network; and
- the appropriate form of audit for standards of performance information.

Draft standards of performance

Respondents' views

3.55 The majority of respondents supported the introduction of LDZ standards of performance for Transco based on the existing public standards of service with additional standards in key areas, such as advising consumers of the expected

reconnection programme following supply interruptions. They also welcomed the proposals to apply overall standards to each LDZ.

3.56 There was strong support for introducing a guaranteed standard on the restoration of domestic supplies within 24 hours following unplanned interruptions, although Transco felt that this obligation should remain in its Network Code. Three other respondents considered it should be extended to cover non-domestic consumers.

3.57 There were several suggestions for additional standards. One respondent suggested that the existing standards of service for connections should be converted into guaranteed and overall standards of performance. It said that these should be supplemented by new standards to cover final connections. Another respondent suggested that there should be a standard on notifying consumers of compensation payments owed under the guaranteed standards.

Final proposals

3.58 It will be appropriate to introduce a guaranteed standard on the restoration of domestic consumers' supplies within 24 hours following supply interruptions. The introduction of this standard will help align regulation in gas and electricity and it will also increase consumer awareness of their entitlement to compensation.

3.59 The compensation scheme for non-domestic consumers will remain in Network Code as this relates the level of compensation payments to capacity bookings. Larger non-domestic consumers therefore receive higher levels of compensation.

3.60 Problems have been experienced by consumers in respect of Transco's provision of final connections. Ofgem is presently working with the industry on a number of initiatives designed to enhance competition and consumer choice. Therefore it is not appropriate to expand the range of guaranteed and overall standards of performance to include connection standards.

3.61 It will be appropriate to introduce a guaranteed standard requiring Transco to notify the consumer (or relevant shipper) of payments owed under the standards and to pass on any associated compensation within a prescribed time.

Appropriate levels of compensation for the guaranteed standards

Respondents' views

3.62 Several respondents said that there should be close alignment between the levels of compensation in gas and electricity, with £50 and £100 compensation payments for failure to restore domestic and non-domestic supplies within 24 hours respectively and £20 compensation for failure to keep appointments with consumers. One respondent suggested that the minimum compensation for non-domestic consumers for loss of supply should be £50. By contrast Transco suggested that compensation for failure to restore domestic supplies should be set at the lower end of the range set out in the draft proposals.

Final proposals

3.63 Compensation for failure to meet guaranteed standards of performance should be based on the direct cost and inconvenience to consumers of Transco failing to provide an adequate level of service.

3.64 The inconvenience to consumers of a service engineer failing to show up for an appointment is likely to be the same in gas or electricity so it is appropriate to align the levels of compensation. However, it is also important to consider differences between gas and electricity. For example, it is generally recognised that the effects of a gas interruption for domestic consumers will be less severe than an electricity interruption of similar duration, particularly as gas boilers and central heating are likely to be electronically controlled. Therefore the level of compensation for gas interruptions should be lower than compensation for electricity interruptions of similar duration. Final proposals for levels of compensation are summarised in table 3.3.

Treatment of third-party and water ingress interruptions

Respondents' views

3.65 All respondents that commented on the issue welcomed the inclusion of third-party and water ingress interruptions in the guaranteed standard on restoring consumers' supplies. The majority of respondents also favoured a fixed allowance in the price control to cover the costs of insurance for such

interruptions. However, two respondents believed that a fixed allowance would be inappropriate and that there was a case for a cost pass through mechanism in the revised price control.

Final proposals

3.66 Transco will be given a fixed allowance in each year of its price control to cover the costs of third-party and water ingress interruptions. This will ensure that Transco has appropriate incentives to reconnect consumers' supplies within 24 hours and to minimise the compensation paid out. A cost pass though would be inappropriate, as it would remove any incentive for Transco to limit the duration of force majeure interruptions.

Treatment of interruptions on Transco's network causing a failure of an IGT network

Respondents' views

3.67 All respondents that commented on this issue said that compensation to consumers on IGT networks should be aligned with compensation to consumers directly connected to Transco's network.

Final proposals

3.68 It will be appropriate to ensure that consumers receive the same level of compensation for interruptions caused by incidents on Transco's network regardless of whether they are connected to an LDZ or an IGT.

Audit of standards of performance information

Respondents' views

3.69 There were mixed views on the appropriate form of audit of standards of performance information with some respondents favouring an internal audit conducted by Transco and others supporting independent audits commissioned either by Transco or Ofgem.

Final proposals

3.70 Ofgem proposes to commission audits of Transco's standards of performance information on an annual basis to ensure that Transco's performance is being accurately recorded and consumers receive compensation they are entitled to. These audits will form part of wider audits on quality of supply, incorporating outputs data.

Final proposals

Guaranteed standards of performance for transportation

3.71 Table 3.3 sets out the final proposals for guaranteed standards of performance, including levels of compensation for consumers.

Table 3.3 Final proposals for guaranteed standards

No.	Standard	Definition	Payment
1	Restoring domestic consumers' supplies after an unplanned interruption*.	Where domestic consumers are interrupted for a period of greater than 24 hours, a fixed compensation payment will be made for each subsequent period of 24 hours or part of such a period consumers are off supply. This applies regardless of the cause of the interruption. (It excludes interruptions where more than 50,000 consumers are affected. It also excludes cases where gas has been restored up to the emergency control valve, but Transco is unable to gain access to complete the reconnection.)	£30 Cap per consumer of £1000
2	Reinstatement of consumers' premises	On completion of Transco initiated work to re-lay service pipes on a consumer's premises, the premises will be permanently reinstated within 10 working days. If the premises are not permanently reinstated within this time, a fixed compensation payment will be made for each subsequent period of 5 working days or part of such a period until the premises have been permanently reinstated.	£50 (domestic) £100 (non-domestic)
3	Making and keeping appointments	Transco should arrange a morning or afternoon appointment for consumer initiated work, or a timed appointment if requested by the consumer. A fixed compensation payment will be made where Transco fails to attend.	£20
4	Adequate heating and cooking facilities.	If it is necessary for safety reasons for Transco to disconnect the gas supply to premises occupied by a domestic consumer who: (a) Is disabled, chronically sick, or of pensionable age; (b) Does not live with any person who is not disabled, or chronically sick, not of pensionable age or a minor; and (c) Is included on a priority service register provided by a supplier, They will not be deprived of adequate heating and cooking facilities. A fixed compensation payment will be made where customers are deprived of these facilities.	£24
5	Notifying consumers (or relevant shippers) of payments owed under the standards	Transco shall write to the consumer (or shipper) and make payment within 10 working days. Where Transco fails to inform the consumer (or shipper) and make payment within 20 working days a fixed payment shall be made.	£0 £20

*Compensation for business consumers will be covered by Transco's network code.

GS1 – Restoring domestic consumers' supplies

3.72 There will be a guaranteed standard on restoring domestic consumers' supplies within 24 hours following unplanned interruptions on Transco's network, regardless of the cause of the incident. This will exclude interruptions where more than 50,000 consumers are affected. Where Transco fails to achieve this level of service it will be required to pay £30 compensation for each further period of 24 hours or part of such a period that the consumer is off supply with the total payment for any particular consumer capped at £1000 per incident.

3.73 IFF's quantitative research suggests that 84 per cent of domestic consumers would find this level of compensation acceptable. The compensation is also in line with IFF's estimate of the average daily cost to domestic consumers of an interruption lasting 3 days.

3.74 The compensation scheme for non-domestic consumers will remain part Transco's Network Code standards of service package. However, the minimum compensation payment for non-domestic consumers should be increased above the existing £20. IFF's quantitative research suggests that 55 per cent of non-domestic customers would find £30 compensation acceptable, 57 per cent would find £40 compensation acceptable and 69 per cent would find £50 compensation acceptable. The extent of the increase for non-domestic domestic consumers will be determined through the Network Code modification process.

GS 2 - Reinstatement of consumer premises

3.75 There will be a guaranteed standard on the permanent reinstatement of consumers' premises within 10 working days of completion of work to re-lay service pipes on their premises. If Transco fails to meet this level of service for domestic consumers it will be required to pay them £50 for each further period of 5 working days or part of such a period until the premises are permanently reinstated. This is equivalent to a daily payment of £10. The results of IFF's quantitative study suggest that 64 per cent of domestic consumers would find this level of compensation acceptable.

3.76 If Transco fails to meet the required level of service for non-domestic consumers it will be required to pay them £100 for each further period of 5 working days or

part of such a period until their premises are permanently reinstated. This is equivalent to a daily payment of £20. IIF's quantitative research suggests that 54 per cent of non-domestic consumers would find this compensation acceptable.

GS3 – Making and keeping appointments

3.77 The existing public standard of service for making and keeping appointments for consumer initiated work will be converted into a guaranteed standard of performance. Transco will be required to make a morning or afternoon appointment or a timed appointment if requested by a consumer. If Transco fails to keep an appointment it will be required to pay compensation to the consumer. Consumers should be offered similar levels of compensation for failure to keep an appointment for both gas and electricity. This suggests a compensation payment of £20 for both domestic and non-domestic consumers. IIF's quantitative research suggests that 68 per cent of domestic consumers and 80 per cent of non-domestic consumers would find this level of compensation acceptable.

GS4 – Adequate heating and cooking facilities

3.78 The existing standard of service on providing adequate heating and cooking facilities to priority consumers will be converted into a guaranteed standard of performance. Transco should provide these facilities as soon as is reasonably practicable in the event of a gas emergency or any non-contractual interruption. Where Transco fails to provide this service it will be required to pay £24 compensation to the consumers affected.

GS5 – Notifying consumers of payments owed under the standards

3.79 As discussed above, it was suggested there should be a standard on notifying consumers (or shippers) of compensation payments owed under the guaranteed standards. This argument appears to have some force and such a standard would increase alignment between the standards of performance in gas and electricity.

3.80 Therefore Transco should notify the relevant consumer (or shipper) of a failure to meet a standard and make payment within 10 working days. No additional compensation will be payable if Transco fails to comply within this time.

However, if Transco fails to comply within 20 workings days a compensation payment of £20 will be due. Transco's performance with respect to this standard will be monitored and if necessary the arrangements for compensation will be tightened in due course.

Overall standards of performance for gas transportation

3.81 Final proposals for overall standards of performance are set out in Table 3.4 below.

Table 3.4 Final proposals for LDZ overall standards

No	Standard	Definition	Annual Target
1	Telephone calls	Transco's call centres will answer telephone calls within 30 seconds. Emergency calls will be given priority over other types of call.	90%
2	Notification of planned supply interruptions	For planned maintenance or replacement work, which involves interruption of the gas supply, a standard notification letter will be provided to consumers directly affected at least 5 working days in advance of starting the work.	95%
3	Informing consumers of when they are due to be reconnected	For unplanned supply interruptions which are expected to last over 24 hours and: (a) Less than 250 consumers are affected Transco will inform individual consumers that they have been interrupted and the expected programme for reconnection within 12 hours of it having knowledge of the interruption; and (b) More than 250 consumers are affected Transco will provide public announcements to inform consumers that they have been interrupted and the expected programme for reconnection within 12 hours of it having knowledge of the interruption (for example, using local public address broadcasts and local radio). Progress charts and the reconnection programme should be displayed locally and updated information should be provided to consumers every 24 hours. (The expected programme for reconnection should include the expected day of reconnection)	97% 97%
4	Acknowledging correspondence	All correspondence from gas consumers or members of the general public will receive an acknowledgement within 5 working days of receipt. This will indicate when a substantive response may be expected.	90%
5	Visits	Where a visit is appropriate following receipt of correspondence or a complaint: a) Contact will be made within 2 working days of receipt of the correspondence; and b) The visit will be made within 5 working days of contact with the consumer or	93%
6	Substantive response to complaints	Consumer shall receive a substantive response to complaints from whatever source within 10 working days other than in exceptional circumstances. (This would include complaints relating to metering until this market become competitive and connections work where it has legal obligations.)	90%
7	Gas emergencies	Where Transco receives a report of a gas emergency or gas escape, significant spillage of carbon monoxide or other hazardous situations, it will attend as quickly as possible within the following timescales: a) All uncontrolled escapes within 1 hour; and b) all controlled escapes within 2 hours.	97% 97%

3.82 OS 3 represents a refinement to the standard set out in draft proposals. Transco should inform consumers of an interruption and provide details of the expected reconnection programme within 12 hours of having knowledge of the interruptions. This should give Transco sufficient time to provide clear and detailed information to consumers of when their property is likely to be reconnected and any action they should take.

3.83 The overall standards will apply both nationally and to each LDZ individually and will cover all consumers connected to Transco's LDZ networks.

Information to be provided to consumers

3.84 Transco should prepare an annual statement setting out its guaranteed and overall standards of performance and, where appropriate, levels of compensation associated with failure to meet the standards. This statement should be provided to suppliers so that they can pass it on to final consumers. Transco may prepare separate statements for domestic and non-domestic consumers if it considers this to be appropriate.

Revised costs projections for developing and implementing new standards

3.85 Ofgem's projections of operating expenditure projections include an allowance of £5.8 million in 2002/03 and £3.4 million in subsequent years for standards of performance improvements. This incorporates:

- £2.2 million in 2002/03 and £0.4 million in subsequent years for general standard of performance improvements;
- £0.9 million per annum for compliance with standards at an LDZ level; and
- £2.7 million in 2002/03 and £2.1 million per annum in subsequent to cover the cost of insurance for force majeure interruptions and any compensations payments that fall into the excess.

Way forward

Output measures

3.86 Where the relevant systems are in place for measuring outputs, collection of data should start in April 2002. However, for the interruption output measures Transco will need a lead-time to develop new systems and processes to record the data. It is proposed that Transco should start measuring information on the interruption measures during 2002/03. Ofgem will also commission an audit of the measurement systems for recording outputs during 2002/03.

3.87 The delivery of outputs will be monitored on an ongoing basis to determine any trends in performance and to ensure that Transco's quality of supply does not deteriorate. It will also be important to monitor Transco's medium-term performance. The process of monitoring outputs will begin in August 2003, as soon as the first data on output measures and medium-term performance become available.

3.88 Ofgem will consult on the development of the incentive scheme relating to interruptions in 2003 and will commission an audit of the initial interruptions data to verify its quality. This will enable accuracy targets to be set for the start of the incentive scheme in 2004.

3.89 The key milestones for developing the outputs regime are set out in Table 3.5 below.

Table 3.5 Key milestones

Dates	Milestones
April 2002	Implementation of new price control: outputs framework comes into force
April 2002 – March 2003	Data collection begins for interruption measures (not later than 31 March 2003). Reporting for these measures begins (not later than 31 July 2003). High-level audit of processes and measurement systems for outputs information
April 2003 – March 2004	Detailed audit of interruption data Consultations on the development of the incentive scheme
April 2004	Implementation of incentive regime

Standards of performance

3.90 Ofgem is empowered to set guaranteed standards of performance in Statutory Instruments (SIs) with the approval of the Secretary of State for Trade and Industry and can separately determine overall standards of performance.

3.91 It will be appropriate to consult on the draft SIs and determinations for the LDZ standards of performance in November 2001, allowing 28 days for representations to be made. It will then be necessary to get the approval of the Secretary of State for Trade and Industry before the guaranteed standards of performance can be implemented.

3.92 The LDZ standards of performance should be effective from 1 April 2002.

4. Capital and operating expenditure

Introduction

4.1 As part of the price control review it is appropriate to estimate the expenditure that a reasonably efficient company would be likely to incur over the period from 2002/03 to 2006/07. These costs comprise operating, capital and replacement expenditure. Ofgem's assessment of these three categories of expenditure is set out in this chapter. All cost data are expressed at 2000 price levels, unless otherwise stated.

4.2 Ofgem appointed Mazars Neville Russell (Mazars) as consultants to advise on efficient levels of costs for the Transco business over the next control period. Mazars appointed Petroleum Development Consultants as technical consultants and Europe Economics as economic consultants to assist them in this task. Arthur Andersen also provided advice on the base level of operating costs and the allocation of costs to the separate price controls. Although the work of Mazars and Arthur Andersen was separate, Ofgem has treated the separate cost adjustments additively. Care was taken to ensure the work carried out was complementary and did not overlap.

4.3 Since June, the consultants have made revisions to their projections in the light of comments made in response to the draft proposals. All the arguments put forward by Transco have been considered, but in some cases the consultants have maintained an alternative view. The consultants' work has now been completed, and final reports will be published on Ofgem's website[11].

Operating Expenditure

4.4 Operating expenditure is the day-to-day costs of running and maintaining Transco's NTS and LDZ networks. As in the draft proposals, controllable operating costs are defined as total operating costs, less prescribed rates, GT licence fees, excluded service costs and depreciation.

4.5 The consultants carried out a detailed assessment of operating expenditure in the base year and the forecasts made by Transco in its response to Ofgem's Business

[11] www.ofgem.gov.uk

Plan Questionnaire (BPQ). Transco's BPQ forecasts included £5,365 million of controllable operating costs over the period 2002/03 to 2006/07. At the time of the draft proposals, the consultants suggested revised projections of £4,127 million. The main adjustments proposed by the consultants were in the areas of:

- network operating costs;
- staff and related costs including manning levels in the finance and procurement and logistics functions, and Employee Profit Share Scheme (EPSS) and pensions costs;
- other operating expenditure associated with procurement and logistics;
- information systems (IS) (the cost of operating the information systems which support Transco's particular role in the gas industry, as well as the general IS needs of the business);
- shrinkage (the cost of gas leakage from the distribution network, gas used by Transco and gas lost due to theft or other differences between measured inputs and outputs); and
- corporate and other re-charges.

