

Separation of Transco's distribution price control

Final Proposals

June 2003

Summary

Transco is the monopoly gas transporter (GT) for the majority of consumers in Great Britain. Its gas pipeline networks comprise the high pressure National Transmission System (NTS) and lower pressure distribution networks.

In April 2002 Transco reorganised its 12 Local Distribution Zones (LDZs) into eight regional networks. The management team of each regional network is accountable for its performance and has greater autonomy over operating its network business. Transco has said that the new management and operational structure will promote further efficiency and cost reduction while at the same time ensuring quality of service and safety are maintained or improved.

In the light of this restructuring it is for consideration whether the existing distribution price control should be separated into price controls for each regional network. In July 2002 Ofgem published an initial consultation document¹ on these matters, followed by draft proposals in December 2002².

The advantages of introducing separate price controls include:

- ◆ the protection of consumers in the event that Transco decides to sell off one or more regional networks;
- ◆ opportunities to compare the performance of regional networks and so enable more effective regulation; and
- ◆ the creation of greater management focus and promote savings which can be shared with consumers.

An important consideration is the impact that separate price controls would have on transportation charges. At present Transco's gas distribution charges are broadly the same across all the regional networks and do not reflect regional variations in costs. Under separate price controls the actual costs of each network would be passed to consumers connected to it and it is likely that consumers connected to different networks would face different levels of charges. It is important to minimise any unnecessary disturbance to charging levels.

¹ July 2002, Separation of Transco's distribution price control. Initial Consultation Document

² December 2002, Separation of Transco's distribution price control. Draft Proposals

In light of these considerations and responses to the July and December documents this document sets out final proposals for separate regional network price controls. In order to preserve the incentives for efficiency and to maintain regulatory stability these proposals set the total level of distribution revenue for the eight regional networks at the same level as Transco's existing LDZ price control. The regional network price controls should take effect from 1 April 2004.

The initial attribution of regulatory asset value (RAV) set out in this document should minimise any unnecessary disturbances to charging levels. The December document presented an assessment of the possible path of gas distribution charges over time. The analysis suggested that on the basis of reasonable assumptions, any regional variations would emerge gradually over time and all consumers should experience further real reductions in gas distribution charges.

Transco has indicated that it will consider the sale of one or more regional networks. This raises wider issues, such as the future interaction between these networks and Transco's other licensed activities. These issues are outside the scope of this review and will be subject to separate and detailed consultation.

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1. Rationale

- 1.1. Transco is the monopoly gas transporter (GT) for the majority of consumers in Great Britain. Its National Transmission System (NTS) conveys gas at high pressures from beach terminals to large power stations, certain very large industrial users and its eight regional networks. The regional networks take gas off the NTS and transport it at lower pressures to domestic consumers, business consumers and Independent Gas Transporter (IGT) networks.
- 1.2. In order to protect consumers from the potential abuse of monopoly power, Transco's gas transportation business is subject to controls on the prices it can charge and the quality of service it provides. Following extensive and wide ranging consultation Ofgem published its final proposals for revised price controls for Transco in September 2001³. The new price controls have been effective from 1 April 2002 and should apply until 31 March 2007.
- 1.3. The price control proposals set out separate price controls for each of the following activities:
 - ◆ the NTS in its role as transmission asset owner (TO);
 - ◆ gas distribution; and
 - ◆ metering and meter reading.

Issue

- 1.4. During the price control review it was suggested that in the future there might be advantages in separating the distribution price control into regional components. These advantages could include increasing the protection for consumers if Transco were to sell some of its distribution assets and providing enhanced incentives for efficiency in distribution activities.
- 1.5. While Transco has previously operated 12 Local Distribution Zones (LDZs) there has only been a limited amount of information available on the costs of each

³ September 2001 Review of Transco's Price Control from 2002, Final Proposals

network, reflecting the organisational structure of its transportation business. From 1 April 2002 Transco reorganised the LDZs into eight regional networks.

- 1.6. This new structure should provide better management focus on gas distribution activities and better information on the costs of each individual regional network. Transco has said that the new management and operational structure will promote further efficiency and cost reduction while at the same time ensuring quality of service and safety are maintained or improved.
- 1.7. In the light of this restructuring it is for consideration whether the existing distribution price control should be separated into eight separate regional network price controls.

Objectives and Policy

- 1.8. Ofgem's principal objective is to protect the interests of consumers, wherever appropriate by promoting effective competition. It must also have regard to the interests of:
 - ◆ individuals who are disabled or chronically sick;
 - ◆ individuals who are of pensionable age;
 - ◆ individuals with low incomes; and
 - ◆ individuals residing in rural areas.
- 1.9. It is also necessary to have regard to the guidance on social and environmental matters issued to Ofgem by the Secretary of State.
- 1.10. The price control limits Transco's revenue from distribution charges to approximately £2 billion for 2002/03. For domestic consumers these charges represent around 30 per cent of the costs of an average gas bill. This is a significant element of the costs for households, particularly for those who find it difficult paying their bills.
- 1.11. Consideration must be given to advantages and other implications of introducing separate price controls for the regional networks. One important consideration is the possibility of greater regional variations in charges. Presently charges are

broadly similar across all networks and do not reflect regional differences in the costs of distributing gas.

1.12. Separate price controls for the regional networks would:

- ◆ provide greater regulatory flexibility and ensure a consistent regulatory approach regardless of ownership of the regional networks, allowing any regional variations in charges to gradually emerge over time.
- ◆ complement Transco's new business structure and provide greater focus for the management of distribution activities. There would also be better information about the costs of distributing gas in the regional networks and incentives could relate to profits and revenues as well as costs.
- ◆ provide a greater opportunity for the use of comparative analysis and assessment across the regional networks. Ofgem has highlighted the role that comparators have played in promoting efficiencies in the electricity distribution sector, which have been shared with consumers⁴.

1.13. While there will be additional commercial and regulatory costs associated with separate controls these should not be significant while the regional networks remain under common ownership. Wherever appropriate Transco will maintain a central interface with shippers and suppliers. Ofgem will seek to ensure that costs are kept to a minimum and that quality of service is maintained or improved. Overall the proposals should lead to significant benefits for consumers.

1.14. Separate controls will impose individual revenue restrictions on each regional network and so price controlled revenue would be recovered exclusively from shippers and suppliers operating within the geographical boundaries of the regional network. Over time the actual costs of each network would be passed to consumers connected to it and it is likely that consumers connected to different networks would face different levels of charges. Disruption to consumers will be minimised as any regional variations in charges should gradually emerge over a relatively long period of time.

