

**Separation of Transco's distribution price  
control**

**86/02**

**Draft Proposals**

December 2002

## 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 timely to consider whether the existing distribution price control remains appropriate and whether separate regional network price controls should be introduced.

In July 2002 Ofgem published a consultation document<sup>1</sup> seeking views on the introduction of a separate price control for each regional network. The July document set out the following rationale for introducing separate price controls:

- ◆ protect consumers in the event that Transco decides to sell off one or more regional networks;
- ◆ provide opportunities to compare the performance of regional networks and so enable more effective regulation; and
- ◆ create 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. The July document noted that in order to minimise the disruption to consumers it would be appropriate to phase in any regional variations in charges.

Following consideration of responses to the July document these draft proposals include revised calculations of the new price controls and an assessment of the possible path of

gas distribution charges over time. The present pattern of regional charges should remain in place to at least 2007 with any regional differences only emerging gradually after this date. On reasonable assumptions all consumers should experience further real reductions in gas distribution charges.

The draft proposals assume that changes to Transco's business structure and the possibility of separate ownership of distribution networks will encourage efficiency and allow comparative analysis to better inform the future regulation of gas distribution activities. If these developments and advantages were not to emerge then it would be possible to consider reverting to the present arrangements with a single price control on Transco's gas distribution networks.

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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 2001<sup>2</sup>. 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 its 12 Local Distribution Zones (LDZs) there has only been a limited amount of information available on the costs of

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<sup>2</sup> September 2001 Review of Transco's Price Control from 2002, Final Proposals

each 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***

- 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. The price control limits Transco's revenue from distribution charges to about £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.
- 1.10. 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.

- 1.11. It is also necessary to have regard to the guidance on social and environmental matters issued to Ofgem by the Secretary of State.

## ***Policy***

- 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 for arrangements to gradually phase in any regional variations in charges.
  - ◆ 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 consumers<sup>3</sup>.
- 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. Even under separate ownership costs should not be any higher than in the electricity distribution sector where competition between suppliers does not appear to have been hindered by dealing with 14 distribution companies.
- 1.14. Separate controls would 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. However it is possible

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<sup>3</sup> April 2002 Mergers in the Electricity Distribution Sector A Policy Statement

to minimise disruption to consumers by gradually phasing in regional variations in charges over a long period of time.

- 1.15. In light of these considerations this document sets out draft proposals for separate regional network price controls. In order to preserve the incentives for efficiency and to maintain regulatory stability these draft 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. Given Ofgem's principle objective it is appropriate to adjust the initial attribution of regulatory asset value (RAV) between the regional networks to minimise any disturbance in charging levels. The analysis set out in chapter 5 combines assumptions about the future costs of gas distribution with the initial attribution of RAVs to give projections of gas distribution over the next 25 years. This analysis suggests that consumers in all regions of Great Britain 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 revised attribution of the regional network RAVs does not compromise the financial viability of any of the regional network price controls while minimising disturbance in charging levels.
- 1.19. Financial modelling indicates that each separate network price controls, based on the revised attribution of RAVs, should support an investment grade credit rating. Therefore the networks would have the flexibility to fund further investment at a reasonable cost.
- 1.20. If Transco were to sell a regional network there would be wider issues to consider, such as the future interaction between that network and Transco's other licensed activities. These issues are outside the scope of this review and if

Transco brings forward proposals for further separation then these matters will be subject to separate and detailed consultation.

- 1.21. The draft proposals assume that changes to Transco's business structure and the possibility of separate ownership of distribution networks will encourage efficiency and allow comparative analysis to better inform the future regulation of gas distribution activities. If these developments and advantages were not to emerge then it would be possible to consider reverting to the present arrangements with a single price control on Transco's gas distribution networks.
- 1.22. The draft 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 July document set out the rationale and proposed a method for establishing separate price controls, including an approach to gradually phasing in regional variations in gas distribution charges.
- 2.2. This document sets out draft proposals for the separate regional price controls, which have been informed by the responses to the July document and further work undertaken by Ofgem. It builds on information set out in the July document on the calculation of separate price controls, the financial viability of the networks and the possible effects on gas distribution charges.