4.6 These projections and the results of the top-down efficiency study carried out by Europe Economics informed the draft proposals. Ofgem's projection of controllable operating costs was £4,250 million over the period 2002/03 to 2006/07.

Responses to draft proposals

4.7 In the consultation responses, four respondents indicated broad agreement with Ofgem's projections of operating expenditure, with one stating that Transco's projection to 2007 looked unrealistic. Another felt that the initial revenue reduction should be greater, to include an allowance for underspend in the current period. Further comments included:

- two respondents commented on the contribution of EPSS costs to operating expenditure. Both respondents felt that EPSS should be considered as part of

the total employment package, and one said that excluding EPSS may lead to a distortion of remuneration packages;

- one respondent considered that inherent uncertainties in pensions funding make it inappropriate to clawback any short-term surpluses;
- one respondent felt that restructuring costs should not be met by customers of the transportation business. Another felt that any potential loss of synergy due to unbundling should be recognised; and
- a further respondent called for a full consultation on the treatment of telecoms rents and the disposal of telecoms assets.

4.8 Transco said Ofgem's projections of operating expenditure would require it to achieve efficiency savings greater than expected in any other comparable price control review of a regulated utility in the UK. Transco also emphasised that costs have increased in the later years of the current price control relative to the 1999/00 base year.

4.9 Transco made specific comments on EPSS and pension costs. It said EPSS is an integral part of motivating employees, and stated that it was allowed by the MMC in 1997. On pensions, Transco suggested that these costs were implicitly allowed by the MMC in 1997, would be consistent with the most recent accounting standards and would provide for equity between different generations of customers. Transco was content with Ofgem's conclusion that Transco's Transaction Model would provide an appropriate method for allocating efficient levels of operating cost to price control units.

Summary of consultants' final reports

4.10 The consultants have considered responses to the draft proposals and Transco's comments on their draft reports. Further information provided by Transco has led to adjustments to the consultants' projections, including those of:

- LDZ wages and salary levels;
- staff holiday allowances;
- unaccounted for gas on the NTS;

- insurance costs; and
- recharges from the property and leasing groups of Lattice, as well as from Advantica.

4.11 Two important areas investigated by Mazars where they have not changed their conclusions since June are EPSS and pensions costs.

4.12 With respect to EPSS costs, while the base pay of Transco staff has been benchmarked to the market median, Mazars noted that EPSS is one of several bonus schemes which Transco has in place to reward staff in addition to base pay. Mazars considered that such a range of schemes is only justified if above target performance is incentivised. They felt that in these circumstances the bonus should be self-financing.

4.13 Mazars' final projection excludes pension contributions above the minimum required under the scheme rules of 3 per cent of pensionable pay. Transco's BPQ projections of pensions costs from 2002 were based on its interpretation of FRS 17 under which Transco would pay an actuarial valuation of the costs of benefits accrued within each year. The net investment return on the pension schemes assets together with any actual gains or losses on the annual revaluation of the pension scheme would be accounted for at the Lattice level. The cash contributions made by Transco are currently at the minimum level of 3 per cent.

4.14 The consultants' work involved considering efficiency in the base year and over the period of the future control. It did not involve consideration of the rate at which Transco might be expected to achieve these efficiencies. Therefore, the consultants' projections are significantly below the level of costs that Transco has reported in 1999 and 2000. The projections of controllable operating cost in the consultants' final reports and Transco's BPQ forecasts are shown in the table below.

Table 4.1 : Controllable operating costs

£ million – 2000 prices	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	Total (2002/03-2006/07)
Transco BPQ	1,056	1,103	1,109	1,108	1,080	1,065	1,057	1,055	5,365
Consultants' projection	927	952	978	921	902	895	893	891	4,502

Strategic Business Plan

4.15 The draft proposals were based on analysis of Transco's December 2000 response to Ofgem's BPQ. The additional costs put forward by Transco in its Strategic Business Plan (SBP), which it published in April 2001, were not considered.

4.16 Ofgem has now reviewed the additional operating expenditure put forward by Transco in the SBP, except for costs relating to non-daily meter reading. These have not been considered as this activity will not be price controlled from April 2002. Transco stated that the SBP 'allows for a number of changes since Transco's BPQ response was submitted. These changes fall into three types:

- BPQ updates, largely reflecting changes in external market factors;
- potential improvements in customer outputs, notably associated with safety and meter unbundling; and
- costs associated with restructuring to facilitate competition.' [12]

4.17 In the majority of cases, it will not be appropriate to allow additional operating costs. This is because the output changes which drive the costs are not required, or because Transco should be able to accommodate any cost changes within the existing projections. However the following extra costs have been allowed:

- Training. Ofgem is supportive of upskilling initiatives such as those promoted by the industry's training organisation (GWINTO) and through the introduction of National Vocational Qualifications (NVQs). It is also recognised that training will be necessary to support the mains replacement programme. However such training should deliver some efficiency savings, and should to some extent be a substitute for training that is currently

[12] Transco Periodic Review, Strategic Business Plan 2002-2007, April 2001.

provided. It is therefore proposed to allow a proportion of the additional costs forecast by Transco;

- Force majeure insurance and monitoring customer interruptions. An allowance was made for these costs in the draft proposals, as part of the costs of quality improvements. These costs are discussed further later in this Chapter;

- Meter asset separation costs. The introduction of competition in metering will require Transco to incur some additional costs, particularly in relation to information systems to support separate asset management. An allowance for additional costs has therefore been made, on the expectation that the separation and associated systems are delivered in accordance with the plan; and

- HSC gas safety review costs. After consultation with the HSE, Ofgem considers that the ongoing fundamental review of the installation and use of gas is likely to generate additional obligations on Transco's emergency service engineers. While these obligations are yet to be finalised, these are likely to be akin to those associated with Transco's SBP low cost scenario. It is understood that this work may be required from the winter of 2002.

4.18 It is proposed to allow a total of £23 million for training and meter separation costs and £50 million for costs arising from the HSC's review of gas safety. This gives a total of £73 million over the period 2002/03 to 2006/07. Costs relating to force majeure insurance and monitoring customer interruptions are dealt with below.

Costs of quality improvements

4.19 Chapter 3 sets out final proposals for improvements in Transco's LDZ standards of performance and arrangements for reporting output measures. To fund these quality improvements Ofgem proposes to allow Transco about £8 million in the 2002/3 formula year falling to £4 million per annum in the later years of the next price control period, giving approximately £24 million over the period 2002/03 to 2006/07.

4.20 Relatively large allowances have been made for IS costs in the various projections and forecasts. In the light of this it will be reasonable to expect that Transco's IS arrangements can cope with the bulk registration of consumers transferring from one supplier to another.

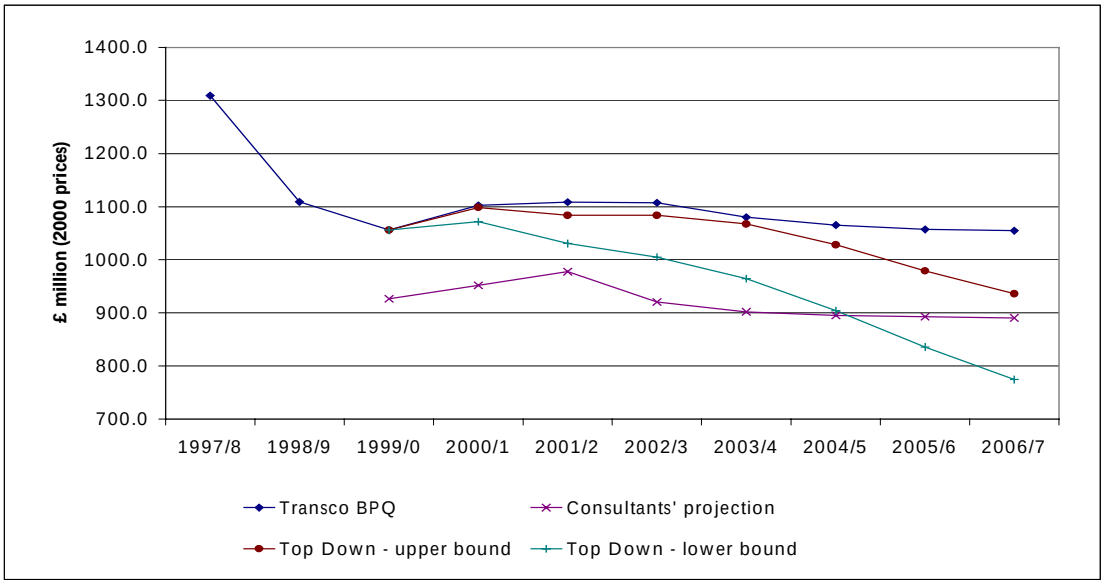
Land decontamination costs

4.21 The draft proposals highlighted that Transco's expenditure on land decontamination in the current period is forecast to be some £38 million less than that allowed by the MMC in 1997. Transco has not identified charges to the Profit and Loss account in respect of land decontamination in the price control period from 2002 to 2007. Transco forecasts cash costs of £34.2 million over the period, but these will be met by a long standing provision. In the light of the provision and the apparent underspend in the current period it is not appropriate to allow additional revenues for land decontamination in the next period.

Top-down projections

4.22 Mazars commissioned Europe Economics to carry out a top-down analysis of Transco's costs. This work derived a range of possible efficiency improvements for Transco based on productivity improvements for comparable sectors and other privatised companies. This work has been concluded, and is included in Mazars' published report. Europe Economics have maintained the view that Transco should be able to achieve an ongoing efficiency improvement of 2 to 4 per cent of real unit operating costs per annum. The consultants' projections, as derived from both the bottom-up and top-down work, are shown in the figure below.

Figure 4.1 : Consultants' projections of controllable operating cost



These projections do not include SBP expenditure, or the costs associated with quality improvements.

Ofgem's projections of operating cost in the next price control period

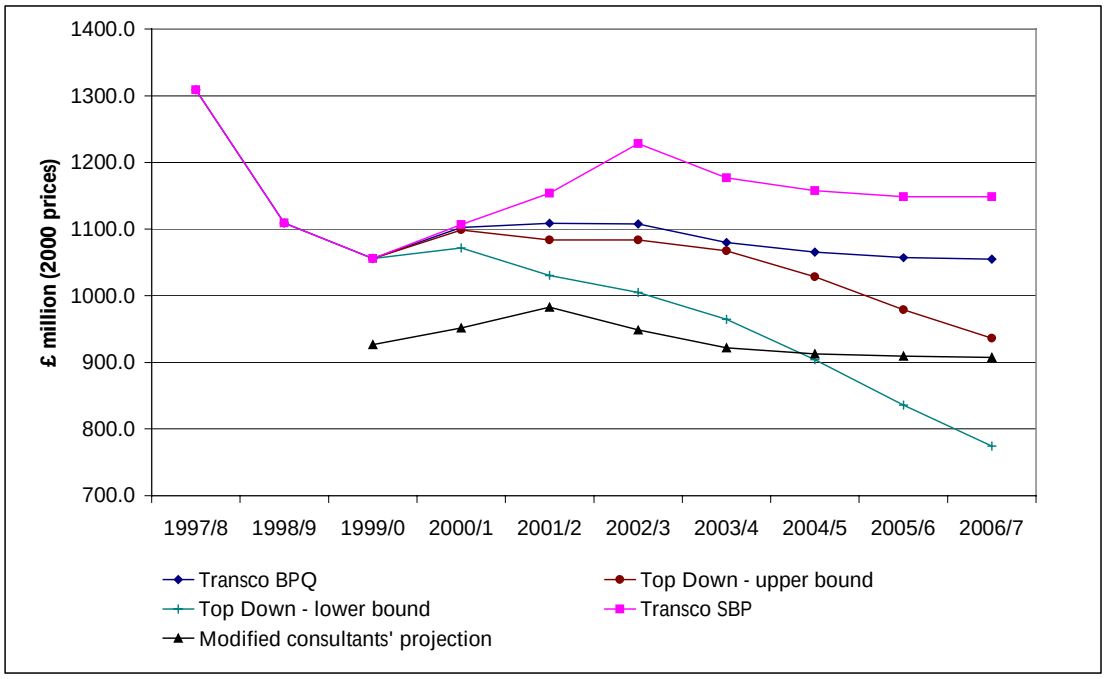
4.23 In formulating final proposals for operating costs, consideration has been given to information from a number of sources including responses to the draft proposals, the final reports of the consultants and arguments made by Transco.

4.24 The consultants' projection of efficient controllable operating cost, adjusted for SBP and quality improvement allowances, is shown in the table below along with Transco's SBP and BPQ forecasts. The subsequent figure shows this data alongside the top-down projections of cost.

Table 4.2 : Controllable operating costs

£ million – 2000 prices	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	Total (2002/03-2006/07)
Transco BPQ	1,056	1,103	1,109	1,108	1,080	1,065	1,057	1,055	5,365
Transco SBP	1,056	1,107	1,154	1,228	1,177	1,158	1,149	1,149	5,861
Modified consultants' projection	927	952	983	948	922	913	909	908	4,600

Figure 4.2 : Consultants' projection including costs of quality improvements and SBP impacts



4.25 The draft proposals noted that while the bottom-up approach provided a projection of the efficient cost base, it did not address the time that Transco would need to achieve these efficiencies. The draft proposals assumed that starting from the base year of 1999/00 a well managed company could close the efficiency gap by 2004/05. This required an annual compound reduction of 4.9 per cent between 1999/00 and 2004/05.

4.26 As described above, the consultants' projection of efficient operating expenditure has since been finalised, and costs have been added in for quality improvements and certain impacts identified in Transco's SBP. In addition, in reviewing the efficient level of cost Ofgem has added some additional pensions costs to the consultants' projection. Pensions costs equivalent to 8.5 per cent of pensionable wages and salaries have been included. This approach is consistent with the present accounting charge and the approach previously adopted by the MMC. It also provides for a smoothing of charges over time as it is likely that the present level of cash contributions will need to increase significantly in the future.

4.27 Given these higher costs it is reasonable to assume that Transco will reach the modified efficiency frontier before 2004/05. Projecting forward from Transco's out-turn costs in calendar year 1999, an annual compound reduction of 2.4 per cent would be required to achieve the consultants' projection (modified for SBP, quality improvements and additional pensions cost allowances) by calendar year 2003. The compound reduction required thereafter along the modified consultants' projection would be less than 0.5 per cent per annum. It is not clear that this would provide a sufficiently demanding target.

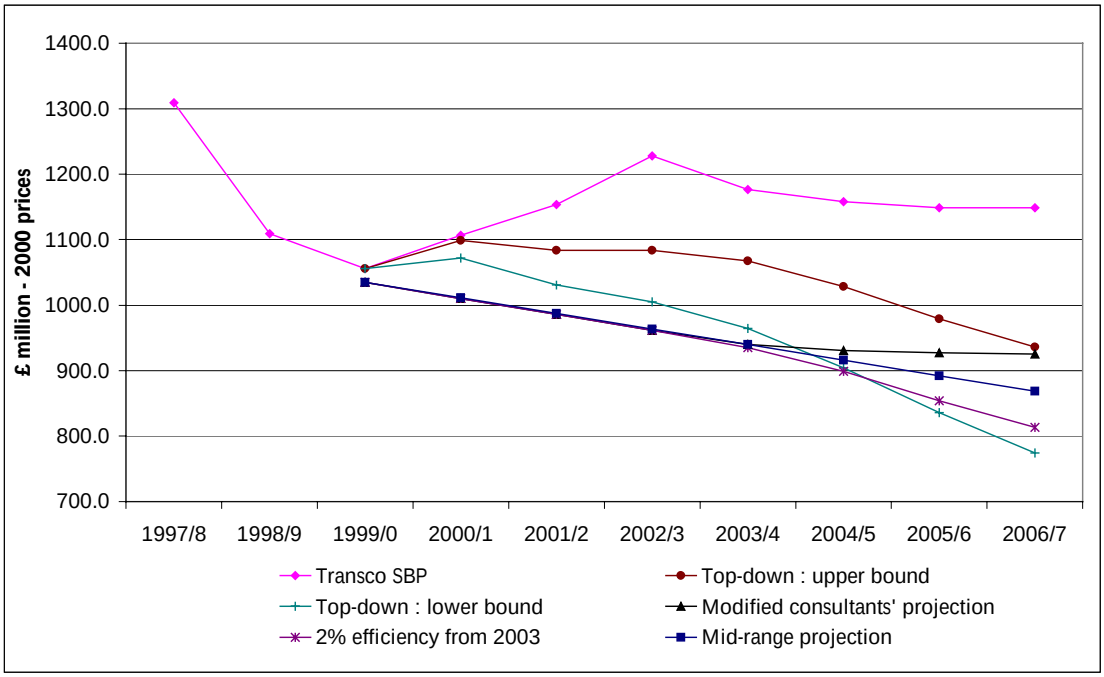
4.28 Ofgem has therefore considered an alternative cost scenario. This comprises efficiency gap closure by calendar year 2003, and then subsequent cost reduction at 2 per cent per annum in accordance with the minimum rate recommended by the top-down study.

4.29 Operating costs have been based on Transco achieving the mid-range between the two alternatives described above in 2006/07. This target requires a compound reduction in cost from calendar year 1999 actuals of 2.5 per cent per annum. This is clearly below the 3.5 per cent target set out in the draft proposals for the period to 2007. Although Transco's actual costs were higher in 2000 than is suggested in Ofgem's projection of costs, a reduction of less than 3.0 per cent per annum is required from Transco's out-turn figures for calendar year 2000 (excluding one-off costs) in order to meet Ofgem's projection by 2002. The mid-range projection is shown in the table and figure below.