⁴ April 2002 Mergers in the Electricity Distribution Sector A Policy Statement

- 1.15. In light of these considerations this document sets out final proposals for separate regional network price controls. In order to preserve the incentives for efficiency and to maintain regulatory stability these proposals set the total level of distribution revenue for the eight regional networks at the same level as Transco's existing LDZ price control.
- 1.16. The initial attribution of regulatory asset value (RAV) between the regional networks should minimise any unnecessary disturbance to charging levels. Analysis set out in the December 2002 draft proposals combined assumptions about the future costs of gas distribution with the attribution of RAVs to give projections of gas distribution charges over the next 25 years. This analysis suggests that consumers in all regions of Great Britain should continue to experience real price reductions in gas distribution charges.
- 1.17. Lower gas distribution charges should ensure that all consumers continue to benefit from regulation, including those experiencing fuel poverty. Reductions in gas distribution charges, in the South of England, where demand is high, should encourage the development of CHP, consistent with the Government's environmental and social objectives.
- 1.18. It will be appropriate to ensure that any revised arrangements for price controls avoid cross subsidy and are consistent with there being no undue discrimination in the setting of charges. In particular it is important to ensure the attribution of the regional network RAVs does not compromise the financial viability of any of the regional network price controls and that charges recover avoidable costs of distributing gas in each area.
- 1.19. Financial modelling indicates that each separate network price control, based on the attribution of RAVs, should support an investment grade credit rating. Therefore the networks should have the flexibility to fund further investment at a reasonable cost.
- 1.20. Transco has indicated that it will consider the sale of one or more regional networks. This raises wider issues, such as the future interaction between distribution networks and Transco's other licensed activities. These issues are outside the scope of this review and will be subject to separate and detailed consultation.

1.21. These proposals relate to Transco's distribution activities. They do not affect Transco's metering price controls.

2. Process

Purpose of this document

- 2.1. In July 2002 Ofgem published a consultation document seeking views on a variety of issues associated with the introduction of separate price controls for Transco's regional gas distribution networks. The draft proposals published in December 2002 provided further detailed information regarding the basis for the regional network price controls, financial viability of the separate controls and analysis of likely paths gas distribution charges.
- 2.2. This document sets out final proposals for the separate regional price controls, which have been informed by the responses to the July and December documents and further work undertaken by Ofgem.

Document Structure

- 2.3. This document has the following structure:
 - ◆ chapter 3 discusses the responses to the July consultation document and sets out Ofgem's position on these matters;
 - ◆ appendix 1 contains a list of respondents to the July consultation document;
 - ◆ appendix 2 sets out the calculations for the separate regional network price controls; and
 - ◆ appendix 3 discusses further issues relating to replacement expenditure.

Timetable

- 2.4. Following publication of this proposals document Ofgem will bring forward the necessary modifications to Transco's Gas Transporter licence to implement the regional network price controls. At the time of the licence modification it may be appropriate to up date some of the calculations set out in appendix 2. Nevertheless the overall impact of further changes on charging levels should be small. The separate regional price controls should take effect from 1 April 2004.

- 2.5. These final proposals concern the separation of Transco's present distribution price control. In order to preserve incentives for efficiency and maintain regulatory stability the separate regional price controls should provide Transco with an equivalent level of revenue to its present distribution price control. The next full review of Transco's price controls is expected to commence in 2004 with the new arrangements taking effect from 1 April 2007.
- 2.6. Transco has indicated that it will consider the sale of one or more regional networks. This raises wider issues, such as the future interaction between these networks and Transco's other licensed activities. These issues are outside the scope of these proposals and will be subject to separate and detailed consultation expected for publication later this summer (2003).

Interactions with other Ofgem work streams

- 2.7. The separation of Transco's distribution price control has links with other work being carried out by Ofgem including:
- ◆ the development of the financial incentive scheme on Transco regarding the number and duration of non contractual interruptions to consumers' supply;
 - ◆ establishing regulatory accounting guidelines (RAGs) for Transco; and
 - ◆ the development of Transco's NTS Exit regime.

3. The December 2002 Draft Proposals

- 3.1. This chapter summarises the main issues raised in the December 2002 draft proposals document, discusses the views of respondents and sets out Ofgem's position on these matters.

Rationale for separating Transco's distribution price control

- 3.2. The December document set out the advantages and disadvantages of establishing separate price control for Transco's eight regional networks. The draft proposals said that separate controls could:
- ◆ provide greater regulatory flexibility and ensure a consistent regulatory approach regardless of ownership of the regional networks, allowing any regional variations in charges to gradually emerge over time;
 - ◆ complement Transco's new business structure and provide greater focus for the management of distribution activities. There would also be better information about the costs of distributing gas in the regional networks and incentives could relate to profits and revenues as well as costs; and
 - ◆ provide a greater opportunity for the use of comparative analysis and assessment across the regional networks. Ofgem has highlighted the role that comparators have played in promoting efficiencies in the electricity distribution sector, which have been shared with consumers.
- 3.3. It also stated that while there would be additional commercial and regulatory costs associated with separate price controls these should not be significant if the networks remained under common ownership. Transco would retain a central interface with suppliers and shippers and would continue to minimise costs subject to meeting its obligations regarding safety and quality of service.
- 3.4. The December document noted that separate controls would impose individual revenue restrictions on each regional network. This would mean that the price control revenue for each network could only be recovered from suppliers and shippers operating within the geographic boundaries of that network. Over time

the actual costs of each network would be passed onto consumers and therefore consumers connected to different regional networks would face different levels of charges. The document explained that regional variations in charges would gradually emerge over time minimising any disturbance to consumers.

Views of respondents

- 3.5. Most respondents agreed with the rationale for separating the distribution price control, in particular the opportunities to share further efficiency gains with consumers and to obtain better information on regional network costs.
- 3.6. One respondent disputed the rationale for separate price controls and said:
- ◆ the use of comparators would have limited effectiveness while regional networks were under common ownership. The respondent suggested that even if all eight regional networks were separately owned the extra transactional, commercial and regulatory costs would outweigh any efficiencies achieved through comparative analysis;
 - ◆ separate price controls would not provide any additional focus to management of the regional networks than is already provided for under the present control; and
 - ◆ the respondent also suggested that separate controls would not provide consumers with more protection if a regional network were sold and said that a single price control could be retained and a revenue allocation mechanism introduced to share revenue between the networks.
- 3.7. Another respondent felt that comparative analysis would not be as effective as in electricity distribution because the regional networks were much more differentiated than the 14 electricity distribution networks. The same respondent said that the scope for further efficiency savings had been reduced given the progress made by Transco since privatisation.

Ofgem's views

- 3.8. The advantages of separating Transco's distribution price control have been discussed in the July consultation document and the December draft proposals.

Consistent with the views of the majority of respondents there appear to be significant advantages associated with separating the price control.