### *Document Structure*

- 2.3. This document has the following structure:
  - ◆ chapter 3 discusses the responses to the July consultation document and sets Ofgem's present position on these matters;
  - ◆ chapter 4 sets out the calculations for separate price controls and discusses the financial viability of each regional network;
  - ◆ chapter 5 discusses the effects separate regional network price controls may have on gas distribution charges;
  - ◆ appendix 1 contains a list of respondents to the July consultation document;
  - ◆ appendix 2 sets out the timetable for this review;
  - ◆ appendix 3 sets out possible changes required to key codes and agreements necessitated by the introduction of separate regional network price controls; and

- ◆ appendix 4 contains information on present NTS and LDZ charges by NTS exit zone.

### ***Annexes to this document***

- 2.4. In addition there are three annexes which provide more detailed information supporting the price control calculations set out in chapter 4. These annexes are only available in electronic format at [www.ofgem.gov.uk](http://www.ofgem.gov.uk).
- 2.5. The first annex is a report by Deloitte & Touche who were commissioned by Ofgem to assess the appropriate attributions and allocations of operating costs and regulatory asset values (RAVs) between the regional networks. The report also considers Transco's forecasts of distribution charge revenue for 2002/03. The second annex explains how capital expenditure has been attributed between the regional networks. The third annex will include an attribution of replacement expenditure and separate supplementary replacement expenditure incentive mechanisms for each regional network control. It should be available in January 2003.

### ***Timetable***

- 2.6. It is the intention to publish final proposals in May 2003. The separate regional price controls would be implemented from 1 April 2004.
- 2.7. These draft 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.

### ***Interactions with other Ofgem work streams***

- 2.8. 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;

- ◆ the establishment of Transco's regulatory accounting guidelines (RAGs);
- ◆ the consultation on the development of the network monopoly price controls;  
and
- ◆ the development of Transco's NTS Exit regime.

Appendix 2 sets out a timetable for these workstrands.

### ***Responding to this document***

- 2.9. If you would like to comment on any of the issues raised in this document please ensure your responses reach Ofgem no later than 28 February 2003. All responses will be made available on Ofgem's website ([www.ofgem.gov.uk](http://www.ofgem.gov.uk)). Therefore any confidential material should be included as an appendix and clearly marked as confidential. Responses should be sent to:

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## 3. The July 2002 Consultation

- 3.1. This chapter summarises the main issues raised in the July consultation document, discusses the views of respondents and sets out Ofgem's present position on these matters.

### ***Separation of Transco's distribution price control***

- 3.2. The July document discussed the advantages and disadvantages of establishing separate price controls for each of Transco's eight regional gas distribution networks, the most appropriate approach to setting these price controls and a method for gradually phasing in any regional variations in gas distribution charges.

### ***Rationale for separating Transco's distribution price control***

- 3.3. The July document highlighted three areas where separate controls could deliver benefits to consumers:
- ◆ they would provide greater regulatory flexibility and ensure a consistent regulatory approach regardless of ownership of the regional networks, allowing for arrangements to gradually phase in any regional variations in charges;
  - ◆ separate controls would complement Transco's new business structure and provide greater focus for the management of distribution activities; and
  - ◆ there would be 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. It has also been recognised that while all eight regional networks remain under common ownership the use of comparative analysis would be less effective than for electricity distribution. Nevertheless separate controls would provide more opportunity for comparative analysis than under the present arrangements.

3.4. The July document also stated an important consideration would be the potential impact of separate controls on gas distribution charges. Presently charges are broadly similar across all networks and do not reflect the regional differences in costs of distributing gas. Separate controls would impose individual revenue restrictions on each regional network and so 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. It is important that regulation protects the interests of consumers, including those residing in rural areas. In the light of these considerations the July document suggested any disruption to consumers could be minimised by gradually phasing in any regional variations in distribution charges.

### **Views of respondents**

3.5. Most respondents who commented on these issues agreed with the rationale for separating the distribution price control, in particular the opportunities to share further efficiency gains with consumers and obtain better information on regional network costs.

3.6. One respondent said that the benefits of establishing separate controls for the regional networks would be outweighed by the extra costs. In particular:

- ◆ increased operational costs due to the loss of economies of scale;
- ◆ higher administrative and operational costs incurred by suppliers and shippers in dealing with separate regional network operators; and
- ◆ higher regulatory costs arising from eight price controls and charging regimes.