Table 4.3 : Ofgem's projection of Controllable Operating Costs

£ million - 2000 prices	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	Total (2002/03-2006/07)
Transco SBP	1,056	1,107	1,154	1,228	1,177	1,158	1,149	1,149	5,861
Top-down : upper bound	1,056	1,099	1,084	1,084	1,068	1,028	979	936	5,095
Top-down : lower bound	1,056	1,072	1,031	1,005	965	904	836	774	4,484
Ofgem's projection	1,035	1,011	987	964	940	916	892	869	4,580

Figure 4.3 : Ofgem's projection of Controllable Operating Costs



4.30 It can be observed from the previous table that the total cost of Ofgem's projection across the next price control period as a whole is within the range derived in the top-down work.

4.31 As stated previously, controllable operating expenditure excludes the costs of Transco's GT licence, excluded services, and formula rates. These must be added to give total operating costs (minus replacement costs and depreciation), for comparison with Transco's SBP projections. Customer contributions released must also be deducted for consistency of presentation with the SBP figures. These adjustments are shown in the table below.

Table 4.4 : Transco's total operating costs, excluding replacement expenditure and depreciation 1999/00 to 2006/07

£ million – 2000 prices	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	Total (2002/03-2006/07)
CONTROLLABLE OPERATING COSTS									
Ofgem's projection	1,035	1,011	987	964	940	916	892	869	4,580
ADD less controllable costs									
GT Licence	8	7	10	10	10	10	10	10	48
Excluded Services	6	3	3	3	3	4	4	4	18
Formula Rates	228	214	220	219	222	228	241	256	1166
Customer contributions	-26	-26	-27	-30	-31	-33	-34	-34	-161
TOTAL OPERATING COSTS									
Ofgem's projection	1,251	1,208	1,192	1,166	1,143	1,125	1,113	1,104	5,651
COMPARISON WITH TRANSCO SBP									
Transco SBP	1,272	1,305	1,361	1,433	1,384	1,367	1,353	1,353	6,891

Allocation of operating costs to price control units

4.32 As set out in the draft proposals, Transco has developed a Transaction Model to allocate the costs incurred within its functional business areas to the correct price control units. As a result of the work of the consultants Ofgem has concluded that the model is appropriate for allocating efficient levels of operating cost to price control units in order to set allowed revenues.

4.33 On this basis Ofgem's final projection of efficient operating cost in the next price control period has been allocated to price control units. The costs in each price control unit are shown in the table below.

Table 4.5 : Allocation of efficient operating costs to price control units

£ million – 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07	Total
NTS (aggregate)	198	199	200	201	206	1,004
LDZs	842	821	803	792	781	4,038
Metering	152	151	152	150	148	753
TOTAL AS PER FINANCIAL MODEL	**1,192**	**1,171**	**1,154**	**1,143**	**1,134**	**5,795**
Excluded services	3	3	4	4	4	18
Customer contributions released	-30	-31	-33	-34	-34	-161
TOTAL	**1,166**	**1,143**	**1,125**	**1,113**	**1,104**	**5,651**

4.34 The financial modelling of the NTS has been carried out at aggregate level. In finalising the licence modification for the NTS TO price control it will be necessary to net off the element of NTS operating cost which is associated with the SO. Furthermore, in developing the initial proposals for the SO incentives, certain costs associated with security of supply and shrinkage were re-allocated from the LDZs to the NTS for the future period. Therefore a similar adjustment will be required for the LDZ price control. Projections adjusted on this basis are shown in the table below.

Table 4.6 : Allocation of operating costs, including SO adjustments

£ million – 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07	Total
NTS TO	123	122	122	122	124	613
NTS SO	103	104	107	109	113	535
LDZs	815	794	774	762	749	3,894
Metering	152	151	152	150	148	753
TOTAL	1,192	1,171	1,154	1,143	1,134	5,795

4.35 The operating costs of the NTS SO will be confirmed in the SO final proposals in December.

Capital Expenditure

4.36 Capital expenditure is investment in assets whose benefits can be expected to last for some years, such as high-pressure pipelines and lower pressure mains. For pipelines and mains Transco makes a further distinction between capital and replacement expenditure. The latter represents the cost of replacing assets, which may for example be for safety reasons or to allow new road construction. Costs incurred in exchanging meters are classified as capital expenditure by Transco. Capital expenditure is dealt with in this section and replacement expenditure in the following section.

4.37 The draft proposals were informed by the work of Ofgem's consultants, who reviewed both capital and replacement expenditure and focussed on the following key areas:

- high-pressure pipeline costs - the unit costs of NTS and LTS pipelines, both in the current period to date and as forecast through to 2007;
- compressor costs - the cost of investing in compression on the NTS, to satisfy both capacity and environmental requirements;
- mains and services costs - the unit cost and workloads associated with Transco's obligations to meet capacity and safety requirements on its distribution networks;
- meters - the costs associated with both the purchase and installation of gas meters; and
- procurement - the costs of Transco's procurement of capital items.

4.38 At the time of draft proposals, the consultants projected gross capital expenditure of £1,996 million over the period 2002/03 to 2006/07. This work informed Ofgem's projections of £1,920 million. This compared with Transco's BPQ forecast of £2,402 million.

Responses to draft proposals

4.39 A number of comments were made on the projections and forecasts of capital expenditure for the next period. One respondent was concerned to ensure that the baseline level of capital expenditure could be adequately financed. A further respondent was concerned at the growing cost base put forward by Transco in its Transporting Britain's Energy consultation[13].

4.40 There was some concern about Transco's performance in the current price control period. In particular, some respondents felt that Transco had 'front-loaded' savings in operating expenditure, and 'back-loaded' capital expenditure. There was a general desire to prevent any such action in the next price control period. However, one respondent made the point that, if Transco is not allowed to keep cost savings due to 'windfall gains', then it should be allowed additional revenues where unforeseen events impose additional costs.

[13] Transporting Britain's Energy, Conclusions of Transco's Consultation for Future Network Requirements, Transco, July 2001.

4.41 In its response Transco stated that, under an RPI-X regime, performance in the current price control period should be judged in terms of outputs. Transco said that projections of outputs associated with the 1997 MMC report will be delivered, and in some cases exceeded, by the end of the current period.

Summary of consultants' final reports

4.42 The consultants have considered responses to the draft proposals and Transco's comments on their draft reports. The consultants' final projection of capital expenditure is set out in the table below, for comparison with Transco's BPQ forecasts. The consultants' figures are based on Transco's base-line BPQ supply/demand scenario C.

Table 4.7 : Gross capital expenditure

£ million – 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07	Total
Transco BPQ	697	497	404	397	406	2,402
Consultants' projection	622	425	323	306	307	1,983

4.43 There has been a small change (of approximately £13 million) in the consultants' capital expenditure projection since draft proposals. This reflects revised adjustments to metering and capitalised operating costs.

NTS TO expenditure

4.44 Transco described three different supply/demand scenarios in its BPQ response. Ofgem's projections in its draft proposals were based on Transco's base-line scenario C. Transco has since conducted a consultation process on the investment requirements of the NTS. As a result of this Transco has now published[14] a revised St Fergus Base scenario. Whereas Transco forecast investment in the NTS of £530 million under scenario C, the revised scenario includes total NTS TO investment of about £1.1 billion for 2002 to 2006. This comprises approximately:

- £430 million to meet minimum statutory obligations;

[14] Transporting Britain's Energy, Conclusions of Transco's Consultation for Future Network Requirements, Transco, July 2001.

- £196 million to improve network resilience; and
- £412 million to increase summer flexibility.

4.45 In response to the publication of the St. Fergus Base scenario, Ofgem requested detailed cost, workload and output information from Transco to support its revised projections. The information received in response has been reviewed by Ofgem, and the final proposals are informed by the results of this review.

Strategic Business Plan

4.46 Transco's SBP included some additional capital expenditure. As for operating expenditure, this has been considered in the context of the cost drivers identified by Transco. The only additional costs that will be allowed are information systems costs associated with meter asset separation.

Expenditure in the current price control period

4.47 The draft proposals set out several areas in which Transco's capital expenditure in the current price control period has been less than that envisaged by the MMC in 1997. Ofgem and Transco have initiated an annual process of capital expenditure monitoring to review Transco's actual levels of expenditure against forecasts and against the delivery of the outputs which underlie the MMC's projections. In accordance with this process Transco has now produced a variance report for 2000. The consultants have been carrying out an audit of this data and a review of Transco's explanation of variances.

4.48 The table below summarises Transco's actual and projected capital expenditure in the current period, compared with that projected by the MMC.

Table 4.8 : Transco's capital expenditure in the current price control period

£ million – 2000 prices	1997/98	1998/99	1999/00	2000/01	2001/02	Total (1997/98 – 2001/02)
MMC projections						
National Transmission System (NTS)	174	197	128	133	173	804
Local Distribution Zones (LDZs)	179	165	153	148	141	787
Meters	242	229	208	191	165	1,034
Other Capital	95	54	51	66	71	338
TOTAL	691	644	540	537	553	2,964
Transco actual/forecast	Actual	Actual	Actual	Actual	Forecast	
National Transmission System (NTS)	147	191	140	220	229	928
Local Transmission System ((LDZs)	155	157	179	281	379	1,150
Meters	163	134	122	119	122	661
Other Capital	87	59	43	76	85	349
TOTAL	552	540	484	696	815	3,087
Variances*						
National Transmission System (NTS)	-27	-5	13	87	56	124
Local Transmission System ((LDZs)	-24	-8	26	133	238	363
Meters	-79	-95	-86	-71	-42	-373
Other Capital	-9	5	-9	10	14	11
TOTAL	-139	-104	-56	159	262	123

* positive variances indicate that Transco has spent more than the MMC allowance

4.49 Based on actual performance to date, and its forecasts for the remainder of the price control period, Transco has said that all outputs will be met by the end of the period. Ofgem will continue to monitor capital expenditure and the associated outputs.

4.50 Certain of the underspends referred to in the draft proposals do not specifically relate to agreed output measures. This is the case for the NTS flexibility projects and certain NTS compressor investment. In the former case the MMC stated that 'any under-investment may be recovered at the time of the next price control review'[15]. Significant investment in NTS flexibility/resilience and compression upgrades has been included in Transco's forecasts. Transco's performance in the current period has been taken into account in setting targets for the next price control period.

[15] MMC Conclusions paragraph 2.155

Ofgem's projections of capital expenditure in the next price control period

4.51 The major area of work carried out since draft proposals relates to NTS TO expenditure. As stated previously, Ofgem has reviewed the detailed information provided by Transco to support its St. Fergus Base scenario for the NTS. The three categories of expenditure identified by Transco are discussed below.

Investment to meet statutory obligations

4.52 Transco has requested an allowance of £430 million over the price control period for capital spending to meet its statutory obligations, excluding compressor replacement expenditure. Analysis indicates that Transco's proposed phasing of this expenditure may be unduly concentrated in the early part of the price control period and that proposed capital expenditure on compressor replacement appears to include an element of resilience expenditure.

4.53 The final proposals are based on the following projections of capital expenditure in respect of NTS statutory outputs. These have been adjusted for the efficiency improvements described in the draft proposals and include the assessment of compressor replacement expenditure to allow Transco to meet its obligations under environmental and other legislation.

Table 4.9 : Ofgem's projections of NTS capital expenditure in respect of statutory obligations

£ million – 2000 prices	2002/3	2003/4	2004/5	2005/6	2006/7	Total
New capacity	110	104	8	3	12	236
Compressors	0	3	15	15	15	48
Other	33	21	28	33	26	140
Total	**143**	**127**	**50**	**51**	**52**	**424**

Summer flexibility

4.54 Transco proposed total spending of £420 million on summer flexibility projects. This provides summer capacity broadly matching winter capacity levels. Ofgem proposes to make the following capital provision in respect of NTS Summer flexibility.

Table 4.10 : Ofgem's projections of NTS summer flexibility capital expenditure

£ million – 2000 prices	2002/3	2003/4	2004/5	2005/6	2006/7	Total
Summer flexiblity	16	110	200	55	0	380

Expenditure includes provision for new transportation capacity and additional compressor replacement and enhancement.

4.55 Additional expenditure related to compressors is included to increase availability, particularly in the summer months. It is noted that this expenditure will also contribute towards the resilience of the system to respond to supply shocks.

4.56 While there is market based and other evidence suggesting a strong demand for this investment at present, given Transco's investment lead times it is not clear that it will necessarily be efficient for Transco to make this investment. Given developments in the pattern of demand then it is not clear that there will be significant demand for extra summer capacity in two or three years time. The development of a revenue driver for the NTS TO control, as discussed in Chapter 2, would help ensure that if Transco does not make this investment then there will be an automatic downward adjustment in its revenue.

Resilience

4.57 Transco has a licence obligation to meet 1 in 20 demand levels and that includes making an allowance for failures of Transco's plant and equipment and for offshore gas supply failures. Nevertheless a very large offshore supply failure may best be dealt with through providing additional capacity for the transport of gas from other terminals. Transco has made proposals for investment of £200 million to provide such capacity, which is additional to those resources it already provides for the 1 in 20 demand level. These proposals need further analysis to understand the outputs delivered both in the event of offshore supply failures and under normal operating conditions. Ofgem does not therefore intend to provide any additional capital provision for resilience projects at this stage. If in the future it becomes clear that this expenditure is needed and that it will have clearly defined outputs then it can be funded through the SO incentive arrangements.

Table 4.11 : Ofgem's projections of NTS TO capital expenditure

£ million – 2000 prices	2002/3	2003/4	2004/5	2005/6	2006/7	Total
Statutory	143	127	51	50	53	424
Summer flexiblity	16	110	200	55	0	380
Resilience	0	0	0	0	0	0
Linepack	0	0	0	0	0	0
Total	159	237	250	106	52	804

Summary of Ofgem's capital expenditure projections

4.58 Ofgem's projections of capital expenditure in price control units other than the NTS are largely unchanged since draft proposals. Small adjustments to the LDZ projections have been made as informed by the consultants' final reports, and metering expenditure has been adjusted for certain extra costs associated with increased non-domestic meter replacement. The following table shows Transco's forecasts and Ofgem's final projections of capital expenditure.

Table 4.12 : Ofgem's projections of gross capital expenditure (excluding NTS SO spending)

£ million – 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07	Total (2002/03-2006/07)
TRANSCO SBP						
NTS TO*	168	286	296	210	86	1,046
LDZ	354	244	193	167	176	1,134
Metering	159	150	164	163	155	792
Meter Reading	4	3	2	4	2	15
Total	685	683	655	544	419	2,985
OFGEM PROJECTIONS						
NTS TO*	159	237	250	106	52	804
LDZ	315	215	168	146	151	996
Metering	120	111	101	96	92	520
Meter Reading	4	3	1	2	2	12
Total	598	566	520	350	297	2,331

* Figures based on Transporting Britain's Energy, St Fergus Base Scenario. Some updated data has been provided to Ofgem since Transco's Transporting Britain's Energy consultation

4.59 As discussed in the draft proposals, in financing capital expenditure it is necessary to take into account capital receipts from customers and other sources. Therefore the projections of capital investment used in Chapter 6 are net of these receipts.

Replacement Expenditure

4.60 Each year Transco replaces a proportion of its existing mains and service pipes. The principal driver for this work is the risk of incidents from mains, which is controlled through the selective replacement of mains prioritised by a risk model. Mains and services may also be replaced if found to be in poor condition or in the course of highway improvement works (re-chargeable diversions) where the cost is usually borne by the highway authority.

4.61 Currently, Transco is carrying out a major replacement programme to remove certain medium pressure ductile iron mains from the network by the end of 2002.

Expenditure in the current price control period

4.62 The two tables below show Transco's expected expenditure and performance over the present price control period in the de-commissioning of mains, compared to the projections made by the MMC at the time of the last price control review.

Table 4.13 : Gross mains replacement expenditure (excluding diversions) 1997/8 to 2001/2

£ million – 2000 prices	1997/98	1998/99	1999/00	2000/01	2001/02	Total
MMC	159.0	179.6	196.1	203.6	204.7	943.1
Actual/Forecast	115.3	125.3	148.5	195.7	305.7	890.5
Variance	-43.7	-54.3	-47.6	-7.9	100.9	-52.6
% Variance	-27%	-30%	-24%	-4%	49%	-6%

Table 4.14 : Mains decommissioned 1997/8 to 2001/2

Kilometres	1997/98	1998/99	1999/00	2000/01	2001/02	Total
MMC	1775	1982	2163	2276	2333	10528
Actual/Forecast	1948	1874	1981	2073	2155	10030
Variance	173	-108	-183	-203	-177	-497
% Variance	10%	-5%	-8%	-9%	-8%	-5%

4.63 Over the period of the present price control, Transco's gross mains replacement expenditure and the total length of mains decommissioned is expected to be within about 5 per cent of that allowed by the MMC. Overall, the totals are reasonably consistent with the projections made by the MMC, suggesting that no further adjustments to the price control revenue would be appropriate.

4.64 The two tables below show Transco's expected expenditure and performance over the present price control period in the replacement of services compared to the projections made by the MMC at the time of the last price control review.