- 3.9. The December document acknowledged that the use of comparative analysis would be less effective while all the regional networks remained under common ownership. Even so the scope to use comparators would be increased compared to the present price control arrangements. There are other approaches to comparative analysis in addition to the statistical based methods, such as process benchmarking and ratio analysis.
- 3.10. In the light of the discussion in paragraph 3.3 the separation of the distribution price control should not impose significant costs on the industry. Nevertheless it is important to ensure that Transco's business reorganisation does not distort competition in related markets or have other adverse effects on the industry. If it were to become necessary Ofgem would be prepared to strengthen the quality of service obligations on Transco in order to protect the interests of shippers, suppliers and consumers.
- 3.11. The December document discussed the possibility of retaining a single price control even if Transco sold a regional network, the document noted that it was not clear if the Gas Act would provide a robust statutory basis for arrangements involving the necessary transfer of revenue between separate companies. Even if there were no such legal difficulties a relatively complex set of contractual and regulatory arrangements would be required to facilitate separate ownership of regional networks under a single price control. Separating the price control provides a more straight forward, transparent and robust way forward.

Regional network price controls

- 3.12. The December document set out the approach to determining separate price controls for each regional network. It explained that in order to preserve the incentives for efficiency and maintain regulatory stability the total revenue provided by the regional network price controls should be equivalent to Transco's existing distribution price control. On this basis the December document said that it would be appropriate to divide allowed revenue under the distribution price control between the eight regional networks. The attribution

of the underlying components of the price control revenue is summarised again below.

Operating expenditure

- 3.13. There is a degree of uncertainty concerning the level of future operating costs across the regional networks, due in part to the business restructuring being undertaken by Transco. However the December document noted that historical data should provide a reasonable indicator of the likely future pattern of operating costs.
- 3.14. The December document presented calculations of operating costs for each regional network based on a transaction model developed by Transco, together with audited information and costs for 2000. Consultants Deloitte & Touche reviewed the transaction model to determine whether it produced an appropriate attribution of operating costs between the regional networks. In broad terms their report (published in part of Annex 1 to the December document) supported the proposed attributions and allocations of costs.

Capital Expenditure

- 3.15. The draft proposals set out the attribution of capital expenditure between the regional networks as suggested by Transco. Transco based its proposal on its response to Ofgem's business plan questionnaire (BPQ) during the price control review, in which it had provided capital expenditure forecasts for each LDZ.

Replacement expenditure

- 3.16. The September 2001 price control proposals were based on projections of the workload and unit cost associated with the 30-year mains replacement programme accepted with the Health and Safety Executive (HSE). The December document explained that Transco's proposals for allocating replacement expenditure between the regional networks were based on individual LDZ unit cost and workload projections in its BPQ response, scaled to match the price control proposals.
- 3.17. Appendix 3 of this document sets out further information on replacement expenditure.

Regulatory Asset Value (RAV)

- 3.18. The December document set out figures for the RAVs of each regional network based on two different approaches to the attribution of RAV. The first approach was to attribute RAV on the basis of physical assets and the second in relation to charging levels and cash flows.
- 3.19. Given that the RAV represents financial capital already invested in the business and the importance of minimising any unnecessary disturbance in charging levels it is appropriate to adjust the RAVs on the basis of cash flows. The December document detailed how the network RAVs were calculated on the basis of forecast distribution charge revenue per network provided by Transco for the year 2002/03. Attributing the RAV has a proportionate effect on the allowances for depreciation and return as these are calculated from the RAV.

Return

- 3.20. The September 2001 price control proposals estimated Transco's cost of capital at 6.25 per cent. Financial modelling demonstrated that a cost of capital of 6.25 per cent would be consistent with Transco's ability to maintain an investment grade credit rating. The December document said that it would be appropriate to retain the same approach for the regional networks.

Financial Viability

- 3.21. The December document explained that in setting price controls Ofgem would consider whether each network could secure access to finance on reasonable terms, providing it with flexibility to fund future investment efficiently. A key test of this is whether the company can maintain an investment grade credit rating. The December document said that the main credit rating agencies considered both qualitative and quantitative factors when determining the ratings. Given the variety of regulatory regimes and accounting conventions greater emphasis was placed on levels of cash flow and debt. Measures such as coverage of interest by funds from operation (FFO) and FFO to total debt were considered to be consistent and reliable financial indicators.
- 3.22. Given that Transco finances its activities at the company level, a number of key assumptions were made concerning the financial structure of the regional

networks. The December document set out the assumptions made and the resulting ranges of the financial indicators for the regional networks. Based on this analysis all the regional network price controls appeared to be consistent with the basic indicators of financial viability described above for the period 2002 to 2007.

Views of respondents

- 3.23. A few respondents commented on the use of Transco's transaction model to attribute and allocate operating costs between the regional networks. One respondent said that because the transaction model was designed for the whole of Transco the resulting allocation of costs may not accurately reflect the circumstances of an individual regional network. The respondent suggested that such costs could be identified through a bottom up review of Transco's activity based costs (ABC) system.
- 3.24. Another respondent said that costs for the year 2000 would not reflect organisational changes which occurred subsequently and so a similar exercise should be carried out using 2002 costs. The same respondent noted that only 40 per cent of regional costs were directly attributable and suggested that the regional networks should be given greater responsibility over their costs to reduce the level of recharging and increase the effectiveness of comparative analysis.
- 3.25. Transco commented on the supplementary incentive mechanisms for mains replacement. It said that given possible variations in workload and unit cost efficiency between the regional networks, separate incentive mechanisms for each network could adversely impact on Transco's overall level of allowed revenue. Transco welcomed the acknowledgement that the parameters of the individual network incentives may need to be adjusted accordingly.
- 3.26. Several respondents were concerned about the interface between the regional networks and the NTS. They said that it was important to consider whether regional networks should undertake system operation or whether such activities should be exclusive to the NTS system operator.
- 3.27. Two respondents commented on the attribution of regional network RAVs in order to minimise disturbance in distribution charging levels. One respondent

was concerned that regional networks such as Scotland and Wales & West, whose RAV was relatively low would be constrained in terms of their ability to raise future finance. The respondent also said that the attribution of RAV would distort market values of the regional networks. Another respondent requested that Ofgem provide an assurance that the asset valuations would not be reopened at subsequent price control reviews or in the event that Transco sold a regional network.

- 3.28. One respondent said that financial indicators for individual regional networks should be published to help identify any cash flow problems particular networks may be exposed to. The respondent said that single regional networks may have problems funding mains replacement programmes, some of which might have to be funded directly from increased revenues.