3.7. A few respondents questioned the potential of comparative analysis while Transco owned all eight regional networks and whether experience in electricity distribution could be repeated in the gas industry. It was suggested that while Transco owned all eight regional networks it was likely to hold back the performance of some networks so to avoid the efficiency frontier being pushed forward and its less efficient networks suffering penalties. One respondent

referred to the Monopolies and Mergers Commission's (MMC) decision in 1996 to block the proposed merger of Severn Trent and South West Water. The MMC concluded that under Severn Trent's ownership South West Water would effectively be lost as a comparator for regulatory purposes and this outweighed any benefits of the merger. The respondent went on to question whether the eight regional networks, while owned by Transco, would prove to be effective comparators.

- 3.8. Most respondents commented on the prospect of regional variations in distribution charges under separate regional price controls. A few respondents said that locational price signals were important and therefore regional prices should be introduced as quickly as possible. The majority of respondents were concerned about the affect of regional variations in charges on consumers and said any regional variations should be phased in over a relatively long period of time.
- 3.9. Energywatch said it would be important that no consumers were disadvantaged by the implementation of separate regional network price controls. It noted that separate price controls could have potential benefits, such as encouraging efficiency gains. It also noted potential disadvantages, such as the impact on regional distribution charges, and said further analysis should be undertaken to identify the 'winners' and 'losers' under separate price controls. Energywatch also said that Ofgem should consider whether the proposed separation of the price control would encourage extensions of the gas network to fuel poor consumers living in rural areas.

### **Ofgem's views**

- 3.10. The advantages of establishing regional network price controls were described in the July document and are summarised in paragraph 3.3. Consistent with the views of the majority of respondents these considerations remain valid. 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 would maintain a central interface with shippers and suppliers. Even under separate ownership costs should not be any higher than in the electricity distribution

sector where competition between suppliers does not appear to have been hindered by dealing with 14 distribution companies.

- 3.11. In its response to the consultation Transco said that there should not be any additional on going costs from establishing separate controls, other than reporting regulatory accounting information on a regional network basis and monitoring and reporting on the operation of separate controls. Transco also stated it would continue to use its transaction model to allocate costs between its businesses rather than establishing a contractual framework for its intra-business relationships.
- 3.12. With regards to the issue of comparative analysis the July document acknowledged that while the eight regional networks remain under common ownership use of comparators will not be as effective as with the electricity distribution sector. Nevertheless the opportunity to use comparators should be greater than with the present arrangements. In the longer term as the operation of the regional networks evolves the use of comparative competition should become more effective.
- 3.13. The Competition Commission recently published a report of its inquiry of the proposed merger of Vivendi Water UK and First Aqua<sup>4</sup>. The reports notes that an important advantage of a comparator-based system is that targets can be set on the basis of companies at the efficiency frontier thereby replicating the functioning of a competitive market.
- 3.14. The reorganisation of Transco's business structure and the introduction of separate price controls should enable greater focus on local issues. In the medium term regional network management will be able to give more attention to developing innovative solutions to issues surrounding network extensions. As part of the next price control review it will be important to ensure that each regional network has appropriate incentives to expand its network where it is economic to do so. An important first step will be to review Transco's existing structure of distribution charges and its boundary between use of system and connection. This work will commence in 2003/04.

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<sup>4</sup> Competition Commission, November 2002, Vivendi Water UK PLC and First Aqua (JVCo) Limited: A report on the proposed merger

3.15. Issues surrounding regional variations in charges and the likely future path of prices are very important. A method for phasing in regional variations in gas distribution charges is discussed in chapter 4. Chapter 5 discusses the future path of prices and factors likely to influence gas distribution charges in the longer term.

### ***Form of separate regional network price controls and related issues***

3.16. The July document dealt with issues relating to the form of price controls for regional networks. It suggested:

- ◆ RPI-X price controls of a five year duration with strengthened links to output measures;
- ◆ output measures and standards of service consistent with the existing LDZ price control;
- ◆ 35 per cent of regional network allowed revenue related to demand via a revenue driver;
- ◆ pass through of prescribed network rates and Transco's Ofgem licence fee costs; and
- ◆ a supplementary incentive mechanism relating to Transco's mains replacement programme, consistent with the overall approach described in the September 2001 price control proposals document.