Table 4.15 : Gross service replacement expenditure 1997/8 to 2001/2

£ million – 2000 prices	1997/98	1998/99	1999/00	2000/01	2001/02	Total
MMC	69	71	72	72	72	357
Actual/Forecast	52	56	68	74	60	310
Variance	-18	-15	-4	1	-12	-47
% Variance	-25%	-21%	-6%	2%	-16%	-13%

Table 4.16 : Services replaced 1997/8 to 2001/2

Service Replacement 000s	1997/98	1998/99	1999/00	2000/01	2001/02	Total
MMC	288	302	318	327	335	1570
Actual/Forecast	243	247	238	210	216	1155
Variance	-45	-55	-79	-117	-119	-415
% Variance	-16%	-18%	-25%	-36%	-36%	-26%

Service replacement includes domestic and non-domestic services replaced and transferred, but excludes the relaying of services to new meter positions (customer led work)

4.65 Transco's service replacement expenditure is forecast to be £47 million or 13 per cent below that allowed by the MMC. Transco's service workload is expected to be some 415,000 services or 26 per cent less than that allowed by the MMC. As part of the capital monitoring process, Transco has explained the reasons for these lower costs. Ofgem intends to reduce the possibility of future under-expenditure of this magnitude by more closely matching its projections of mains and service replacement programmes.

Projections of replacement expenditure in the next price control period - Mains

4.66 The draft proposals referred to the HSE review of Transco's replacement policy and programme. The HSE has now concluded that Transco should be required

to implement a mains replacement programme from 2002 such that all cast iron and ductile iron mains within 30 metres of premises should be replaced within 30 years.

4.67 To meet the HSE's requirement Transco will need to increase its level of mains replacement from the current level of about 2000 kilometres/year to around 3,500 kilometres/year by 2006. Transco will need to maintain this higher level of activity for 20 years before declining to new, low, maintenance levels of activity by the year 2031.

4.68 Transco estimates that currently there are some 91,000 kilometres of low pressure mains within 30 metres of premises. In addition, there are some 2000 kilometres of medium pressure ductile iron main within 30 metres of premises which will be replaced by the end of 2002. The total mains population (in 2001) includes approximately 136,000 kilometres of metallic pipe and non-standard materials.

4.69 It is often uneconomic to replace short sections of main (i.e. strictly within 30 metres of premises) and total replacement in excess of 91,000 kilometres is to be expected. An allowance has also been included in the programme for mains currently outside the 30 metre threshold, which may in the course of the 30 year programme fall within 30 metres due to new development adjacent to the main.

4.70 Taking into account these operational factors, the 30 year programme indicates that some 98,000 kilometres of replacement pipe will be installed over the thirty-year programme, equivalent to 108,000km of mains abandoned or 80 per cent of the existing non-polyethylene pipe mains population.

4.71 The HSE has acknowledged that certain categories of metallic main (principally large diameter (> 12") cast iron mains) have a much lower risk of failure than others. Transco has been requested by the HSE to undertake work to quantify the risk arising from these mains. It is likely that these very low risk mains may ultimately be removed from the 30 year programme with future replacement or refurbishment being informed by condition monitoring. The HSE intends to regularly review Transco's progress and may adjust the programme when better quality information concerning the population at risk is available and when the

question of the inclusion or exclusion of large diameter cast iron mains has been resolved.

4.72 Transco's forecasts for the mains replacement programme are summarised in the table below.

Table 4.17: Transco's 30 year programme - Mains Replacement (excluding diversions)

	2002/03	2003/04	2004/05	2005/06	2006/07	Total
Gross costs £ million – 2000 prices	367	280	325	354	364	1,690
Length of Replacement Main (km)	2,258	2,696	2,991	3,298	3,512	14,755

4.73 There is significant uncertainty in the cost of the programme proposed. Transco's forecasts include:

(a) completion (by the end of 2002) of the removal of medium pressure ductile iron mains within 30 metres of premises;

(b) continuing management of risk and targeted replacement of identified mains; and

(c) general replacement of iron mains within 30 metres of premises.

4.74 The precise policy that will deliver these requirements is yet to be agreed with the HSE and thus the transition from the existing work, (a) and (b) above, to the more large-scale replacement projects (c) is not fully determined. Because of this uncertainty Ofgem has assumed only modest economies of scale arising from a gradually increasing workload.

4.75 Transco has considered the potential cost of increasing production to meet the 30 year programme at a time when the utility infrastructure market is relatively buoyant. Its forecasts of these additional costs take into account a range of factors and assume costs rising in real terms (in excess of general inflation) by about 24 per cent between 2000 and 2005. Towards the end of the price control period Transco's assessment of cost increases recognises the mitigating effect of recruiting new staff entrants to the industry.

4.76 Ofgem accepts that Transco's costs are likely to rise faster than RPI but has assumed that a reasonably efficient management would be able to limit this increase to 17 per cent. There will also be extra costs associated with training about 1,500 new entrants to mains and service replacement activity over the five year period

4.77 The final proposals are based on an assessment of efficient unit costs following analysis of data presented by Transco and taking into account the current forecasts of the length and diameter mix in the 30 year programme. These are summarised in the table below.

Table 4.18: Final proposals - Mains Replacement (excluding diversions) 2002/3 to 2006/7

	2002/03	2003/04	2004/05	2005/06	2006/07	Total
Costs £ million – 2000 prices	342	263	285	304	314	1,509
No of new recruits	*380*	*300*	*300*	*300*	*280*	*1,560*
Length of Replacement Main (km)	Unchanged from Transco submission					

4.78 The following table compares the final proposals with the estimates in the draft proposals and with Transco's forecasts. The 30 year programme has a significant increase in length over the programme in the draft proposals. Ofgem's projection of cost for the 30 year programme has not increased pro-rata with length because of changes in the diameter mix between the draft proposals and the 30 year programme.

Table 4.19 : Comparison of cost - Mains Replacement (excluding diversions) 2002/3 to 2006/7

	Length of replacement main km	Cost
Draft proposals	8,531 km	£1,191m
Transco's 30 year programme	14,756 km	£1,690m
Final proposals	14,756 km	£1,509m

4.79 Re-chargeable mains diversions are excluded from the allowed costs set out above since the costs of these diversions are recovered from third parties.

Projections of replacement expenditure in the next price control period - Services

4.80 Transco's proposal for service replacement reflects the increasing volumes of mains replacement required to meet the 30 year programme. For the most part, services are replaced in conjunction with the mains replacement programme, although services in good condition may simply be re-connected to the new main.

Table 4.20 : Transco's proposals - Services Replacement 2002/3 to 2006/7

Replacement Services	2002/03	2003/04	2004/05	2005/06	2006/07	Total
Costs £ million – 2000 prices	78	108	117	124	123	550
Workload – No of Jobs (000s)	274	389	417	446	465	1,991

4.81 Ofgem's projections of service job workload reflect the projected mains volumes in the first five years of the 30 year programme. In addition, the estimated number of service jobs takes into account the relationship between replacement mains and services as reported by Transco for 1997 to 2000. The final proposals for services replacement are set out in the table below.

Table 4.21 :Ofgem's proposals - Services Replacement 2002/3 to 2006/7

Replacement Services	2002/03	2003/04	2004/05	2005/06	2006/07	Total
Costs £ million – 2000 prices	73	84	88	91	91	427
Workload – No of Jobs (000s)	261	327	355	384	404	1,731

4.82 The following table compares the final proposals with the estimates in draft proposals and with Transco 's forecasts. Ofgem's workload projection is lower that that proposed by Transco in relation to the 30 year programme. However, it is significantly larger than that suggested by Transco in its BPQ submission and reported in the draft proposals, and which Transco developed in line with the service replacement policy agreed with the HSE.

Table 4.22 : Comparison of cost - Services Replacement 2002/3 to 2006/7

	Number of service Jobs (000s)	Cost
Draft proposals	1,156	£290m
Transco 30 year plan	1,991	£550m
Final proposals	1,731	£427m

4.83 The following table summarises the final proposals for expenditure on the replacement of LDZ mains and services, and includes the proposals for LTS replacement and mains diversion expenditure. It also shows Transco's projections.

Table 4.23 : Ofgem's projections for replacement 2002/3 to 2006/7

£ million – 2000 prices	Ofgem final proposals Gross Cost	Transco projections Gross cost
LTS replacement	41	41
Replacement Mains	1,509	1,690
Mains Diversions (rechargeable)	95	98
Replacement Services	427	550
Total	2,072	2,379

Supplementary Incentive Mechanism – Mains

4.84 Accurate forecasting of replacement volumes over a five-year control period will always be difficult. Although the HSE has now given clear guidance on the overall objective to be achieved, there remains some uncertainty in the diameter mix of the population to be replaced each year. Since the cost of replacing a large diameter main may be many times that of a smaller main (per unit length) expenditure forecasting errors can be significant if diameter substitution takes place.

4.85 The draft proposals outlined a supplementary incentive mechanism intended to sharpen focus on Transco's mains replacement activity. This has now been further developed to provide a mechanism for returning to consumers benefits from changes in the expected workload mix, and sharing with customers any benefits from efficiency gains.

4.86 At the end of each year Transco will report the length of mains abandoned by diameter band. These will be multiplied by the unit costs in the diameter matix (see table 4.25) to give a matrix cost total for the year. This matrix cost total will then be compared to the price control projection (also shown in table 4.25) and the outturn total costs of mains replacement. An outturn price control allowance will then be determined according to the following rules.

- If the outturn total is equal or less than the matrix total then the price control allowance will be the outturn total + 0.33*(matrix total – outturn total).

- If the outturn total is greater than the matrix total then the price control allowance will be the matrix total + 0.5(outturn total – matrix total)

4.87 Table 4.24 sets various possible outcomes from the supplementary incentive mechanism assuming that outturn costs fall within 7½ per cent of the final matrix index totals. Each of the 9 rows in the table summarises a possible scenario based on differing final matrix index totals and outturn cost totals. This supplementary mechanism will provide incentives for Transco to complete the mains replacement programme efficiently. There will be no adjustment to regulatory asset values at the next price control review to take account of differences between Ofgem's projections and final outturns.

Table 4.24: The supplementary incentive mechanism in 2002/03 £ million 2000 prices

Price Control Projection	Matrix Index Totals	Outturn Total Costs	Price Control Allowance	Adjustment to LDZ revenue	Impact on LDZ profits
342	308	285	293	(49)	8
342	308	308	308	(34)	0
342	308	331	319	(23)	(11)
342	342	316	325	(17)	9
342	342	342	342	0	0
342	342	368	355	13	(13)
342	376	348	357	15	9
342	376	376	376	34	0
342	376	404	390	48	(14)

4.88 In addition the price control allowance will be subject to an aggregate constraint where the 5 year total must be no more than the 5 year total for the price control projection.

4.89 If the HSE makes a significant change to its requirements for mains and services replacement then it will be appropriate to consider adjusting the parameters set out in tables 4.24 and 4.25.

Table 4.25 : Replacement Mains Cost Matrix (2000 prices) – mains abandoned

2002/3			
Diameter of Mains Abandoned	Length of mains (km) actually abandoned	Unit cost of abandonment (£/m)	Matrix Cost (£m)
2-3"	256.3	45.7	12
4-5"	858.9	47.4	41
6-7"	280.3	115.3	32
8-9"	213.2	179.8	38
10-12"	517.9	211.7	110
> 12"	357.3	306.8	110
Total	2,483.8		342
2003/4			
Diameter of Mains Abandoned	Length of mains (km) actually abandoned	Unit cost of abandonment (£/m)	Matrix Cost (£m)
2-3"	445.5	46.1	21
4-5"	1,670.2	47.3	79
6-7"	282.7	117.9	33
8-9"	177.8	190.9	34
10-12"	297.0	225.1	67
> 12"	92.4	316.8	29
Total	2,965.6		263
2004/5			
Diameter of Mains Abandoned	Length of mains (km) actually abandoned	Unit cost of abandonment (£/m)	Matrix Cost (£m)
2-3"	287.3	45.2	13
4-5"	2,002.2	45.5	91
6-7"	336.2	113.5	38
8-9"	218.7	184.3	40
10-12"	353.8	217.0	77
> 12"	92.4	307.0	28
Total	3,290.5		288
2005/6			
Diameter of Mains Abandoned	Length of mains (km) actually abandoned	Unit cost of abandonment (£/m)	Matrix Cost (£m)
2-3"	292.4	44.2	13
4-5"	2,265.1	44.3	100
6-7"	366.3	111.0	41
8-9"	237.2	180.2	43
10-12"	374.4	212.1	79
> 12"	92.6	298.2	28
Total	3,628.0		304
2006/7			
Diameter of Mains Abandoned	Length of mains (km) actually abandoned	Unit cost of abandonment (£/m)	Matrix Cost (£m)
2-3"	299.9	42.3	13
4-5"	2,407.5	43.3	104
6-7"	406.8	106.9	43
8-9"	262.0	174.3	46
10-12"	393.6	204.9	81
> 12"	93.3	288.0	27
Total	3,863.0		314

Expenditure monitoring

4.90 The draft proposals set out a framework for expenditure monitoring. This will provide information related to Transco's performance in meeting the outputs specified in the outputs framework, including:

- details of actual and forecast expenditures within the price control period as well as longer-term expenditure forecasts, where these impact on current or forecast delivery of outputs; and
- areas where there are changes in the relationship between capital and operating expenditures.

Excluded Services

4.91 Given the disposal of telecoms assets, the levels of excluded services costs and revenues forecast by Transco for the next price control period are low (less than £5 million per annum). No adjustments have been made to Transco's projections of excluded service costs.

Disposal of Telecoms Assets

4.92 The draft proposals indicated that Transco is in the process of disposing of a number of telecoms sites to Spectrasite Transco Communications Limited (SST). The efficiency consultants reviewed the information provided by Transco on asset valuations and concluded that the transfer prices were reasonable. Regulatory asset values have been adjusted accordingly and no further adjustments are proposed at this stage.

5. Financial issues

Introduction

5.1 The May 2000, November 2000 and February 2001 consultation documents established a framework for the assessment of financial issues during the Transco price control review. This formed the basis for the analysis set out in the June 2001 draft proposals paper. This chapter updates this analysis, setting out an estimate of the cost of capital for Transco's transportation and metering activities, and deals with issues relating to asset valuation, depreciation and financial modelling.

Cost of Capital

5.2 The level of return that is required by the financial markets to provide capital to a company is called its cost of capital, and is usually calculated as a weighted average of the cost of debt and equity finance. The draft proposals established a range of 6 to 6.25 per cent for the cost of capital of transportation activities. The calculation of this range is set out in table 5.1 below. For metering and meter reading the draft proposals suggested 6.75 to 7 per cent, reflecting the influence of competitive pressures.

Table 5.1: Transco's Weighted Average Cost of Capital

Component	Low %	High %
Cost of debt		
Risk-free rate	2.75	2.75
Debt risk premium	1.50	1.90
Cost of debt	**4.25**	**4.65**
Cost of equity		
Equity risk premium	3.5	3.5
Gearing	62.5	62.5
Equity Beta (value)	1.0	1.0
Post tax cost of equity	6.25	6.25
Taxation adjustment (multiplier)	1.43	1.43
Pre-tax cost of equity	**8.9**	**8.9**
WACC		
Pre-tax WACC	**6.0**	**6.25**

Gearing

5.3 The proportion of debt to debt plus equity is referred to as gearing. In calculating an average cost of capital it is necessary to make an assumption about gearing. In setting the price control it is appropriate to assume that Transco has a reasonably efficient level of gearing, in order to encourage financial efficiency and to protect the interests of consumers.

5.4 In the electricity transmission price control review of the National Grid Company (NGC) in 2000, Ofgem assumed that an efficient range for NGC's gearing was between 60 and 70 per cent. The draft proposals assumed Transco's gearing would be 62.5 per cent and this assumption has been retained in the final proposals.

5.5 For debt finance, specialist credit rating agencies assign rating grades to individual debt issues by assessing the degree of credit risk. Transco has a licence requirement to maintain an investment grade credit rating on its debt, providing for access to a wide range of funds at a reasonable cost.

Cost of debt

5.6 The cost of debt finance can be thought of as having two components, a risk-free component (the risk-free rate) and a company-specific risk premium (debt premium). In its report on two water only companies in September 2000[16], the Competition Commission used an estimate of 3.0 per cent for the risk-free rate, based on a range of 2.75 to 3.25 per cent. The draft proposals showed that, since then, redemption yields on index linked gilts (ILGs) have remained low. Similarly, average real yields on conventional bonds of similar duration were 2.5 per cent, based on a forward-looking inflation rate of 2.5 per cent. The draft proposals considered the uncertainty around these yields, the impact of the Minimum Funding Requirement (MFR) and its proposed abolition, as well as past precedent, giving an estimate for the risk-free rate of 2.75 per cent.

[16] "Mid Kent Water plc – A report on the references under sections 12 and 14 of the Water Industry Act 1991", Competition Commission, August 2000

5.7 Transco has said that this rate is too low and does not give adequate recognition to the effect of removing the Minimum Funding Requirement. However, since the draft proposals, the yields on ILGs, although initially rising in July, have subsequently fallen markedly to 2.5, 2.5 and 2.4 per cent for short, medium and long-term gilts respectively. Similarly, conventional government bonds currently yield an average real return of 2.5 per cent. These downward movements add further support to the estimate for the risk free rate of 2.75 per cent.