Ofgem's views

- 3.29. Ofgem has considered a range of information relating to operating costs, including data from 2001 and 2002. The present approach to assessing operating costs, using the transaction model and audited costs from 2000 appears to give a reasonable guide to future levels of costs for the regional networks.
- 3.30. The December document set out key financial indicators for the individual regional network price controls. The financial indicators for all the regional networks were consistent with an investment grade credit rating and the regional networks should be able to secure finance on reasonable terms.
- 3.31. It is not the intention to revise the approach to setting the RAVs if Transco proceeds with the sale of one or more of its regional networks.
- 3.32. The separation of the distribution price control should not directly affect the interactions between the gas distribution and transmission networks. The ongoing interaction between the NTS and the regional networks will be monitored through Transco's regulatory accounts, exit code and reporting of output measures. Wider issues would arise if Transco were to sell a regional network. As already noted these issues will be dealt with in a separate consultation exercise.

3.33. Ofgem has already published a significant amount of information on the likely costs, revenues and financial performance of each of the regional networks. Appendix 2 sets out the further updates to the calculations of the regional network price controls. Appendix 3 focuses on replacement expenditure and the supplementary incentive on mains replacement.

Transportation charges

3.34. The December document discussed the impact of separate regional network price controls on gas distribution charges. In order to minimise any unnecessary disturbances in charging levels it is appropriate to determine the initial attribution of RAV on the basis of cash flow from each regional network.

Distribution charges over time

3.35. The December document also discussed the possible path of gas distribution prices over time. The document focused on two influential factors: the growth of network RAVs and future efficiency savings.

Change in RAVs

3.36. Over time each regional network RAV will be determined by the balance between regulatory depreciation and new capital expenditure. Where the initial attribution of the RAV is relatively low (high) the rate of capital additions will tend to be higher (lower) than the rate of depreciation causing the RAV to increase (decrease). For the purpose of making price projections the draft proposals assumed that the RAVs would revert to steady state levels over 25 years. It was noted that for some regional networks this was likely to be an overestimate of the rate of growth of RAV.

Efficiency savings

3.37. For the period 2002/03-2006/07 regional network charges are linked to an RPI-2 price control. The draft proposals referred to a study by Europe Economics⁵ (EE)

⁵ September 2001, Transco price control review 2002-2007: Report to Ofgem by Mazars Neville Russell, Appendix D – Top Down Study

and using information contained in this study made projections of distribution costs falling by RPI-0.7 from 2007.

- 3.38. The December document noted that this estimate of future efficiency savings may be conservative as it did not include any considerations of gains from comparative competition.
- 3.39. Based on the above assumptions on RAVs and future efficiency savings the draft proposals set out gas distribution charges for the regional networks over 25 years. The figures showed that consumers in all regions of the country should experience real price reductions compared the present level of charges, but with charging levels diverging between regions over time.

Views of respondents

- 3.40. Transco said it had performed its own analysis of future charging levels and came to similar conclusions that there should be real price reductions in all regional networks over 25 years. Transco added that the level of divergence between networks at the end of 25 years appeared less than the Ofgem projections.
- 3.41. One respondent suggested that phasing in of regional variations in charges would be more effective if it was more closely aligned to duration of cost reductions from efficiency savings. The respondent also said that more analysis should be undertaken to illustrate the effects of regional variations in distribution charges on overall consumer transportation charges. Another respondent said the analysis should be treated with caution because it was not clear whether the real price reductions set out in the December document would actually be outweighed by increased transactional costs to shippers and suppliers from dealing with eight networks.
- 3.42. One respondent said that while regional variations in distribution charges may be phased in gradually for domestic consumers the effects would be different for industrial and commercial (I&C) consumers. The respondent explained that such consumers often negotiated fixed price contracts for one or two years. and went on to suggest that these consumers were likely to experience step changes in charges as regional variations took effect.

Ofgem's views

- 3.43. The analysis set out in the December document was based on a range of relatively conservative assumptions. On this basis these projections should provide a degree of reassurance to consumers. As noted earlier Ofgem will seek to ensure any additional transactional costs for suppliers and shippers are kept to a minimum. The phasing in of regional variations in charges should ensure that domestic and I&C consumers do not face step changes in charge levels.

Safety and replacement activity

- 3.44. The December document said that the separation of Transco's distribution price control should not have a detrimental effect on safety. Transco could continue to run central functions such as the national telephone number for the Gas Emergency Service. Further Transco is required under Gas Safety (Management) Regulations 1996 to operate in accordance with a safety case approved by the HSE. Any material change to Transco's safety case, which could include those caused by developments in the regional networks, would require approval by the HSE.
- 3.45. Annex 3 to the draft proposals discussed the mains replacement programme Transco is undertaking as accepted by the HSE. The 30 year replacement programme involves replacing all iron mains within 30 metres of premises. The Annex explained that there were a number of developments that could change the profile of mains replacement workload and associated costs across the regional networks

Views of respondents

- 3.46. The HSE welcomed the statement in the December document that the separate regional network price controls should promote efficiency while ensuring safety would be maintained or improved.

Quality of service

- 3.47. The December document also discussed the incentive scheme for non contractual interruptions to supply on Transco's distribution network. The experience of the Information and Incentives Project (IIP) for electricity

companies demonstrated the importance of having accurate and consistent information on which to base incentives. In the light of these considerations Ofgem had decided to focus work in 2003 on developing a robust auditing process for Transco's measurement systems and data. Ofgem would consult on the incentive scheme during 2004 and the scheme would take effect from 1 April 2005.

- 3.48. The December document reiterated discussion in the July consultation document. Separate regional network price controls should not impact Transco's existing Guaranteed and Overall Standards of Performance as the standards already apply to each regional network. It was also noted that Transco already reports key outputs of the distribution price control on a national and regional network basis.

Views of respondents

- 3.49. Of the respondents who commented on the issue the majority were supportive of Ofgem's approach regarding the incentive scheme on non contractual interruptions. One respondent said that given the regional networks were under common ownership it should not be difficult to achieve consistent quality and provision of data across the networks. The respondent queried the need to delay the implementation of the incentive scheme for a year.
- 3.50. Another respondent said that the quality of service as measured by non-contractual interruptions to supply varied significantly between the regional networks. The respondent said that careful consideration should be given to the design and basis of the incentive scheme in order to improve the worst performing regional network and to ensure that the regional networks were not penalised for problems on the NTS.
- 3.51. One respondent said that the regional networks tended to monitor performance differently to each other. The respondent also suggested alternative areas of performance which could be monitored. Another respondent stressed the importance of having common minimum standards which consumers could expect across all the regional networks.

Ofgem's views

- 3.52. There is no consensus across respondents on the accuracy of Transco's quality of service data. Work will shortly begin developing the processes for auditing Transco's measurement system data on non contractual interruptions. This work will ensure that there is robust information for the development of the incentive scheme for quality of supply in the regional networks. A consultation document on the design of the incentive scheme will be published in the first quarter of 2004/05.

Sale of a regional network

- 3.53. The December document acknowledged that there were a large number of issues relating to the change in ownership of a regional network. It was made clear that such changes were beyond the scope of the draft proposals. The December document stated that if Transco put forward proposals to sell one or more regional networks such proposals would be subject to separate and detailed consultation by Ofgem.