### **Views of respondents**

3.17. There were relatively few comments regarding the form of regional network controls. Two respondents said it would be appropriate to retain the passthrough of prescribed network rates and licence fees.

### **Ofgem's views**

3.18. The form of the regional price controls should be broadly similar to the existing price control and so it is appropriate to retain the assumptions set out in the July document and summarised in paragraph 3.16.

## ***Determining allowed revenue for the regional networks***

3.19. In order to preserve the incentives for efficiency and maintain regulatory stability the regional network price controls should provide an equivalent level of total revenue as Transco's existing distribution price control. On this basis the July document suggested that it would be necessary to divide the allowed revenue set under the LDZ price control between the eight regional networks. It went on to discuss how the main components of price control revenue (projections of operating costs, capital expenditure, replacement costs, an allowance for depreciation on the regulatory asset value (RAV) and return on the RAV) could be allocated to the regional networks.

### **Operating costs**

3.20. In part because Transco is restructuring its business operations there is uncertainty as to the level of operating costs for each regional network. Nevertheless, operating costs are more stable over time than capital expenditure. In these circumstances historical data should provide a broad indication of the future pattern of operating costs across the regional networks. Transco has developed a transaction model that attributes and allocates direct and indirect costs between the regional networks. The July document suggested using this model with audited data on costs for 2000 to estimate the proportion of operating costs that should apply to each regional network. These proportions could then be used to hypothecate the overall allowance for operating costs between the regional networks.

### **Capital expenditure**

3.21. The July document said that Transco had put forward proposals to separate Ofgem's 2001 price control review projections of capital expenditure between the regional networks. The document explained that the basis for Transco's suggestions was its response to Ofgem's business plan questionnaire (BPQ), provided during the price control review. In its BPQ response Transco had provided information on capital expenditure for each LDZ.

## **Replacement expenditure**

- 3.22. The September 2001 price control proposals were based on projections of the workload and unit cost associated with the 30-year mains replacement programme agreed with the Health and Safety Executive (HSE). The July 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.

## **Regulatory asset values and depreciation**

- 3.23. The July document explained that RAVs could be attributed between the regional networks using information from Transco's BPQ response as it had established individual LDZ RAVs by analysing the location and age of its assets. Nevertheless, given the importance of stability in distribution charges the July document suggested that it would be appropriate to adjust the initial attribution of RAVs between the regional networks to minimise any disturbance in charging levels. Adjusting the RAV in this way would have a proportionate effect on the allocation of depreciation allowances.

## **Returns**

- 3.24. The September 2001 price control proposals used an estimate for Transco's real cost of capital of 6.25 per cent and noted that this should provide Transco with flexibility to fund expenditure above the baseline levels assumed in setting the price control. Financial modelling demonstrated that a cost of capital of 6.25 per cent was consistent with Transco's ability to maintain an investment grade credit rating. The July document said that this approach would remain appropriate for the regional network price controls.

## **Price control calculations**

- 3.25. Chapter eight of the July document set out calculations of each regional network's price control revenue based on the approach set out above. These included calculations of revenue using the natural attribution of RAVs between the regional networks and calculations of revenue using a revised allocation of RAVs, designed to minimise regional price variations. It said that by revising the

allocation of RAVs between the regional networks, regional variations in charges would emerge as the value of existing assets is reduced by depreciation and new capital expenditure enters the asset base. Given the average age of existing assets regional variations would emerge over a period of about 25 years.