5.8 The debt risk premium reflects the additional return required by the providers of debt finance to hold corporate rather than government debt and can be estimated as a premium over the real risk-free rate. A measure of the debt risk premium is the differential (or spread) between the yield on corporate bonds and those on gilts of comparable maturity. In deciding on the appropriate debt risk premium for Transco, it will be appropriate to assume that Transco maintains an investment grade credit rating on its debt, consistent with an efficient capital structure.

5.9 The draft proposals, using data taken from HSBC for corporate and utility bonds over the last year, suggested single A debt premiums for a balanced portfolio of approximately 150 bps. Premiums on triple B+ utility bonds were estimated at 30 to 40 bps above those carrying a single A rating. Taking an estimate for the risk-free rate of around 2.75 per cent and a debt risk premium of 1.5 to 1.9 per cent, the draft proposals concluded on an overall cost of debt in the range 4.25 to 4.65 per cent.

5.10 Transco has suggested that the divergence between single A and triple B stocks has widened and that there is increased volatility in this spread, such that the additional premium for a triple B stock would need to be at least 60 bps greater than that for a single A rated stock. Transco has also said that the level of borrowing that it requires means that it must have access to both the Sterling and Euro Bond markets.

5.11 Ofgem has carried out further work on the required additional premium between triple B and single A rated stock, using raw data and information gathered from the Bank of England's Financial Stability Review: June 2001 on the Sterling and Euro Bonds markets. While the additional work on the Sterling

Bond market suggests the findings of the draft proposals may be somewhat generous, the work on the Euro Bond market suggests that the additional premium may be somewhat understated. Consequently, overall, the range for debt premia set out in the draft proposals remains valid.

Embedded debt

5.12 One respondent raised concerns that not allowing an adjustment to the cost of capital for embedded debt penalised companies for existing debt that was raised at a reasonable price. Ofgem recognises the principles surrounding the financing of embedded debt but, for the reasons set out in the draft proposals, it is not appropriate to make an adjustment for Transco in the present circumstances.

Cost of Equity

5.13 The draft proposals set out estimates for the cost of equity finance based on the Capital Asset Pricing Model (CAPM), which were supported by results from the Dividend Growth Model (DGM). CAPM derives an estimate for the cost of equity finance by adding an estimate of the real risk-free rate to an estimate of the appropriate company specific equity risk premium (ERP). The estimation of the risk-free rate was discussed above in the section on the cost of debt. In estimating the appropriate company specific ERP, two factors are taken into consideration, the ERP for the market as a whole and the riskiness of the company relative to the market (known as its beta value).

Equity Risk Premium (ERP)

5.14 As explained in the draft proposals, doubts have been raised as to how relevant the historical ERPs are in predicting the risk premiums that will be required in the future. Generally, past trends are usually regarded as too high, and surveys of institutional and investor opinion tend to produce considerably lower estimates. In considering all the available information, the draft proposals suggested an ERP of around 3.5 per cent.

5.15 Transco has said that it should be allowed an ERP of 4 per cent, consistent with the Competition Commission's report on the water companies in September 2000. Furthermore, Transco suggest that Ofgem is incorrect in its interpretation

of the Millennium Book II[17] in suggesting a range for the UK of 2 to 4 per cent. These arguments were dealt with in the draft proposals and no further information has come to light since then. The final proposals retain an estimate for the ERP of 3.5 per cent.

Beta values

5.16 An indication of the specific riskiness of a company relative to the market is given by its beta coefficient. A difficulty in using observed betas to estimate a beta for Transco's regulated business is that Transco is not a separately quoted company.

5.17 The evidence that is available suggests an asset beta for Transco in the range 0.4 to 0.5. Using a gearing for Transco of around 60 per cent suggests an equity beta of around 1 to 1.25. There is however only limited empirical evidence supporting a mechanistic link between higher levels of gearing and higher equity betas. The draft proposals showed that alternative approaches to calculating asset betas may imply lower estimates. Taking this into account as well as the market perception that utility businesses are low risk, the draft proposals were based on a value for the equity beta of 1, consistent with the average risk for the market as a whole.

5.18 Transco has said that Ofgem has chosen to ignore one of CAPM's fundamental principles, namely that as a company's gearing increases, its equity risk also increases. Transco has suggested a series of equity betas, using the alternative approaches highlighted by Ofgem in the draft proposals for the de-gearing and gearing of betas. Transco conclude that its findings support an equity beta of between 1.1 and 1.2, and that all of the alternative approaches accept that equity risk increases as gearing increases. Transco further proposes that at a gearing level of 62.5 per cent the equity beta should be at least 1.2.

5.19 The draft proposals accepted that gearing and equity risk are linked, but suggested that it would be sensible to take a conservative view of the appropriate adjustments to equity beta arising from higher levels of gearing.

[17] "Millennium Book II, 101 Years of Investment Returns", Elroy Dimson, Paul Marsh and Mike Staunton, ABR-AMRO and London Business School, 2001

This remains the position and the final proposals have retained the assumption that an appropriate estimate of the equity beta for Transco would be 1.

Adjusting for taxation

5.20 As well as paying dividends and interest, companies must also finance corporation tax payments. As interest payments are allowable against corporation tax, the cost of debt finance does not need to be adjusted upwards to take account of corporation tax.

5.21 In its report on Cellnet and Vodafone, the MMC adjusted the cost of equity finance upwards by a tax wedge to take account of corporation tax payments. In calculating the tax wedge, the assumption was that the companies would pay the mainstream rate of corporation tax of 30 per cent, giving a multiplier of 1/(1-0.3) or 1.429. Ofgem adopted this same approach in its reviews of the electricity transmission and distribution businesses.

5.22 One respondent to the draft proposals felt that the calculation of the tax wedge overstates Transco's likely future tax liability in light of its large investment programme.

5.23 The use of the 1.429 multiplier will be retained, consistent with the approach previously adopted by the Competition Commission and the present mainstream rate of corporation tax. Nevertheless, there remains some uncertainty as to the amount of the corporation tax Transco will actually pay as the Inland Revenue is presently considering the tax treatment of replacement expenditure. If the Inland Revenue changes the tax treatment of replacement expenditure it may be appropriate to consider adjusting the price control.

Discussion and conclusion

5.24 Transco has raised concerns about its ability to maintain a single A investment grade rating with a 62.5 per cent level of gearing. Transco has said that the draft proposals would result in a lower credit rating for its debt. It has also said that any deterioration in its single A credit rating would lead to a deterioration in its short-term rating from A1/P1 to A2/P2 and that this would result in a sharp increase in the cost of its short term borrowings.

5.25 Most respondents expressed the view that having decided on unfocused regulatory asset values, the cost of capital should be consistent with that set for the electricity transmission and distribution businesses. A number of respondents felt that the range of 6 per cent to 6.25 per cent seemed reasonable, although some emphasised that the cost of capital would need to be high enough to ensure Transco could finance its future capital expenditure programme, in particular iron pipe replacement. Some respondents felt that the cost of capital should reflect the additional risks that Transco would face under the new regulatory incentive framework for the NTS. However, one respondent noted that a number of features of the draft proposals would serve to reduce Transco's risk exposure, such as the LDZ revenue driver.

5.26 Compared to most business activities, gas transportation is a relatively low risk activity. These proposals include a range of measures consistent with this. The section below sets out proposals for an unfocused approach to asset valuation. Chapter 6 explains measures that will ensure that Transco can finance its increased programme for replacement expenditure. The financial modelling described at the end of this Chapter indicates that Transco will be able to retain an investment grade credit rating comfortably above the minimum level. Nevertheless Transco will also need the flexibility to fund levels of expenditure in excess of the base levels set out in these proposals. Taking all of these considerations into account suggests a cost of capital of 6.25%. This is at the higher end of the range in the draft proposals.

Asset Valuation

5.27 In order to secure continuing access to funds on acceptable terms, an enterprise needs to provide a return on the capital invested in its business. In the last Transco price control review the capital invested in Transco's business, or its regulatory asset value (RAV), was considered in two parts, an initial valuation and the value of subsequent investments.

Initial valuation of assets

5.28 In its 1993 report the MMC distinguished between assets in existence on 31 December 1991 and investments made after that time. The same approach was used by Ofgas in its initial and final proposals in 1996 and by the MMC in its

1997 report. The May, November and February documents described issues surrounding the valuation of Transco's assets at 31 December 1991, and two different approaches that could be used to arrive at a value for these assets, the focused or unfocused approaches.

5.29 In deciding on a focused or unfocused approach, a range of factors were considered including market evidence and 1991 asset values, regulatory consistency, the views of interested parties, and the views of the MMC. The draft proposals also noted that as time progresses the RAV will increasingly reflect the value of new investment undertaken since December 1991 and that a change to the initial RAV would create uncertainty and may increase Transco's cost of capital. In light of these considerations, the draft proposals retained an unfocused valuation for Transco's initial RAV, consistent with the MMC's 1997 report.

5.30 Respondents generally welcomed the resolution of this issue, although two respondents would have preferred a focused approach to the calculation of the RAV. Transco emphasised that the decision to maintain an unfocused valuation for the initial RAV brought Transco into line with other utilities and did not make it a lower risk company.

Valuation of subsequent investments

5.31 As well as providing a return on the unamortised balance of Transco's December 1991 assets, the present Transco price control was designed to allow for the financing of network capital expenditure between December 1991 and the end of the present price control in 2002. The next price control will also allow for the financing of Transco's efficiently incurred capital expenditure between December 1991 and the present, and an efficient level of projected capital expenditure to the end of the next price control period in 2007. There is no market-to-asset ratio adjustment to the investment made since 1991 so Transco is able to earn a full return on allowed capital expenditure.

Asset lives and depreciation

5.32 There is an annual adjustment to the RAV for depreciation, both on assets existing at the end of this price control period (pre-April 2002), and on the

projected capital expenditure to be undertaken between April 2002 and March 2007.

5.33 Transco has provided figures for the roll forward of the RAV from 1997 to April 2002 on the basis of its actual and projected depreciation. These numbers are broadly in line with the projections made by the MMC in its 1997 report and have been used in the calculations set out in Chapter 6.

Impact of separate controls

5.34 To implement separate controls, it is necessary to attribute Transco's existing RAV between the NTS, LDZ, and metering activities. Transco initially proposed separating these activities according to the relative book value of the assets, but with a transfer from metering to transportation to reflect the recovery of certain stranded metering costs. The draft proposals adopted an unfocused approach, consistent with the method for valuing Transco's overall RAV and so did not make Transco's proposed adjustment to the value of metering assets. This is shown in table 5.2.

Table 5.2: Separation of the RAV (as at 31 December 2001):

Business	RAV (£ million 1996 prices)	RAV (£ million 2000 prices)	%
NTS	1,907	2,125	16.4
LDZs	8,347	9,304	72.1
Metering	1,339	1,492	11.5
Total excluding storage	**11,592**	**12,921**	**100.0**

5.35 Transco has reiterated its view that the RAV for the metering business is greater than depreciated replacement cost, and that this would lead to the stranding of metering assets. Transco propose a replacement value for metering RV of £965 million, with the excess treated as network assets.

5.36 An unfocused approach to asset valuation has been retained. In the light of this it is not appropriate to make the adjustments to metering asset values suggested by Transco.

Treatment of depreciation

5.37 The draft proposals described the present approach to calculating depreciation, indicating that it is relatively complex, difficult to monitor and relies on Transco providing detailed information on additions and disposals across a relatively large range of asset categories. To address these concerns, the draft proposals suggested that it would be beneficial to simplify the approach to calculating depreciation post-April 2002.

5.38 In its response to the draft proposals Transco drew attention to three principles which it said would be important to consider in simplifying depreciation:

- Transco needs to be able to fund its activities;
- there should be inter-generational equity between consumers; and
- the regulatory regime should be as simple, transparent and predictable as possible.

5.39 In order to satisfy these principles, Transco proposed that the method of calculating regulatory depreciation would have assumed economic lives for assets with these being revised at each successive price control review.

5.40 Transco's method would involve applying straight line depreciation to all of its assets. Network activities would be split into 3 asset categories, with 40, 25 and 5 year asset lives, and metering into 4 asset categories, with lives between 5 and 10 years. The same asset lives would apply to existing assets and new investments and would be reviewed every 5 years in the light of remaining economic lives and adjusted accordingly. This 5 yearly review of asset lives would help avoid any large step changes in depreciation between price control periods.

5.41 The approach suggested by Transco has a number of attractive features. However, it would represent a significant change to the overall approach to calculating regulatory depreciation. It would be premature to introduce these changes at this price control review as there is no further opportunity for wider consultation.

5.42 Nevertheless, it remains appropriate to simplify the existing calculation of regulatory depreciation. The revised approach is summarised below.

A) Existing assets (pre-1 April 2002)

- The revised method assumes that the assets existing at April 2002 have been accumulated evenly over time. A straight-line depreciation charge is calculated for each group of assets separately in each year as shown in the example calculations in table 5.3. The result is a smooth, declining depreciation profile as shown in table 5.4.

Table 5.3: Accumulated net value at the start of the price control (assuming an opening value of 550 and an economic life of a new asset is 10 years)

	Remaining economic value £	Years remaining	Annual depreciation £
Group 1	100	10	10
Group 2	90	9	10
Group 3	80	8	10
Group 4	70	7	10
Group 5	60	6	10
Group 6	50	5	10
Group 7	40	4	10
Group 8	30	3	10
Group 9	20	2	10
Group 10	10	1	10
Total net value	550		

Table 5.4: Depreciation charge projected forward (£)

	2002/03	2003/04	2004/05	2005/06	2006/07
Group 1	10	10	10	10	10
Group 2	10	10	10	10	10
Group 3	10	10	10	10	10
Group 4	10	10	10	10	10
Group 5	10	10	10	10	10
Group 6	10	10	10	10	10
Group 7	10	10	10	10	0
Group 8	10	10	10	0	0
Group 9	10	10	0	0	0
Group 10	10	0	0	0	0
Total depreciation	100	90	80	70	60
Remaining net value	450	360	280	210	150

- A range of considerations has influenced the choice of asset lives including the accounting and economic lives of the assets concerned, and the present value of the new profile compared to the method previously adopted by the MMC.

B) New assets (post-1 April 2002)

- A single asset life for each price control block is applied to new assets. The new assets are then depreciated on a straight-line basis.

C) Capital Expenditure

- This will be assessed net of cash receipts (either from customer contributions or asset disposals). No further adjustments will be made for asset disposals.

5.43 A summary of the asset lives used in Ofgem's calculations is given in table 5.5. Over the price control period, this method will result in the depreciation charges shown in table 5.6.

Table 5.5: Average asset lives

Category	Existing assets (years)	New investments (years)
NTS	28	45
LDZs	28	45
Metering	10	15

Table 5.6: Depreciation profile

Category	2002/03	2003/04	2004/05	2005/06	2006/07
NTS	75	77	81	85	86
LDZs	328	331	332	332	333
Metering	142	143	143	143	142
Total	545	551	556	560	561

Financial modelling

5.44 Ofgem has developed a financial model of Transco's regulated business, which derives an appropriate level of revenue for Transco, based on Ofgem's projections of costs. The financial model has been used to inform judgements on the final proposals.

5.45 In order to maintain financial efficiency it is necessary for Transco to have access to finance on acceptable terms. A key test of which will be Transco's ability to retain a credit rating adequate to secure this under stable market conditions and this is the focus of the financial modelling.

5.46 As set out in the draft proposals, the main credit rating agencies stress the importance in determining credit ratings of qualitative factors such as overall management strategy and perceptions of the regulatory environment, although there is some published guidance on the financial analysis they undertake. Particular emphasis is placed on levels of debt, cash and cash flow in view of the difficulty of comparing reported earnings and balance sheet data between companies operating under different regulatory regimes and following different accounting conventions. Therefore measures such as the coverage of interest charges by funds from operations (FFO) and the ratio of FFO to total debt are considered more relevant and reliable than earnings coverage or balance sheet gearing. In addition, credit rating agencies increasingly have regard to the percentage of total debt to RAV, with a range of 60 to 70 percent being consistent with investment grade credit ratings above the minimum levels.

5.47 Following discussions with institutions, rating agencies and investors, the draft proposals set out the minimum levels for key financial indicators consistent with an investment grade credit rating, which had been used to assess the impact of revised price controls. These are reproduced in table 5.7 below.

Table 5.7: Ofgem's financial indicators

Indicator	Minimum levels
EBIT interest coverage	Min 1.5x
EBITDA interest coverage	Min 2.25x
FFO interest coverage	Min 2.0x
FFO to total debt	Min 12%

5.48 It is not straightforward to determine how the credit rating agencies will interpret the financial position of Transco. The key financial ratios are affected by Transco's accounting treatment of replacement expenditure and to some extent by its use of modified historical cost accounts.

5.49 The modelling of the base case in the draft proposals indicated that Transco would be able to maintain an investment grade credit rating. The financial modelling of the final proposals and discussions with the main credit rating agencies indicate that Transco should be able to retain a credit rating comfortably above the minimum investment grade.

6. Price control calculations

Introduction

6.1 In setting Transco's price controls, it is appropriate to estimate the revenue level that would be sufficient to finance a reasonably efficient business. This is derived by considering projections of operating costs, allowances for depreciation and the appropriate level of return for capital already invested in the business. This chapter explains how Ofgem has derived its final proposals for Transco's price control revenue over the period 2002/03 to 2006/07, incorporating the analysis set out earlier in this paper.

Transportation controls

6.2 Over time, transportation prices may be considered the sum of:

- efficient operating expenditures;
- an allowance for depreciation on the regulatory asset base; and
- a return on the regulatory asset base.