Views of respondents

- 3.54. One respondent said that there was an inconsistency between Ofgem saying that issues associated with the sale of a network were outside the scope of the consultation and the rationale for the work on price control separation that included the objective of protecting consumers in the event of a network sale. Another respondent said that considering the implications from the sale of a regional network would help the industry in forecasting costs and anticipating the complexities involved in price control separation.

Ofgem's views

- 3.55. Transco has recently indicated that it will consider the sale of one or more regional networks. This raises wider issues, such as the future interaction between that network and Transco's other licensed activities. These issues will shortly be subject to separate and detailed consultation. The proposals for separation of Transco's distribution price control can be treated separately from these issues.

Appendix 1 Respondents to the December 2002 draft proposals

British Gas Trading

East Midlands Electricity

Health and Safety Executive (HSE)

Innogy

National Grid Transco

Powergen

Scottish and Southern Energy

Statoil (UK)

United Utilities

Total Fina Elf Power and Gas

Appendix 2 Regional Network Price Controls

2.1 This appendix sets out the calculations of revenue for each regional network updated from the December 2002 draft proposals document. These calculations involve allocating the revenue from Transco's existing distribution price control to each of the regional networks.

2.2 Price control revenue can be set by reference to estimates of:

- ◆ operating expenditure;
- ◆ an allowance for depreciation on the RAV; and
- ◆ return on the RAV.

Each of these components of price control revenue is dealt with below.

Operating Expenditure

2.3 Transco used its transaction model and audited information from 2000 to provide information on the operating costs for each of its regional networks. This data has then been used as a basis for allocating the allowances for operating costs underlying Transco's existing distribution price control. These calculations are set out in tables 2.1, 2.2 and 2.3.

Table 2.1 derivation of transaction model total operating costs from Transco's regulatory accounts (£ millions)

From Transco's Regulatory Accounting Statement (year ending 31/12/00)	
Total operating costs	1,999
Less replacement expenditure	249
Less depreciation	450
Less network code liability	50
Transportation operating costs	1,250
Reconciliation to transaction model total (£ millions)	
Less sundry adjustments	1.5
Deminimis costs	8.5
Transaction model total	1,257

2.4 The first section of table 2.2 below shows the allocation of the transaction model costs. The second section shows the allocation of operating costs (less prescribed rates), between the 12 LDZs. The third section shows each regional network's operating costs as a percentage of the total (where a regional network comprises two LDZs its percentage is from the sum of the LDZ costs). The slight difference from the figures presented in the December document reflects changes in replacement expenditure as discussed in Appendix 3.

Table 2.2 Regional network proportions of transaction model operating costs

Allocation of operating costs from Transco's transaction model (£ millions)				
LDZs	NTS	Meters	Met reading	Total Transco
919	174	138	26	1,257

Allocation of LDZ operating costs (less rates), between LDZs from Transco's transaction model (£ millions)												
Scot	North	NW	Yorks	E Mids	W Mids	Wales	E Anglia	N London	SE	South	SW	Total
79	48	93	53	75	67	46	56	78	78	51	52	776*

Regional network Percentages (%)							
Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England
10.2	13.0	12.0	16.8	8.6	12.6	10.0	16.7

* LDZ total less prescribed rates £143 million

2.5 Table 2.3 below shows the allocation of LDZ operating cost allowance between the regional networks based on the percentages in table 2.2. The figures for prescribed rates are based on the attribution of RAVs shown in table 2.9.

Table 2.3 Regional network operating expenditure excluding replacement expenditure (£ millions, 2000 prices)

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total*
2002/03									
Op costs	70	89	83	115	59	86	69	115	
Rates	11	17	19	30	15	15	19	30	
Total	81	106	102	146	74	101	87	145	842
2003/04									
Op costs	67	86	80	111	57	84	66	111	
Rates	12	18	19	31	15	15	18	31	
Total	79	104	99	142	72	99	84	142	821
2004/05									
Op costs	65	83	76	107	55	80	65	108	
Rates	12	18	21	32	16	16	18	32	
Total	77	101	97	139	71	96	83	140	803
2005/06									
Op costs	62	80	75	105	53	78	63	103	
Rates	13	19	21	33	17	17	19	34	
Total	75	99	96	138	70	95	82	137	792
2006/07									
Op costs	61	77	72	101	52	75	60	101	
Rates	13	21	22	35	17	18	21	35	
Total	74	98	94	136	69	93	81	136	781

*Ofgem Final Proposals September 2001

Capital Expenditure

2.6 Transco's proposals for dividing Ofgem's projections of LDZ capital expenditure between the eight regional networks are based on its BPQ response, provided during the 2001 price control review. This approach was explained in greater detail in Annex 2 to the December document and is summarised in table 2.4 below.

Table 2.4 regional network net capital expenditure, excluding replacement expenditure (£ millions, 2000 prices)

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
2002/03	30	39	15	34	33	41	15	26	233
2003/04	25	21	9	21	11	24	8	25	144
2004/05	13	18	7	16	5	13	6	28	106
2005/06	11	14	9	18	7	13	6	16	94
2006/07	9	20	7	16	12	16	6	20	106

Replacement Expenditure

2.7 Appendix 3 explains the attribution of replacement expenditure between the regional networks. The results of this approach are summarised in the table below. In the calculations underlying the price control 50 per cent of replacement expenditure is treated as capital expenditure and 50 per cent as operating costs.

Table 2.5 Regional network net replacement expenditure (£ millions, 2000 prices)

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
2002/03	27	53	54	65	51	37	54	77	418
2003/04	24	39	59	52	34	31	48	71	359
2004/05	31	46	56	63	38	38	40	73	384
2005/06	31	49	64	58	39	37	45	84	407
2006/07	29	48	70	58	38	34	45	89	410

Regulatory Asset Values

2.8 One way to determine the RAV of each regional network is on the basis of physical assets. The table below shows RAVs for each network based on Transco's distribution asset registers, at the beginning of this price control period.

Table 2.6 Regional network regulatory asset value at 1 April 2002, (£ millions, 2000 prices)

Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total*
902	1,104	1,082	1,725	747	1,354	858	1,603	9,376

*Ofgem Final Proposals September 2001

Regional Network Revenue

2.9 In the December document Ofgem calculated an estimate of revenues for each regional network. The cost of capital (6.25 per cent) and asset lives used to calculate depreciation are consistent with the September 2001 price control proposals. Consistent with the December document and on the basis of the

information set out above the calculation of revenues for 2002/03 (using the RAVs in table 2.6) is shown in the table below.

Table 2.7 Regional network revenue 2002/03 (£ millions, 2000 prices)

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
RAV open	902	1,104	1,082	1,725	747	1,354	858	1,603	9,376
Depreciation	(32)	(39)	(38)	(61)	(26)	(48)	(30)	(56)	(329)
Cap Exp #	44	65	42	67	59	59	42	64	442
RAV close	914	1,131	1,086	1,732	780	1,366	869	1,611	9,489

Op exp #	98	134	127	177	97	127	110	180	1,051
Depreciation	32	39	38	61	26	48	30	56	329
Return	57	70	68	108	48	85	54	100	590
Total	187	243	233	345	171	260	194	337	1,970

includes 50 percent of replacement expenditure

Transportation Charges

2.10 As explained in chapter 1 it is appropriate to minimise any unnecessary regional variations in gas distribution charges. One way to achieve this is to determine the regional network RAVs is on the basis of transportation charge revenue and cash flow.

2.11 Table 2.8 below shows forecast revenue for each regional network region for 2002/03. This revenue is then adjusted to 2000 prices (using the RPI as defined in special condition 28B of Transco gas transporter licence). The second section of the table shows this revenue in terms of percentages. In the third section of the table these percentages have been used to allocate LDZ price control allowed revenue for 2002/03 (as shown in table 2.13).

Table 2.8 Forecast transportation charge revenue 2002/03* (£ millions)

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
2002/03*	171	245	254	372	191	220	227	383	2,063
2000 prices	161	231	239	351	181	208	214	361	1,945

Regional network transportation charge revenue percentages 2000 prices									
%	8.3	11.9	12.3	18.0	9.3	10.7	11.0	18.5	100.0

Regional network revenue for 2002/03 (2000 prices) under existing LDZ price control									
	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
Allowed rev	163	234	242	355	183	210	217	365	1,969

*Source Transco

2.12 The figures in the table above are based on forecast data updated after the July 2002 consultation document. Deloitte & Touche have undertaken an assessment of the forecast revenue figures provided by Transco, their findings are summarised out in Annex 1 to the December document.

2.13 Comparing the final section of table 2.8 with the final section of table 2.7 shows that if the regional network were determined on the basis of physical assets some regional networks (for example Wales and Scotland) would require more allowed revenue than presently raised by gas distribution charges.

2.14 The table below sets out the attribution of LDZ RAV as shown in table 2.6. The second line sets out the RAVs required to generate allowed revenues for 2002/03 that equal the revenue figures in table 2.8. In broad terms the allocation of RAVs produced by this alternative method would be sufficient to eliminate any initial regional variations in charges.

Table 2.9 Regional network regulatory asset value at 1 April 2002 (£ millions, 2000 prices)

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
RAV A	902	1,104	1,082	1,725	747	1,354	858	1,603	9,376
RAV B	671	1,032	1,153	1,819	901	904	1,064	1,833	9,376
Difference	(26%)	(7%)	7%	5%	21%	(33%)	24%	14%	0%

2.15 As the table above shows both allocations of RAV sum to the same aggregate RAV consistent with the September 2001 price control proposals Table 2.10 sets out the calculation of regional network revenues using the alternative allocation of regional network RAVs. The differences in operating expenditures between table 2.10 and table 2.7 are due to the reallocation of rates arising from the alternative allocation of RAVs.

Table 2.10 revised regional network revenue 2002/03

£ millions 2000 prices	Scotland	North England	North West	East England	West Midlands	Wales & SW	North London	South & SE	LDZ Total
RAV Open	671	1,032	1,153	1,819	901	904	1,064	1,833	9,376
Deprec'tion	(24)	(36)	(40)	(64)	(32)	(32)	(37)	(64)	(329)
C'tal Exp*	44	65	42	67	59	59	42	64	442
RAV close	691	1,061	1,154	1,823	928	932	1,068	1,832	9,489

Op'ting Exp*	94	133	128	178	100	120	114	184	1,051
Deprec'tion	24	36	40	64	32	32	37	64	329
Return	43	65	72	114	57	57	66	115	590
Total	161	234	240	356	189	209	217	363	1,970

* includes 50 per cent of replacement expenditure

2.16 The revised regional network revenues for the price control period are shown in table 2.11 below.

Table 2.11 Revised regional network revenue 2002/03 –2006/07

£ millions 2000 prices	Scotland	North Englan d	North West	East England	West Midlands	Wales & West	London	South England	LDZ Total
2002/03	161	234	241	356	189	209	217	363	1,970
2003/04	158	227	241	346	180	205	213	356	1,926
2004/05	161	228	238	347	179	207	206	354	1,920
2005/06	160	228	240	342	179	205	207	358	1,919
2006/07	158	226	242	339	177	201	205	360	1,909

2.17 The September 2001 price control proposals explained that the LDZ price controlled revenue had been calculated such that price reduction in the first year (P0) of the new price control period 2002/03 was 2.9 per cent. With a subsequent annual reduction (X) of 2 per cent in prices. These calculations are consistent with Transco being able to maintain an investment grade credit rating The table below sets out the regional network price controlled revenues calculated on the same basis

Table 2.12 Regional network price controlled revenue 2002/03 –2006/07 (X= 2%)

£ millions 2000 prices	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ Total
2002/03	164	236	248	357	187	212	217	369	1,990
2003/04	162	232	244	352	184	209	213	364	1,960
2004/05	159	229	240	346	181	205	210	358	1,929
2005/06	156	224	236	340	178	202	206	351	1,893
2006/07	154	220	232	334	174	198	202	345	1,860

2.18 Following the September 2001 price controls proposals further minor adjustments were made to Transco’s price control, these adjustments were published in notes⁶ accompanying the modification to Transco’s licence required to implement the new price control arrangements. Firstly LDZ costs required to implement the new price control arrangements. Firstly LDZ costs funded through the NTS SO incentives arrangements (£27.82 million) were deducted from distribution price control revenue. Secondly a small amount of costs (£6.93 million) were reallocated from Transco’s metering price control to the distribution price control. The table below sets out the price controlled revenue for each regional network following these further changes.

Table 2.13 Regional network price controlled revenue 2002/03 (adjusted for SO and metering)

(£ millions, 2000 prices)	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ Total
Price control rev	163	233	245	353	185	209	215	366	1969

⁶April 2002: Transco price control and NTS SO incentives 2002-7, Explanatory notes to accompany the section 23 notice of proposed modifications to Transco’s Gas Transporter Licence.

Appendix 3 Replacement Expenditure

3.1 This section discusses the attribution of replacement expenditure to each of the regional networks and how the supplementary incentive mechanism has been modified to operate with the separate network price controls.

Mains and services replacement expenditure

September 2001 price control proposals

3.2 The September 2001 price control proposals⁷ included projections of efficient replacement expenditure based on estimates of mains and services replacement workload and the associated unit costs. The September 2001 proposals for mains and services replacement are shown in table 3.1 below.