Operating and capital expenditure

6.3 The levels of operating and capital expenditure set out below reflect the conclusions of Chapter 4.

6.4 In setting the present price control, replacement expenditure was treated as capital expenditure and added to the regulatory asset value. The draft proposals were based on maintaining this same approach, while highlighting that this might need to be reconsidered following the outcome of the review by the HSE of Transco's replacement policy and the associated level of replacement expenditure.

6.5 Following directions from the HSE, the programme of replacement expenditure set out in Transco's BPQ has been significantly increased, such that a key issue becomes how this enhanced level of replacement expenditure should be financed.

6.6 If replacement expenditure is treated as capital expenditure then an allowance is made each year for depreciation and a return on the unamortised balance of the expenditure. This allows the costs to be spread out over a number of price control periods. If it is treated as an operating cost then it is expensed in the year that it is incurred and a 100 per cent allowance made for the spending in that year.

6.7 The renewal programme is primarily concerned with present safety requirements rather than increasing the network's capacity or functionality for the benefit of future customers. This suggests that the costs should be expensed within the price control period and be met by consumers within the period. Nevertheless there will be some advantages to consumers in the future in that levels of replacement spending will be lower, newer assets tend to require less repair and maintenance and less gas will be lost through shrinkage. This suggests that it would be reasonable for future consumers to bear a proportion of these costs.

6.8 A way to deal with the tension between these considerations is to treat a proportion of these costs as capital expenditure and a proportion as operating expenditure. In deciding on the appropriate proportions it is necessary to have regard to a range of considerations. It is important to consider the path of prices in the short and longer term and whether the assumptions underlying the price control will allow Transco to finance its activities efficiently. It would be undesirable if the revised price control reduced prices to a level that was not sustainable in the following price control period. Assuming that 50 per cent of this expenditure is capitalised and that 50 per cent is expensed allows for real price reductions in each year of the next price control period and Ofgem's projections indicate that these price reductions should be sustainable in the future. In addition, the financial modelling and discussions with the credit rating agencies indicates that Transco plc should be able to retain an investment grade credit rating on its debt and so continue to have access to a range of funds at a reasonable cost.

6.9 In contrast, if all the replacement expenditure is capitalised and added to the RAV then, although the initial price reductions would be larger, they might not be sustainable over time. In addition, given that it is envisaged that the programme of enhanced replacement spending will last some 30 years, then

there would be sustained upward pressure on the LDZ RAV, Transco's net debt and interest payments. This would put significant strain on Transco's key financial ratios and jeopardise its ability to retain an investment grade credit rating. On the other hand if all the replacement expenditure were to be expensed then present consumers would fund a high level of expenditure, a proportion of which would benefit consumers in the future. Price reductions to consumers would be significantly less and at the same time the LDZ RAV would be falling and Transco would be extracting cash from its LDZ price control. This would not appear to strike an appropriate balance between the interests of present and future consumers and shareholders.

6.10 Bearing these considerations in mind, the final proposals are based on 50 per cent of replacement expenditure being capitalised and added to the RAV and 50 per cent being expensed in the year that it is incurred.

Regulatory Depreciation

6.11 The approach to asset values and regulatory depreciation was explained in Chapter 5. An unfocused approach to Transco's RAV will be appropriate in the future, consistent with the approach previously adopted by the MMC, giving an opening asset value of about £12.7 billion in April 2002. This leads to a regulatory depreciation charge of about £0.55 billion per year.

Cost of Capital

6.12 In respect of the cost of capital, Ofgem has assumed a weighted average cost of capital of 6.25 per cent, consistent with a reasonably strong triple B investment grade credit rating on its debt.

Allocating Po and X

6.13 It is necessary to decide how to sculpt the price control revenue over the period, thus allowing projections of revenue for each year of the price control. The price reduction in the first year of the next price control period is referred to as P0. The subsequent annual reduction in prices is referred to as X. Ofgem has assumed an X of 2 per cent for the next price control period, consistent with Transco's present price control.

Final proposals

6.14 On the basis of all the information available and taking into account the considerations described above, the calculations of Transco's price control revenue give a P0 reduction of 4.2 per cent in 2002/03 followed by further real reductions in revenue of 2 per cent each year over the period 2003/04 to 2006/07.

6.15 The following table sets out the calculation of Transco's price control revenue.

Table 6.1: Transco's price controlled revenues (P0 = 4.2 per cent, X = 2)

£ billion 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07
Opening asset values	12.7	12.8	13.0	13.0	13.0
Depreciation	(0.5)	(0.6)	(0.6)	(0.6)	(0.6)
Capital expenditure	0.7	0.7	0.6	0.5	0.5
Closing values	12.8	13.0	13.0	13.0	12.9
Operating costs	1.40	1.35	1.35	1.35	1.34
Depreciation	0.54	0.55	0.56	0.56	0.56
Return	0.81	0.82	0.82	0.82	0.82
Total	2.75	2.72	2.73	2.73	2.72
Price control revenue*	2.82	2.77	2.73	2.67	2.63

*In 2001/02 Transco's price control revenue is projected to be £2.94 billion.

6.16 The results of the above analysis have been translated into a financial model of Transco and assessed against financial indicators set out in Chapter 5. A range of assumptions have been considered with respect to the level of costs and gearing. The results of this modelling suggest that Transco should be able to retain a credit rating comfortably above the minimum investment grade.

6.17 The final calculations of NTS, LDZ and metering costs and returns are set out in the tables below. These imply a P0 reduction for the NTS and LDZ price controls of 3.1 per cent and 2.9 per cent respectively in 2002/03, followed in each case by further real reductions in revenue of 2 per cent each year over the period 2003/04 to 2006/07. The level of the metering tariff caps is dealt with in Chapter 7.

Table 6.2: NTS price controlled revenues (P0 = 3.1 per cent, X = 2)

£ billion 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07
Opening asset values	2.1	2.2	2.4	2.5	2.5
Depreciation	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Capital expenditure	0.2	0.2	0.2	0.1	0.1
Closing values	2.2	2.4	2.5	2.5	2.5
Operating costs	0.20	0.20	0.20	0.20	0.21
Depreciation	0.07	0.08	0.08	0.09	0.09
Return	0.14	0.14	0.15	0.16	0.16
Total	0.41	0.42	0.43	0.45	0.45
Price control revenue	0.45	0.44	0.43	0.42	0.41

Table 6.3: LDZ price controlled revenues (P0 = 2.9 per cent, X = 2)

£ billion 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07
Opening asset values	9.1	9.2	9.2	9.2	9.2
Depreciation	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)
Capital expenditure	0.4	0.3	0.3	0.3	0.3
Closing values	9.2	9.2	9.2	9.2	9.1
Operating costs	1.05	1.00	1.00	1.00	0.99
Depreciation	0.33	0.33	0.33	0.33	0.33
Return	0.57	0.58	0.57	0.57	0.57
Total	1.95	1.91	1.90	1.90	1.89
Price control revenue	1.97	1.94	1.91	1.88	1.84

Table 6.4: Metering and Meter Reading Costs and Returns

£ billion 2000 prices	2002/03	2003/04	2004/05	2005/06	2006/07
Opening asset values	1.4	1.4	1.4	1.3	1.3
Depreciation	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Capital expenditure	0.1	0.1	0.1	0.1	0.1
Closing values	1.4	1.4	1.3	1.3	1.2
Operating costs	0.15	0.15	0.15	0.15	0.15
Depreciation	0.14	0.14	0.14	0.14	0.14
Return	0.10	0.10	0.09	0.09	0.09
Total	0.39	0.39	0.39	0.38	0.38

7. Metering and meter reading

Introduction

7.1 This chapter sets out final proposals for the price regulation of Transco's metering and meter reading activities from April 2002 onwards.

7.2 In March 2001, Ofgem published its metering strategy.[18] This document set out a range of measures designed to promote effective competition in metering and meter reading services, across both gas and electricity. The proposals for metering set out in this document form part of this wider strategy.

Ofgem's draft proposals

7.3 The June document stated that price regulation would be removed from Transco's metering and meter reading activities once effective competition was in place. Annex 4 set out Ofgem's criteria for informing this decision.

7.4 It was proposed that price regulation be removed from Transco's provision of Non-Daily Metered (NDM) meter reading activities, since competition in this area is sufficiently developed. However, price regulation should be retained in respect of Transco's other metering and meter reading services.

7.5 A change in the form of control was also proposed – from an RPI-X form of control to a tariff cap form of control. Three of Transco's metering services would be subject to tariff caps, and the provision of other metering services would be regulated through a new non-discrimination condition. In addition, within the overall cap for domestic meter provision, the difference between prepayment and credit meter charges would, for a time, be constrained to £15.

7.6 The proposed tariff caps are reproduced in Table 7.1 below:

[18] Ofgem's strategy for metering - A consultation paper, Ofgem, March 2001.

Table 7.1: Metering tariff caps, draft proposals

Service	Level of cap (2000 prices)
Provide and maintain a domestic meter	£10 - £13 a year
Domestic credit to prepayment meter exchange	£40 - £50 per job
Daily Metered (DM) meter reading service	£330 - £370 a year

7.7 The tariff cap on domestic meter provision bundled together credit and prepayment meters. Within the average cap, the draft proposals also included an outline proposal for the relative tariff caps on credit and prepayment metering – linked to a time-scale for deregulation of prepayment metering.

7.8 The difference between Transco's charges for credit meters and prepayment meters would be capped at £15 until April 2003, at which point Transco's last resort obligation to provide new prepayment meters would fall away. Transco's provision of new prepayment meters beyond April 2003, to the extent that it chose to do so at all, would not be subject to price regulation. There would some form of price regulation, possibly in the form of an undertaking from Transco, in respect of its continuing provision and maintenance of prepayment meters installed before April 2003.

7.9 In Ofgem's view, this proposal provides incentives, and a manageable timetable, for shippers and suppliers to seek out cheaper, more efficient prepayment metering services. It also ensures that consumers are protected in terms of the costs of prepayment metering while alternative arrangements are being put in place.

Respondents' views

7.10 Of the twenty-seven responses to the draft proposals document, eighteen commented on the proposals for metering.

7.11 There was broad support for the move to a tariff cap form of control as a step towards future deregulation of metering services. One respondent noted that the price control was flexible enough to allow selective modification as

competition develops. However, a number of respondents requested more detail on how the non-discrimination condition would operate in practice.

7.12 The majority of respondents supported the principle of removing price regulation when effective competition is established. A number of respondents welcomed Appendix 4 in the draft proposals, which set out the criteria for the assessment of competition.

7.13 Two respondents commented on the proposal to remove price regulation from Transco's provision of non-daily metered (NDM) meter reading with effect from April 2002. One respondent was in favour of the proposal, and one respondent disagreed. Another respondent stated that full unbundling was not the most effective means of capturing the potential benefits, and that Ofgem should take more direct action through standards of service on Transco.

7.14 Eleven respondents commented on the proposal for prepayment metering. While a number of respondents supported Ofgem's view that steps should be taken to facilitate change in gas prepayment metering services, the majority of respondents who commented did not support the proposed method and timetable. Specifically, a number of respondents were concerned about the possibility that Transco's last resort obligation to provide prepayment meters could be removed in April 2003 without any viable alternatives being in place.

7.15 Views were mixed on whether April 2003 was a viable time-scale. One respondent stated that it would plan for April 2003, but that there was a risk of delay – and that Ofgem should allow for this contingency. Another respondent stated that the last resort obligation should not be removed until there was a proven track record of non-Transco meter ownership.

7.16 The majority of respondents who commented, including energywatch, stated that the differential between credit and prepayment meters should be capped at £15 until there was effective choice. One respondent stated that this cap should be retained until at least 2005. A number of respondents, however, expressed concern about the impact of a £15 cap on other meter charges, and on the incentives of shippers and suppliers to seek out more efficient alternatives. One respondent stated that increasing the level of the cap was reasonable if done so in a phased manner over 2 to 3 years.

Final proposals

7.17 The final proposals are for the following tariff caps for Transco's provision of metering and meter reading services.

Table 7.2: Metering tariff caps, final proposals

Service	Level of cap (2000 prices)
Provide and maintain a domestic credit meter	£12 a year
Provide and maintain a prepayment meter	£27 a year
Domestic credit to prepayment meter exchange	£46 per job
Daily Metered (DM) meter reading service	£340 a year

7.18 The tariff caps in Table 7.2 would take effect on 1 April 2002. The values in Table 6.2 would be translated into 2002 prices and in subsequent years the level of the caps would increase in line with RPI, i.e. the tariff caps would be fixed in real terms. The caps would remain in place until competition is sufficiently developed. In Ofgem's view this condition has already been met for non-daily metered (NDM) meter reading. As such, no price regulation will apply to Transco's provision of NDM meter reading services after April 2002.

7.19 Market developments since June suggest that competition is also developing in the wider market for metering services. Two suppliers, British Gas Trading and TXU, are in the process of tendering for gas metering services. These developments tend to confirm Ofgem's present expectation that the tariff caps will be removed by April 2004 at the latest.

7.20 Deregulation of Transco's provision of metering services also implies the removal of licence obligations to provide metering services. It is Ofgem's initial view that such a step could be taken at the same time as the corresponding tariff caps are removed. However, such a decision would be informed by prevailing market conditions – and the views of interested parties.

7.21 The proposed tariff caps retain a £15 differential between the costs of domestic credit metering and prepayment metering. This constraint on Transco's charging will remain in place until there is effective choice over alternative prepayment meter systems. In the light of respondents' comments, it is clear that the steps to facilitate such choice (and associated time-scales) would benefit from further

consultation. This work will be taken forward as set out in the metering strategy update document, to be published in October 2001.

7.22 The tariff caps ensure that all shippers can access affordable metering services, in the absence of such choices being available through a competitive market. The levels of the tariff caps reflect Transco's costs in providing its current package of services – adjusted for potential efficiency gains. However, the relative caps for credit and prepayment metering may create incentives for shippers to 'cherry pick', for example by obtaining credit services competitively but using Transco's prepayment services. It is appropriate to provide Transco with the flexibility to respond to such behaviour.

7.23 The proposed licence modification will therefore include scope for Ofgem to consent to a derogation to allow Transco to charge in excess of the tariff caps in instances where a shipper has unbundled part of its metering portfolio. The purpose of such a derogation, which would be granted on a case-by-case basis, would be to ensure that Transco's charges to individual shippers reflect the cost of the bundle of services being taken by that shipper. Such a derogation would not exempt Transco from compliance with the non-discrimination condition discussed below. The last resort protection afforded by the proposed tariff caps to shippers who continue to use Transco for all metering services would not be affected.

7.24 Ofgem will publish an explanation of any decision to grant a consent that allows Transco to exceed, in a particular set of circumstances, the proposed tariff caps[19].

7.25 The proposed tariff caps cover a subset of Transco's metering and meter reading services. It is appropriate to regulate the terms and prices of Transco's other services (including new services it may wish to introduce) through a non-discrimination condition.

7.26 This condition will oblige Transco to ensure that its charges and terms for uncapped services are cost-reflective and otherwise reasonable. It will also oblige Transco to ensure that its charges do not have the effect of unduly

[19] Section 38 of the Gas Act 1986, as amended by the Utilities Act 2000, will, upon commencement, oblige the Authority to give reasons for any consents or directions made pursuant to a licence condition.

discriminating between shippers, given that shippers may take different bundles of capped and uncapped metering services.

7.27 Transco will continue to be obliged through its licence to publish a statement setting out all of its metering charges. Ofgem will monitor closely changes in the levels and relative prices set out in this statement. The detailed cost data provided by Transco on the individual cost basis for its metering services will allow monitoring of Transco's compliance with its non-discrimination obligation. Additional information will be requested where necessary.

Calculations and cost forecasts

7.28 This section explains how the tariff caps for domestic meter provision and meter exchanges proposed in this chapter have been derived, and discusses the underlying operating cost and capital expenditure forecasts.

7.29 The proposed tariff cap in respect of Daily Metered (DM) meter reading, which falls within the meter reading price control block in Transco's cost allocation framework, has been analysed and calculated separately. The proposed tariff cap is set at a level that reflects the potential scope for efficiency savings, given the technology currently used by Transco. There is the possibility of changes to Transco's DM meter reading service in the light of ongoing industry discussions. Nevertheless, the cap is based on Transco's current service to shippers.

Operating costs and capital expenditure

7.30 In Transco's BPQ, operating costs were allocated to the meter asset price control block (which includes all of the capped services except Daily Metered (DM) meter reading) using Transco's Transactional Model. Ofgem allocated efficiency savings against the BPQ forecasts across the price control blocks.

7.31 Transco also submitted a number of additional costs relating to metering through its Strategic Business Plan (SBP) response. The most significant item related to £222 million over the five years of the next price control to fund the operational separation of emergency work and meter work. In the light of detailed discussion with Transco, Ofgem has decided not to allow these costs. This decision reflects reservations about the robustness of Transco's underlying

analysis – and, more importantly, concerns about whether the implied operational separation is necessary, or even likely, in the short term.

7.32 Metering capital expenditure forecasts are inherently uncertain due to the future development of competition. However, even abstracting from this uncertainty, Ofgem had a number of reservations about Transco's forecasts. These were highlighted in the draft proposals document, and have been subject to further information gathering and discussion with Transco.