Table 3.1 September 2001 mains and service replacement expenditure (£ millions, 2000 prices)*

	02/03	03/04	04/05	05/06	06/07
Mains	342	263	288	304	314
Services	73	84	87	91	92
Total	415	347	375	395	405

* The figures in table 3.1 do not include minor cost items e.g. LTS pipeline replacement, rechargeable and non rechargeable mains diversions and capitalisation items, this is the reason for the slight difference with the LDZ total figures in table 2.5.in appendix 2

3.3 The proposals above were derived from data provided by Transco during the price control review including information on mains and service replacement volumes and unit costs for each LDZ.

3.4 During the price control review the HSE concluded that Transco should implement a national programme such that all iron mains within 30 metres of premises should be replaced within 30 years. Transco scaled up its original projections of mains and service replacement volumes to reflect the requirements of the 30 year programme. The September 2001 proposals were based on Ofgem's assessment of efficient unit costs and Transco's projections of mains length and diameter mix in the 30 year programme.

⁷ September 2001 Review of Transco's Price Control from 2002, Final Proposals

February 2003 draft proposals

3.5 The September 2001 price control proposals were set on a national basis i.e. for all 12 LDZs. Transco has subsequently divided the aggregate figures for mains and service replacement volumes in proportion to its individual LDZ totals submitted earlier in the price control review. Transco also scaled its LDZ replacement unit costs to match the assumptions underlying the price control proposals. These assumptions on unit costs and volumes were then combined to produce the individual regional network totals published in Annex 3 to the December document and as shown in table 3.2.

Table 3.2 February 2003 regional network replacement expenditure (£millions, 2000 prices)

Regional Network	2004/05		2005/06		2006/07	
	Mains	Services	Mains	Services	Mains	Services
Scotland	21	5	22	5	22	6
North England	34	8	36	8	38	8
North West	45	11	43	11	42	11
East England	41	13	46	13	49	13
West Midlands	28	8	30	8	32	8
Wales & West	23	6	24	7	25	7
London	42	12	45	12	45	12
South England	53	25	58	27	60	27
Total	288	87	304	91	314	92

Final Proposals

3.6 In the light of further discussions with Transco the following adjustments have been made to the allocation of mains and service replacement expenditure.

Revised risk model and mains replacement policy

3.7 Transco follows a replacement policy agreed with the HSE. The policy, which is applied in all regions, describes how mains will be identified for replacement using data from a risk model (Mains Replacement Prioritisation System).

3.8 The model is regularly updated and Transco has recently introduced a revised version which, in conjunction with a revised mains replacement policy, has re-distributed mains replacement workload among the regional networks. Transco

has provided data to support the resulting changes and Ofgem is satisfied that the revised figures are reasonable.

Renegotiated contract rates

3.9 Transco outsources most of its mains replacement work to independent contractors and has recently renegotiated the costs of its contracts. Application of the new rates has changed the mains replacement unit costs for each regional network. Transco has provided the revised contract costs and Ofgem is satisfied that the allocation of costs to networks and diameter bands is broadly reasonable.

3.10 Table 3.3 below sets out the final attribution of mains and services replacement expenditure between the regional networks, the figures reflect the combined effect of changes in mains replacement workload and unit costs. The changes to service replacement expenditure are largely driven by changes in the mains workload. Although there is a revised attribution of costs the totals for the regional networks remain consistent with the September 2001 price control proposals in table 3.1.

Table 3.3 Mains and services replacement expenditure (£millions, 2000 prices)

Regional Network	2004/05		2005/06		2006/07	
	Mains	Services	Mains	Services	Mains	Services
Scotland	23	7	23	7	22	7
North England	35	10	38	10	37	10
North West	43	11	50	12	56	13
East England	47	14	43	13	44	13
West Midlands	29	8	30	8	30	8
Wales & West	28	8	27	8	25	7
London	31	9	35	9	35	9
South England	50	21	58	23	63	25
Total	288	87	304	91	314	92

Supplementary incentive mechanism for mains replacement

September 2001 price control proposals

- 3.11 The September 2001 price control proposals recognised that accurate forecasting of replacement volumes over a five year period is difficult. In particular there is uncertainty over the mix of mains diameters to be replaced each year and this is a significant driver of replacement expenditure. To accommodate deviations from the baseline projection of mains replacement the September 2001 proposals included a supplementary incentive mechanism applicable to mains replacement.
- 3.12 Under the incentive arrangements Transco will report the length of mains abandoned by diameter band every year. These will be multiplied by the unit costs in the diameter matrix, shown in table 3.4 below to give a matrix cost total for the year. This matrix cost total will then be compared to the price control projection and the total outturn costs for 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); and
 - ◆ 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).
- 3.13 Under the incentive scheme replacement expenditure may vary from year to year but total outturn price control allowance in respect of mains for the five year price control (2002/03 to 2006/07) is capped to the five year total of projected replacement expenditure as set out in the September 2001 price control proposals.

Table 3.4 September 2001 mains replacement cost matrix

2004/05			
Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	287.3	45.2	13
4-5"	2,002.2	45.4	91
6-7"	336.2	113.4	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
2005/06			
Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	292.4	44.1	13
4-5"	2,265.1	44.3	100
6-7"	366.3	110.9	41
8-9"	237.2	180.1	43
10-12"	374.4	212.0	79
> 12"	92.6	298.2	28
Total	3,628.0		304
2006/07			
Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/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

Final proposals

3.14 It is necessary to separate the above cost matrix so that it can be applied to each network price control. Cost matrices for each regional network are set out at the end of this appendix. The eight matrices sum for each year to the total length of mains abandoned and total matrix cost in table 3.4 i.e. total allowed costs remain the same. Nevertheless the figures in the regional network matrices reflect the changes in mains replacement workload and unit costs discussed earlier.

Issues arising from the disaggregation of the incentive mechanism

Effect of the five year cap

3.15 Alongside the incentive mechanism is a requirement to cap the outturn price control allowance over the five-year period to the total of the price control

projection. With a single price control individual network allowances would be aggregated before the cap is applied at the end of the price control period. The introduction of separate network controls may impose an additional constraint because caps will be applied to each of the eight networks. It is possible that changes in the allocation of mains workloads may require some regional networks to incur levels of replacement expenditure in excess of their individual allowances.

- 3.16 Removing the cap would not be appropriate as this would remove an important protection for consumers. Revising the individual caps, but with an aggregate total in excess of the existing 5 year total would be a possible way forward, however at this stage it is difficult to establish the necessary adjustments. The allocation of mains replacements workload between the networks is determined by Transco's risk model and by the requirements of the HSE. If developments in either of these two areas result in a material loss of equivalence for Transco compared to the single distribution price control Ofgem would relax the 5 year constraint on the relevant regional network price controls.

Asymmetry within the incentive mechanism

- 3.17 Due to the asymmetry of the mechanism (Transco retains 33% of savings against the matrix index totals but it incurs 50% of expenditure above the matrix index total) the introduction of separate price controls may reduce Transco's level of expected revenue because any overspending in an individual network can no longer be offset against savings in other networks.
- 3.18 The draft proposals said that the sharing factors could be adjusted if further analysis suggested that this was a material issue. At present there is no evidence that any of the regional networks would be under funded for mains replacement. Given that the commitments given in paragraph 3.16 reduce the risk to Transco from variances in volume and the changes to the made to unit costs described in paragraphs 3.8 to 3.11 will reduce the scope for variations in outturn unit costs then it is appropriate to exercise a degree of caution in making further changes to the matrices. On balance it seems appropriate not to make any further changes to arrangements or give further commitments to deal with asymmetries.

Supplementary incentive mechanism cost matrices for the regional networks

Scotland

2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	78.7	43.8	3
4-5"	119.0	55.3	7
6-7"	45.4	85.0	4
8-9"	23.2	116.8	3
10-12"	18.2	164.5	3
> 12"	13.1	262.3	3
Total	297.5		23

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	51.1	41.2	2
4-5"	132.6	51.9	7
6-7"	64.8	79.9	5
8-9"	17.7	109.8	2
10-12"	20.6	154.5	3
> 12"	14.7	246.6	4
Total	301.4		23

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	27.4	39.9	1
4-5"	155.1	50.2	8
6-7"	53.9	77.5	4
8-9"	26.5	106.4	3
10-12"	19.9	149.6	3
> 12"	14.2	239.0	3
Total	296.9		22

North England

2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	91.5	44.1	4
4-5"	264.2	58.1	15
6-7"	65.6	92.8	6
8-9"	23.8	125.4	3
10-12"	25.3	175.1	4
> 12"	7.4	286.7	2
Total	477.9		35

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	62.0	42.9	3
4-5"	335.9	56.7	19
6-7"	64.8	90.0	6
8-9"	27.3	121.7	3
10-12"	28.5	169.6	5
> 12"	7.2	278.2	2
Total	525.7		38

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	76.3	42.1	3
4-5"	326.6	55.6	18
6-7"	72.2	88.4	6
8-9"	28.0	119.5	3
10-12"	26.3	166.5	4
> 12"	6.9	273.1	2
Total	536.3		37

North West

2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	249.0	52.4	13
4-5"	133.1	66.8	9
6-7"	30.7	101.8	3
8-9"	20.3	137.7	3
10-12"	31.4	204.3	6
> 12"	26.0	351.6	9
Total	490.4		43

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	162.9	49.6	8
4-5"	271.3	65.2	18
6-7"	67.5	95.5	6
8-9"	26.7	129.2	3
10-12"	30.0	191.7	6
> 12"	26.2	329.1	9
Total	584.6		50

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	128.3	47.9	6
4-5"	379.1	63.3	24
6-7"	73.6	91.8	7
8-9"	36.7	124.2	5
10-12"	36.6	183.7	7
> 12"	25.2	316.1	8
Total	679.6		56

East of England
2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	57.8	50.6	3
4-5"	326.2	57.1	19
6-7"	63.8	89.8	6
8-9"	29.6	136.9	4
10-12"	33.7	181.0	6
> 12"	40.8	245.3	10
Total	551.9		47

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	37.5	52.3	2
4-5"	398.5	57.8	23
6-7"	68.3	91.5	6
8-9"	26.8	141.6	4
10-12"	32.0	186.2	6
> 12"	6.6	279.3	2
Total	569.8		43

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	37.1	50.9	2
4-5"	409.6	56.4	23
6-7"	78.8	88.9	7
8-9"	25.7	140.0	4
10-12"	34.7	180.7	6
> 12"	6.3	274.1	2
Total	592.2		44

West Midlands

2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	81.7	54.7	4
4-5"	141.2	65.9	9
6-7"	48.4	99.4	5
8-9"	29.2	155.5	5
10-12"	24.2	215.4	5
> 12"	3.0	309.4	1
Total	327.7		29

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	22.6	52.9	1
4-5"	207.2	62.9	13
6-7"	64.8	95.0	6
8-9"	29.5	148.6	4
10-12"	21.6	205.8	4
> 12"	2.9	294.0	1
Total	348.6		30

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	16.1	52.4	1
4-5"	227.9	61.6	14
6-7"	56.7	94.0	5
8-9"	34.0	146.9	5
10-12"	20.8	203.7	4
> 12"	1.9	288.0	1
Total	357.5		30

Wales and West

2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	19.0	54.1	1
4-5"	220.5	62.3	14
6-7"	55.3	91.4	5
8-9"	24.8	137.1	3
10-12"	26.0	170.7	4
> 12"	1.7	285.4	0
Total	347.3		28

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	20.7	50.4	1
4-5"	230.3	58.3	13
6-7"	61.3	85.3	5
8-9"	24.4	128.0	3
10-12"	23.9	159.1	4
> 12"	1.6	266.3	0
Total	362.1		27

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	18.5	46.5	1
4-5"	230.5	53.7	12
6-7"	68.4	78.6	5
8-9"	29.0	117.9	3
10-12"	20.7	146.5	3
> 12"	1.5	245.3	0
Total	368.7		25

London

2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	74.2	64.2	5
4-5"	96.9	77.9	8
6-7"	43.8	108.5	5
8-9"	14.2	211.6	3
10-12"	14.6	304.2	4
> 12"	14.6	445.8	6
Total	258.2		31

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	71.5	63.2	5
4-5"	107.8	76.7	8
6-7"	65.5	105.9	7
8-9"	22.8	206.6	5
10-12"	16.2	294.3	5
> 12"	12.8	435.2	6
Total	296.7		35

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	69.1	61.6	4
4-5"	106.3	74.8	8
6-7"	70.1	103.2	7
8-9"	30.4	201.2	6
10-12"	16.3	286.5	5
> 12"	12.3	424.0	5
Total	304.5		35

South England

2004/05

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	37.9	61.0	2
4-5"	321.8	64.9	21
6-7"	89.4	89.9	8
8-9"	35.0	141.3	5
10-12"	36.9	190.0	7
> 12"	18.5	389.1	7
Total	539.5		50

2005/06

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	47.6	61.9	3
4-5"	400.1	65.7	26
6-7"	92.4	91.2	8
8-9"	41.9	143.4	6
10-12"	39.1	192.8	8
> 12"	18.1	394.8	7
Total	639.2		58

2006/07

Diameter of mains Abandoned	Length of mains actually abandoned	Unit cost of abandonment (£/m)	Matrix costs (£/m)
2-3"	63.6	61.0	4
4-5"	455.3	64.9	30
6-7"	112.5	90.0	10
8-9"	38.7	141.6	5
10-12"	39.6	190.3	8
> 12"	17.5	389.8	7
Total	727.2		63