7.33 As a result, the allowances for capital expenditure underpinning the tariff cap calculations have been relaxed slightly in comparison to the draft proposals – although allowances remain substantially below Transco's BPQ forecasts. Concerns remain in respect of Transco's forecasts for policy meter replacements. In part this reflects concerns over how Transco has generated its forecasts. It also reflects concerns over Transco's lack of contractual protection in instances where meters types have proven to not to be fit for purpose over the expected operational life.

7.34 Ofgem has also revised downward Transco's BPQ unit costs for prepayment meters. It appears that Transco has underestimated the use of refurbished meters in its projections, and has taken an overly conservative view on possible cost savings within the existing meter technology.

Allowed revenues

7.35 On the basis of Ofgem's projections of operating costs and capital expenditure, and the assumptions on cost of capital and metering opening regulatory value, the implied allowed revenue for Transco's metering activities is, as set out in chapter 5:

Table 7.3: Metering allowed revenue, 2002/3 and 2003/04

£ million - 2000 prices	**2002/03**	**2003/04**
Operating cost	152	151
Regulatory depreciation	142	143
Return on Regulatory Value (RV)	99	97
Total	393	391

7.36 The tariff caps have been calculated to allow Transco to recover the revenues set out above. Given the proposed duration of metering price controls, the caps are

set on the basis of allowed revenue for 2002/03 and 2003/04. To the extent that tariff caps remain in place beyond April 2004, it may be necessary to review the levels of any remaining caps.

7.37 Prices for each metering service have been estimated on the basis of Transco's present costs - including present meter costs, assumed asset lives, and associated labour costs. These unit prices have then been scaled up, using associated volume estimates, to identify a set of prices consistent with the allowed revenue total.

7.38 The difference between present costs and allowed revenues primarily reflects reductions in certain meter purchase costs over recent years. The scaling of charges has therefore been isolated to domestic credit and non-domestic metering. The scaled charges for domestic credit metering and prepayment metering are re-balanced to ensure that the difference is £15. The effect of this re-balancing is confined to domestic metering charges.

Appendix 1 Summary of responses to Ofgem's Draft Proposals

1.1 There were 33 responses from a range of interested parties – Transco, Energywatch, 16 shipper/suppliers, 6 industry associations and 9 others.

Form of scope of the transportation control

Transco's response

1.2 Transco supported the proposals for separate NTS and LDZ price controls and that these should be RPI-X controls. It suggested that the outputs should be clear and the regulatory framework should provide appropriate incentives for investment during the five-year price control period.

1.3 Transco suggested that a single LDZ revenue driver with a 65 per cent fixed element would provide weak incentives for it to develop its network.

Other respondents

1.4 Fifteen respondents supported separate controls for the NTS and LDZs, six of whom favoured the continued use of the RPI-X form of control, while one respondent believed that RPI-X might inhibit future investments and the need to fulfil market requirements.

1.5 Seven respondents commented on the possible further split of the LDZ price control; the majority felt that further analysis and consultation was required and that the current changes should be given the chance to bed down.

1.6 Views on the split of the SO and TO functions were more mixed. Five respondents supported the recognition of these separate roles, while three respondents expressed concern that the separation may not realise significant benefits and two others felt that the roles needed to be clearly defined. The latter were concerned that there may not be sufficient information available to allocate costs and revenues.

1.7 Two respondents commented specifically on the size of the LDZ revenue driver, with one supporting the figure of 35 per cent, while one other respondent suggested that a lower figure could be adopted.

NTS outputs

Transco's response

1.8 Transco said that further work was needed on the proposed NTS output measures to reach a definition that best met customer requirements. It suggested that, without formal arrangements in place to resolve outstanding items, continued uncertainty in the NTS framework beyond final proposals could lead to a requirement for a higher cost of capital.

Other respondents

1.9 Several respondents welcomed the introduction of defined output measures, although the difficulty of defining a suitable baseline for NTS outputs was also highlighted. Most of the views related to how the proposed framework would operate in practice and whether it would provide sufficient incentives for Transco to respond to market requirements.

1.10 Some respondents were concerned about the treatment of auction revenue over-recoveries. One respondent suggested that it was important to prevent such over-recoveries being smeared back through transportation charges, as this caused increased volatility of charges. Another respondent felt that any proposal to create a fund from over recoveries and offset this against buy-back costs would be inappropriate.

Metering and meter reading

Transco's response

1.11 Transco supported the proposals for the form, scope and duration of the metering and meter reading controls. It suggested that the extent of competition in April 2002 should determine whether the scope of the control remains appropriate and whether tariff caps should be continued.

1.12 It noted that restriction on the additional charge for pre-payment customers of £15 may limit the incentive for organisations to seek alternative provision.

1.13 Transco said that a formal undertaking in respect of the ongoing provision and maintenance of prepayment meters installed before April 2003 will provide an effective level of protection to customers.

Other respondents

1.14 Generally, there was support for competition in metering, although there were concerns as to the timing of the lifting of the price caps. A number of respondents suggested that the lifting of the price caps should only occur when there is evidence of sufficient competition and that Transco's discretion should not be allowed to give it an unfair advantage or restrict the development of competition.

1.15 Two respondents specifically welcomed Appendix 4 in the draft proposals (Assessing competition in metering services). However, one respondent felt that full unbundling was not necessary for competition and the costs may outweigh the benefits.

1.16 One respondent supported the immediate lifting of the NDM meter reading price control; another respondent was opposed to this, believing that currently there is insufficient competition in that market.

1.17 Five respondents said that the last resort obligation from Transco should be retained beyond April 2003 and until competition for gas pre-payment meters becomes fully effective.

1.18 Four respondents expressed support for the restriction on the additional charge for pre-payment meters, but one respondent felt this was unduly tight.

LDZ and shipper service output measures and medium-term performance reporting

Transco's response

1.19 Transco welcomed the steps towards a clearer definition and quantification of outputs and broadly agreed with the approach to setting medium-term performance measures. However, it was concerned that the level of detail requested for the narrative could create unnecessary bureaucracy. It also expressed concerns at the proposed frequency for reporting some of the output measures. Transco expressed support for Ofgem's proposed timetable for introducing output-based incentives.

Other respondents

1.20 Respondents broadly supported the initial definitions and coverage of the output measures and medium-term performance reporting, saying that they would lead to an increase in transparency and a reduction in uncertainty surrounding the price control. There were, however, some concerns regarding the detailed definitions of the measures

1.21 There appeared to be a broad consensus that outputs should be reported on an annual basis, with data on interruptions being reported more frequently during the development of the incentive scheme.

1.22 The majority of respondents who expressed an opinion supported output-based incentives for Transco's LDZ networks. However, there were mixed views on the form of the incentive scheme. Three respondents supported the development of an incentive scheme which allowed for both increases and decreases in Transco's revenue depending on its performance. Three respondents indicated that an asymmetric scheme would be more appropriate.

1.23 Several respondents noted that the incentive scheme proposed for Transco was at variance with the asymmetric incentive scheme proposed for the electricity distribution businesses.

LDZ standards of performance

Transco's response

1.24 Transco suggested that standards of performance for restoring domestic and non-domestic customers' supplies should remain in the Network Code and that compensation for domestic customers should be at the lower end of the range proposed by Ofgem. It also said that should either be a a daily or total cap on compensation payments under GS1 to avoid unreasonable financial penalties in the event of a long incident affecting a large number of customers. It suggested that the costs incurred in compensating customers that experience force majeure interruptions should be treated as a pass-through in the price control.

1.25 Transco suggested that as it already conducts its own accredited audits, independent audits would add unnecessary costs.

Other respondents

1.26 The majority of respondents supported the introduction of LDZ standards of performance for Transco based on the existing public standards of service with additional standards in key areas. They also welcomed the proposals to apply overall standards to each LDZ.

1.27 There were several suggestions for additional standards. One respondent suggested that the existing connection standards of performance on Transco should be converted into guaranteed and overall standards of performance. It said that these should be supplemented by new standards to cover final connections. Another respondent suggested that there should be a standard on notifying customers of compensation payments owed under the guaranteed standards.

1.28 Several respondents said that there should be close alignment between the levels of compensation in gas and electricity, with £50 and £100 compensation payments for failure to restore domestic and non-domestic supplies within 24 hours respectively and £20 compensation for failure to keep appointments with consumers.

1.29 A number of respondents welcomed the inclusion of third party and water ingress interruptions in standards on restoring supplies, with the majority supporting a fixed allowance in the LDZ price control to cover the costs of compensation for these interruptions. However, two respondents felt that there was a strong case for a cost pass through.

1.30 There were mixed views on the appropriate form of audit of standards of performance information with some respondents favouring an internal audit conducted by Transco and others supporting independent audits commissioned either by Transco or Ofgem.

Transco's operating and capital expenditure

Transco's response

1.31 Transco noted that it would like to see the final proposals drawn not only from the Business Plan Questionnaire (BPQ) but also from Transco's Strategic Business Plan (SBP).

1.32 It considered that Ofgem's projections for capital and operating expenditure were inadequate to allow Transco to finance the higher levels of safety, reliability and customer service standards that were expected.

1.33 It suggested that Ofgem's consultants had misinterpreted the data provided by Transco when drawing up the proposals, and therefore the projections did not reflect the expenditure necessary for investment in the system.

1.34 It noted that the mechanism to adjust revenues associated with mains replacement should not conflict with Transco's obligation to maintain safety. It said the repex adjustment mechanism should be transparent and sufficiently flexible to allow for funding of changes in safety requirements.

Other respondents

1.35 Mixed views were expressed by respondents on the levels of achievable operating cost savings, with one respondent believing the targets to be achievable but challenging, whilst another believed the targets were inappropriate and unachievable. Two respondents expressed concern over the size of the differences between Transco and Ofgem, with one of these respondents saying that more would need to be known about the assumptions made by Ofgem's consultants before commenting any further.

1.36 A number of respondents commented on the need to ensure network investment meets capacity demand. Five respondents addressed the materiality of the replacement capital expenditure programme needed to meet HSE requirements. However, views differed on how this programme should be funded, with one respondent in favour of treating it all as operating costs, whilst another felt that it should be considered as capital expenditure as it comprises a significant proportion of Transco's assets.

Financial Issues

Transco's response

1.37 Transco did not believe that the proposed cost of capital adequately reflected investors' views of Transco's risk profile. It suggested that

- the Competition Commission's conclusion in September 2000 of a 3 per cent risk free rate remains valid;
- in setting the equity risk premium Ofgem should follow the Competition Commission's precedent and allow 4 per cent; and
- Transco's equity beta should be at least 1.2 at 62.5% level of gearing.

1.38 It said that the decision to confirm an unfocused approach to asset valuation did no more than bring Transco into line with other regulated industries, comparable with NGC and electricity distribution businesses, and did not make Transco a lower risk.

1.39 Transco was concerned with the presumption that it could maintain a single A rating with a 62.5 per cent gearing, believing its rating would fall to BBB if the draft proposals were adopted, and that this would increase the debt premium by at least 60 bps.

Other respondents

1.40 The majority of respondents supported the decision to maintain an unfocused valuation for the initial RV. One respondent however commented that they were disappointed at Ofgem's decision and felt that the regulatory consistency argument was ambivalent.

1.41 Five respondents supported a cost of capital in the proposed range of 6 to 6.25 per cent. Five expressed concern that this range may prove insufficient to reward investment, with one respondent proposing a figure of 7 per cent. Two other

respondents commented that the cost of capital should be set to finance the replacement programme, with one of these saying that Transco should be allowed to maintain a single A credit rating.

Regulatory Instructions and Guidance

Transco's response

1.42 Transco suggested that entry and exit capacity were inextricably linked so no reporting of exit was necessary. It did not support reporting linepack. Transco was concerned that the introduction of an output licence condition might limit change in shipper query submission and resolution processes.

1.43 It did not support Ofgem's proposed diameter bands for reporting mains replacement, and was not yet convinced that this level of detail would provide adequate benefit for the costs that would be incurred.

1.44 Transco suggested that there should be annual rather than quarterly provision of output information to reduce the administration burden and costs. The only exceptions might be shipper queries and the setting up/testing phase of the incentive scheme on interruptions. Furthermore Transco indicated that one month from the end of the formula year was insufficient time to report output data.

Other responses

1.45 Only one other respondent commented on the RIGs, noting that it would be appropriate to monitor progress against the mains replacement targets agreed with the HSE. It said that the requirement to report on medium-term condition of the LDZ networks was pragmatic. It believed that the adoption of the CD-ROM as a measure of data quality was unsound.

List of respondents

Association of Electricity Producers
Agip (UK) Ltd
Alliance Gas Limited
Amerada Hess Gas Ltd/Amerada Hess (Domestic) Ltd/ Midlands Gas Ltd/Western Gas Ltd/OwnLabel Energy Ltd/Amerada.co.uk Ltd
BG Group plc
BP Gas Marketing Ltd
British Gas Trading
Chemical Industries Association
Corus UK Ltd
Dynegy UK Ltd
Energy Saving Trust
Energywatch
Enron Europe
Energy Intensive Users Group
Gas Industry Trade Unions (GMB, TGWU, UNISON)
Innogy plc
London Electricity plc
Major Energy Users Council

National Grid Company plc
NEA
Powergen Uk plc
Society of British Gas Industries
Schroder Salamon Smith Barney
Scottish and Southern Energy plc
ScottishPower
Secure Electrans Limited
Seeboard plc
Shell Gas Direct Ltd
Siemens Metering Ltd
TotalFinaElf Gas & Power Ltd
Transco plc
TXU Europe Group plc
Water UK

Appendix 2 Summary of the seminar held on 1st August 2001 at Imperial College, London.

It was noted that an initial proposals paper relating to the NTS SO control would be published in early September, with final proposals paper later in the year. Ofgem gave a series of presentations outlining the main points in its June 2001 Draft Proposals document. Each presentation was followed by discussion and questions.

LDZ form of control & quality of supply

Ofgem presented its proposals for the LDZ form of control, the LDZ quality of supply proposals and associated standards. Delegates raised the following issues:

- The timing of the proposed incentive scheme related to interruptions.
  Ofgem said that the scheme will not commence until mid way through the price control period, as there is limited data on interruptions. The level of revenue at risk might be reduced for the first year of operation.

- The effect of the incentive scheme and the revenue drivers on X and whether Transco's revenues would change throughout the period.
  Ofgem stated that the impact of the revenue driver would be to change allowed revenues. The incentive scheme, when introduced, would also be likely to change allowed revenues.

- The levels of compensation for interruptions and the appropriateness of domestic standards being covered in a Statutory Instrument while non-domestic standards were covered in the Network Code. Would the compensation payments unduly influence the order of re-connection between different classes of consumers?
  Ofgem said that its proposed arrangements were appropriate as they increased alignment with electricity. Ofgem expected no significant change from current arrangements for re-connection.

Expenditure analysis

Ofgem summarised the approach set out in the draft proposals and noted further work would be required to evaluate the costs set out by Transco in its strategic business plan. Delegates raised the following issues:

- There was a dicussion of the scope for further reductions in operating costs.
  Ofgem explained the top-down and bottom-up analysis carried out by its consultants, and explained that the bottom-up approach had been used to establish an efficient frontier. Ofgem noted that good management should was good and capable of meeting the targets.

- Concern was expressed that capital expenditure in the current period had been inappropriately delayed.
  Ofgem explained that investment reflected the needs of users as established by the BPA process, and that the process would improve with the development of the auctions. Transco will be required to deliver agreed outputs or risk penalties as it would have to buy back capacity.

NTS controls

Ofgem gave a presentation on the proposed NTS SO incentive arrangements. Delegates raised the following issues:

- It was still unclear how much exit capacity would be available by zone, how it would change over time and how the auctions would supercede the BPA process.

Ofgem explained that the incentives were designed to deliver the capacity that the market wants. The information from the auction process would add to the information gained through the BPA process.

- How would new capacity would be priced?
  Prices would be set by auctions and that the auctions would expose the demand curve for capacity at different locations. If supply capacity were tight, the price would rise. As this exposes Transco to increased buy back risk this would provide an incentive for Transco to invest. The NTS would continue to be regulated, as it is a monopoly.

- How is the SO incentive scheme related to the TO incentive scheme and would it distort market mechanisms in a similar way to the NGC schemes? A way to modify the incentive scheme would be necessary in order to limit the scope for perverse actions. Experience with NGC was that changing the licence was not easy.
  Ofgem stated that Transco would want to see incentives embedded in the licence in order to maintain a right of appeal to the Competition Commission. Ofgem did not share the delegate's views on the NGC incentive schemes as were operating well and reducing costs. It would be important to consider further whether the incentives should be in the Nework Code or in the licence.

- How auctions will work, what capacity will be available and how they will change over time? A particular concern was the lead-time for new investments and how Transco would respond to the information from the auctions.
  Although there are planning and other constraints on Transco, Ofgem said that there were things that Transco could do in the shorter term to increase capacity in response to signals from the auctions. It would be important to proceed with the auctions and the associated SO incentives on Transco. The incentives will focus Transco on delivering the capacity the market requires, as signalled by the auctions.

- Would back-loading investment to the end of the period continue?
  Ofgem noted that the capital expenditure profiles in the Draft Proposals document represented investment required for scenario C in the BPQ and that the latest forecasts indicate a front-loaded investment profile.

- What would happen to the proceeds from the auctions, would an investment fund would be created, and how auctions would fit in with the price control?
  Ofgem said that this would be explained in the September SO paper.

- How would Ofgem monitor Transco's investment? What monitoring work will Ofgem do on auctions?
  Ofgem said that there is currently a process for monitoring Transco's investments and the BPA process would continue to be used. Under the new arrangements, Ofgem would be able to signal in advance any concerns about future investment and a right of veto on investment might be required.

Financial issues

Ofgem gave a presentation on the main issues set out in the draft proposals. Delegates raised the following issues:

- Would the risks faced by Transco increase in the future?
  Ofgem said there was no strong evidence for this and that the draft proposals dealt adequately with the risks that Transco is likely to face in the future.

- Should Transco's regulatory asset value be calculated on a focused rather than unfocused basis?
  Ofgem emphasised that the MMC had already considered this issue twice and concluded that

an unfocused approach was appropriate. To try and reopen this issue would only serve yo increase perceptions of regulatory risk and so would not be in the interests of consumers.

Metering

Ofgem gave a presentation covering developments in metering and explained that metering competition is expected to bring significant benefits to customers. Controls on Transco's charges for metering services would remain in place until competition had developed sufficiently.

Transco's response

Transco stressed that the costs in the draft proposals were based on the BPQ submission and that Transco's more recent strategic business plan contained additional costs related to recent developments. As regards the NTS, it had become clear that additional near-term gas supplies would likely come from St. Fergus.

Transco's main points were that, although it was content with the conclusion on asset valuation serious concerns remained in a number of areas:

- the funding of the mains replacement and NTS capital programmes;
- the proposed cost of capital;
- Transco was not financially viable under the draft proposals assumptions;
- the level of capex reductions; and
- the unprecedented nature of the opex reductions.

Delegates raised the following issues:

- In constructing the strategic business plan had Transco identified any cost savings?
  Transco said that savings had been incorporated into the BPQ but no further savings had been identified in the strategic business plan.

- Would investment again be left to the end of the period?
  Transco said that it will deliver the required outputs and will invest accordingly. Historically investment had focused on meeting 1 in 20 peak demand. This requirement will continue, but Transco expects that the SO control will provide incentives to meet other demands from customers.

Appendix 3 NTS outputs

The following detail the assumptions on which the price control has been set. For the avoidance of doubt these outputs do not replace or alter any legal obligation that Transco may have in respect of these outputs.

NTS Entry capacity (without summer flexibility investment)

Table 1a – Maximum physical entry capacity (winter)

GWh/day	**2002/3**	**2003/4**	**2004/5**	**2005/6**	**2006/7**
Bacton	1527	1646	1711	1787	1787
Barrow	812	790	790	791	791
Easington	1105	985	996	1050	1094
St. Fergus	1689	1721	1754	1787	1819
Teesside	910	823	856	899	845
Theddlethorpe	758	628	639	650	650

The winter is the period October to March (inclusive).

Table 1b – Maximum physical entry capacity (summer)

GWh/day	**2002/3**	**2003/4**	**2004/5**	**2005/6**	**2006/7**
Bacton	1191	1516	1603	1581	1592
Barrow	433	509	715	487	682
Easington	412	368	368	368	357
St. Fergus	1256	1300	1397	1495	1581
Teesside	921	845	921	888	899
Theddlethorpe	412	368	368	368	357

The summer is the period April to September (inclusive).

Table 1c – Maximum physical entry capacity (storage)

GWh/day	**2002/3**	**2003/4**	**2004/5**	**2005/6**	**2006/7**
Glenmavis	110	110	110	110	110
Partington	239	239	239	239	239
Avonmouth	165	165	165	165	165
Isle of Grain	243	243	243	243	243
Dynevor Arms	55	55	55	55	55
Hornsea	195	195	195	195	195
Hatfield Moor	60	60	60	60	60
Aldborough	0	259	259	259	259
Cheshire	0	0	119	179	238
Hole House Farm	29	29	29	29	29

NTS Entry capacity (with summer flexibility investment)

Table 2a – Maximum physical entry capacity (winter, adjusted for summer flexibility outputs)

GWh/day	2002/3	2003/4	2004/5	2005/6	2006/7
Bacton	1527	1646	1839	1939	1939
Barrow	812	790	790	791	791
Easington	1105	985	1141	1180	1180
St. Fergus	1689	1721	1809	1831	1863
Teesside	910	823	834	845	845
Theddlethorpe	758	628	879	942	942

The winter is the period October to March (inclusive).

Table 2b – Maximum physical entry capacity (summer, adjusted for summer flexibility outputs)

GWh/day	2002/3	2003/4	2004/5	2005/6	2006/7
Bacton	1191	1516	1723	1830	1830
Barrow	433	509	595	682	682
Easington	412	368	766	866	866
St. Fergus	1256	1300	1668	1760	1787
Teesside	921	845	887	899	899
Theddlethorpe	412	368	362	357	357

The summer is the period April to September (inclusive).

NTS Exit capacity

Table 3 - Exit capacity (daily demands)

GWh/day	2002/3	2003/4	2004/5	2005/6	2006/7
LDZ					
Scotland	345	350	357	364	369
Northern	266	272	279	284	288
North West	541	553	560	566	571
North East	281	284	288	291	294
East Midlands	466	472	479	486	491
West Midlands	456	461	467	473	477
Wales North	51	53	54	56	57
Wales South	199	202	205	210	212
Eastern	361	368	374	379	384
North Thames	511	515	518	523	528
South East	519	526	529	532	535
Southern	382	396	404	411	416
South West	280	285	292	296	301
TOTAL LDZ LOADS*	4,658	4,738	4,808	4,870	4,924
NTS loads	1,287	1,327	1,391	1,453	1,491

*LDZ exit requirements include LDZ shrinkage; NTS loads exclude NTS shrinkage

NTS Linepack (without summer flexibility investment)

Table 4

Available linepack mcm	Winter (October – March inclusive)	Summer (April – September inclusive)
2002/3	17	37
2003/4	18	39
2004/5	14	31
2005/6	20	32
2006/7	12	38

NTS Linepack (with summer flexibility investment)

Table 5

Available linepack mcm	Winter (October – March inclusive)	Summer (April – September inclusive)
2002/3	17	37
2003/4	18	39
2004/5	19	45
2005/6	20	50
2006/7	21	50

Appendix 4 LDZ outputs

The following detail the assumptions on which the price control has been set. For the avoidance of doubt these outputs do not replace or alter any legal obligation that Transco may have in respect of these outputs.

Outputs

1. **Number and duration non-contractual supply interruptions** – it is assumed that the number and duration of interruptions will remain broadly level until 1 April 2004 when an incentive scheme on interruptions will be implemented. Transco will be required to install data collection schemes in order to report appropriate data, so that the implied output levels can be determined.

2. **Resolution of shipper queries** – it is assumed that the following performance targets will be met each year.

Measure	Target performance level
Percentage of shipper queries resolved within 10 business days	80%
Percentage of shipper queries resolved within 20 business days	95%
Mean time taken to resolve outstanding queries	Reduction over time

3. **Reliability of M-number CD-ROM data service** – it is assumed that Transco will issue an updated CD-ROM in April, June, September and January each year.

4. **LDZ Mains and services replacement assumptions**

Mains abandoned (excluding mains diversions)

Kilometres	2002/3	2003/4	2004/5	2005/6	2006/7
Policy					
< = 180mm	1,183	2,140	2,343	2,634	2,830
> 180mm	1,002	479	571	613	657
Total policy	2,185	2,619	2,914	3,247	3,487
Condition					
< = 180mm	213	259	283	290	284
> 180mm	86	88	94	91	92
Total condition	299	347	377	381	376
Total mains	2,484	2,966	3,291	3,628	3,863

Mains diversions

Kilometres	2002/3	2003/4	2004/5	2005/6	2006/7
	150	150	150	150	150

Services replaced

Number	2002/3	2003/4	2004/5	2005/6	2006/7
Domestic	180,134	200,496	215,118	230,305	240,878
Non-domestic	4,091	2,690	2,969	3,259	3,461
Test & transfer	77,264	123,886	136,745	150,100	159,398
Total services	261,489	327,072	354,832	383,664	403,737

5. Capacity – peak day firm demand assumptions.

Peak Day demand (GWh/day)

	2002/3	2003/4	2004/5	2005/6	2006/7
LDZs					
Scotland	348	353	357	361	364
Northern	262	265	267	269	271
North West	543	550	553	555	558
North East	280	283	286	288	290
East Midlands	454	457	461	464	466
West Midlands	458	461	466	468	472
Wales - North - South	 53 202	 54 204	 54 206	 55 208	 55 209
Eastern	372	376	380	383	387
North Thames	504	509	513	515	517
South Eastern	522	526	529	531	534
Southern	384	389	393	399	402
South West	288	292	296	298	301
Total LDZ	4669	4720	4760	4793	4825

6. LDZ Connections – the following numbers of connections have been assumed.

Number	2002/3	2003/4	2004/5	2005/6	2006/7
Existing housing	83023	80165	70825	55711	48903
New housing	32240	23754	18915	17053	15746
I&C	11222	10981	10741	10502	10260
Total	126485	114900	100481	83266	74909

Total number of connections provided under Transco's statutory obligations in respect of premises within 23 metres of a main is 350,000 over the 5 year period of the control.

7. Annual demand (total LDZ) GWh – the following levels of annual demand have been assumed.

GWh	2002/3	2003/4	2004/5	2005/6	2006/7
Firm load < 5.860 Gwhpa	525,471	533,034	539,216	541,294	544,842
Firm load > 5.860 GWhpa except VLDMCs	83,711	86,490	87,943	88,607	89,462
VLDMCs	44,482	46,216	47,636	47,537	47,537
Interruptible	113,342	115,364	116,922	117,850	118,797
Total	767,005	781,105	791,717	795,288	800,638

8. Publicly reported gas escapes – the following numbers of publicy reported gas escapes have been assumed.

Range for period	2002/3 to 2006/7
Number of internal escapes attended	1,090,000 to 1,230,000
Number of external escapes attended	250,000 to 280,000
Number of visits where no escapes are found	75,000 to 79,000
Total number of escapes received	1,360,000 – 1,520,000

Appendix 5 Outline licence modifications

The proposed changes to Transco's licence were set out in the draft proposals. This appendix provides further detail on the following areas:

- Determination of formula revenues for LDZ price control;
- Supplementary incentive mechanism – mains;
- Exit Code;
- Emergency services; and
- Metering and meter reading prices.

Determination of formula revenues for LDZ price control

Allowed revenue (M_t) in each year of the price control will be made up of several; components:

a) **Core allowed revenue (Z_t)** – which will cover all costs other than prescribed formula rates and licence fees. There will be a pre-determined value for Z_t for 2002/03. The value for Z_t in subsequent years will be determined by indexing for inflation minus the efficiency factor (the RPI-2 term) and changes in volumes (the volume driver);

b) **Cost-pass through term (F_t)** – this will cover prescribed formula rates and the licence fees which are allocated to the LDZ price control;

c) **Repex adjustment term** (R_t) - see chapter 4

d) **Under- or over-recoveries in the previous formula year (K_t)** – any under-recovery or over-recovery of allowed revenue in a given formula year will be rolled into allowed revenue for the following formula year, with an adjustment for interest.

1. Determination of core allowed revenue (Z_t) for 2002/03

The initial value of Z_t for 2002/03 will be calculated using the following steps:

a) the forecast levels of prescribed formula rates and licence fees for 2002/03 will be subtracted from the total allowed revenue for the LDZ price controls for 2002/03 generated by Ofgem's financial model;

b) an estimate of any costs that will be funded through the NTS SO arrangements will be subtracted; and

c) the values will then be adjusted from 2000 to 2002/3 prices. It is appropriate to use historic RPI figures to adjust for inflation as this allows greater certainty in

forecasting allowed revenues and therefore created greater stability in transportation charges. This is consistent with the approach used for the electricity distribution businesses and the effects of increased inflation in any given formula year will feed through to allowed revenues in subsequent formula years. The effect of differences between current and historic inflation will therefore average out over time.

The inflation adjustment will be made using the percentage change in the arithmetic average of the Retail Price Index numbers published for July to December (inclusive) 2001 and the arithmetic average of the Retail Price Index numbers published for April to September (inclusive) 1999. (This allows for 27 months inflation.)

2. Indexing for inflation in subsequent formula years

The initial inflation adjustments for subsequent formula years will be made using the percentage change in the arithmetic average of the Retail Price Index numbers published for July to December in year t-1 and the arithmetic average of the Retail Price Index numbers published for July to December in year t-2.

3. LDZ revenue

The LDZ price control will be set on the assumption that 65% of allowed revenues are fixed and 35%of allowed revenues vary with the quantity of gas transported.

A 100% weighting will be given to small users (firm loads using less than 5,860 MWh p.a.). A 15% weighting will be given to large users (firm loads using between 5,860 and 1,465,355 MWh p.a. plus interruptible loads using less than 1,465,355 MWh p.a.). A 5% weighting will be given to very large users (all loads using more than 1,465,355 MWh p.a.). The total weighted annual demand is called the composite demand.

The following table shows Ofgem's assumptions in setting the price control:

GWh	**2002/3**	**2003/4**	**2004/5**	**2005/6**	**2006/7**
B, small user quantity	525471	533034	539216	541294	544842
D, large user quantity	197053	201856	204865	206457	208261
V, very large user quantity	44482	46216	47636	47537	47537
Composite demand	557253	565623	572328	574639	578458

Where possible, Transco should allocate loads to the small user quantity, large user quantity and very large user quantity on the basis of actual volumes offtaken during the formula year. Where daily meter reads are not available (either because of a meter failure or because the volumes are monthly read) Transco should use its best endeavours to estimate the volumes offtaken during the formula year.

Where sites are monthly read, the period between reads may fall into 2 formula years. The associated volumes should then be apportioned between the 2 formula years by dividing the volumes by the number of days in the period and then multiplying by the number of days in that period which fall in the relevant formula year.

4. Under- or over-recoveries

Allowed revenue in the first formula year of the new price control must take into account the level of under- or over-recovery in the final year of the current control. As there is currently a single price control for transportation the under- or over-recovery will need to be apportioned between the NTS TO and LDZ price controls according to a method to be approved by the Authority.

Draft LDZ price control formula

Transco shall take reasonable steps to ensure that in each formula year its actual transportation revenues do not exceed

$$M_t = Z_t + F_t - R_t - K_t$$

where

$$Z_t = \left(Z_{t-1} * \left[1 + \frac{(RPI_t - 2)}{100} \right] * Q_t \right)$$

except for the formula year commencing 1 April 2002 where

Z_t = pre-determined value in 2002/3 prices

$$Q_t = \left(0.65 + 0.35 * \frac{W_t}{W_{t-1}} \right)$$

W_t = composite user quantity in Formula Year t $= B_t + 0.15 * D_t + 0.05 * V_t$

B_t = small user quantity in Formula Year t (firm loads < 5,860 MWh p.a.)

D_t = large user quantity in Formula Year t (firm loads 5,860-1,465,355 MWh p.a. and interruptible loads < 1,465,355 MWh p.a.)

V_t = very large user quantity in Formula Year t (all loads > 1,465,355 MWh p.a.)

F_t = cost pass-through term for presribed formula rates and licence fees

R_t = repex adjustment term in year t

$$K_t = (T_{t-1} - M_{t-1}) * (1 + \frac{I_t}{100})$$

except for the formula year commencing 1 April 2002 where

K_t = x% of the under- or over-recovery from the final year of the previous price control rolled forwards for interest.

T_t = actual transportation revenues in Formula Year t

Supplementary incentive mechanism – mains

The proposed mechanism is set out in chapter 4. This section specifies the scope of the mechanism.

1. Length of mains abandoned
   All mains which are abandoned in a year and are composed of a relevent material are to be included except where this is due to a rechargeable diversion.

2. Relevant mains material
   All "non-standard" materials abandoned in the low, medium and intermediate pressure tiers are to be included.
   Non-standard materials include all types of cast and ductile iron, asbestos cement, PVC and steel mains without cathodic protection.

   All PE mains abandoned are to be excluded.

5. Calculation of Allowed Efficient Cost
   The unit costs of abandonment will be taken from the diameter matrix for the relevant year. These costs can be adjusted to a different price level using the appropriate RPI factor.

6. Calculation of Actual Cost
   The net cost of abandonment of mains composed of relevant materials.

7. Audit Arrangements
   The lengths abandoned and actual costs will be subject to annual audit.

NTS price control

This will be determined using the same method and approach as the LDZ price control, except that there will be no volume driver or incentive mechanism relating to replacement expenditure.

Exit Code

Each formula year, the Licencee shall submit to Ofgem an Exit Code statement.

The LDZ statement shall set out:

i) services which have been provided to the NTS by the LDZ in the previous formula year;
ii) The amount or volume, whichever is appropriate, of the services provided to the NTS by the LDZ in the previous formula year;
iii) The charges made for the services referred to in i) and ii);
iv) A forecast of the information required in i), ii) and iii) for the formula year in which the statement is submitted.

The charges made by the LDZ for the provision of services set out in the statement shall reflect the reasonable costs incurred by the Licensee and shall not exceed such costs.

A similar statement shall be required to be submitted by the NTS in relation to services provided to the LDZ.

Emergency services

An amendment will be made to standard condition 6 to specify that the charges made by the Licensee for the provision of emergency services shall reflect the reasonable costs incurred by the Licensee and shall not exceed such costs.

Metering and meter reading prices

There will be two licence changes to implement the proposed regime for metering and meter reading. First, a licence condition to set the tariff caps. Second, a licence condition to establish the proposed new non-discrimination obligation. The tariff cap condition will:

- define the services to be capped;
- set the levels of the caps for each service;
- determine how the levels of such caps will change over time; and
- set out disapplication arrangements.