### **Views of respondents**

- 3.26. Few respondents commented directly on Ofgem's proposed approach to separating Transco's distribution price control. All of the respondents who did comment on these issues agreed that it was appropriate to divide the existing price control settlement between the regional networks. Many respondents said that they would like to see more detailed information before they could comment on the approach to separating the price control.
- 3.27. Some respondents discussed the potential interactions between the regional network price controls and the National Transmission System (NTS) in its system operator (SO) and transmission asset owner (TO) roles. For instance it was suggested that under separate price controls regional networks might undertake investment that could be done more efficiently on the transmission system. Respondents suggested it would be appropriate to take into account future developments in relation to the NTS SO, in particular those relating to NTS exit capacity and linepack services. A few respondents asked whether the NTS SO would undertake balancing activities for all the regional networks or whether regional networks would eventually assume SO and TO roles.
- 3.28. Many respondents commented on the approach to phasing in regional variations in distribution charges by changing the initial attribution of RAVs between the regional networks. One respondent said that sculpting RAVs would be too complex and suggested that instead Transco base its gas distribution charges on the natural attribution of RAVs between the regional networks and then reallocate allowed revenue between the separate regional network price controls to minimise regional variations in charges.
- 3.29. Many respondents were unclear about the timescales over which regional differences in charges would be phased in. One respondent suggested that suppliers would only be able to tolerate a 4 per cent variation in transportation charges before regional variations would need to be reflected in final prices to

consumers. The same respondent said that modelling of the data in the July document showed that under the revised attribution of the RAV there would be a divergence of 5 to 6 per cent in regional network charges within ten years.

- 3.30. Transco said that there could be many factors that would drive the evolution of gas distribution charges. These include factors influencing RAVs (such as the variances in age profile of assets and the level of replacement expenditure) and other factors such as growth in demand for gas and the extent to which each regional network would be able to achieve efficiencies.

### **Ofgem's views**

- 3.31. A number of respondents requested further information on the calculations of the regional price controls or the path of future gas distribution charges. Chapter 4 sets out updated calculations of regional price controls and chapter 5 further analysis of the likely path of charges in the longer term. In addition annexes to this document provide a more detailed explanation of how the figures underlying the separate controls have been derived.
- 3.32. The separation of Transco's distribution price control into regional components should not directly effect the interactions between gas distribution and transmission networks, although further business separation would have the potential to have a significant impact on these interactions. If Transco brings forward proposals for further separation then these matters will be subject to separate consultation. In the meantime the ongoing interactions between the NTS and regional networks will continue to be monitored through its regulatory accounts, exit code and the reporting of output measures.
- 3.33. The July document noted that rather than sculpting the initial allocation of RAVs it might be possible to deal with possible regional variations in charges by transferring revenue between regional network price controls. It concluded that this could be unsustainable if Transco decided to sell one or more of its regional networks. Nevertheless, a number of respondents have suggested that these arrangements would be preferable to fully separate price controls. There are advantages and disadvantages of both approaches. However, it is not clear that the Gas Act provides a robust statutory basis for arrangements involving the transfer of revenue between separate companies in a way envisaged by a

respondent to the July document. Even if these legal difficulties could be dealt with it would be necessary to put in place a relatively complex regulatory and contractual structure to allow these transfers. Therefore, on balance it remains Ofgem's view that fully separate price controls would be the most robust and appropriate way forward.

### ***Financial viability***

- 3.34. In setting monopoly price controls Ofgem considers whether the regulated company could continue to retain access to finance on reasonable terms and so retain the flexibility to fund its future investment programme. The July document noted that issues of financial viability would be important for separate regional network price controls. It set out an approach based on hypothecating a financial structure to each price control unit and considering tests of financial viability. Consistent with the approach adopted by credit rating agencies these tests would focus on measures such as coverage of interest charges by funds from operations (FFO) and the ratio of FFO to total debt.

### **Views of respondents**

- 3.35. Only a few respondents commented on this subject, all of them agreed that it would be important to establish the financial viability of each regional price control unit.

### **Ofgem's views**

- 3.36. An assessment of the financial viability of each regional price control unit is set out in chapter 4.

### ***Replacement activity and safety***

- 3.37. The July document noted Transco's responsibilities with respect to the safe operation of its gas network and discussed the 30 year mains and services replacement programme. It also discussed the incentive mechanism in the existing distribution price control relating to replacement expenditure.

## ***Safety***

- 3.38. Transco has responsibility for the Gas Emergency Service which provides a national telephone number for gas emergencies available every day for 24 hours. Specially trained personnel are despatched to all gas escapes to make the situation safe and ensure there is no further danger. Transco also acts as the Network Emergency Co-ordinator, which entails co-ordinating activities to prevent, control and mitigate supply emergencies to significant areas of Great Britain. The July document stated that Transco would continue to manage both functions nationally and that neither would be affected by the creation of separate regional price controls.
- 3.39. The July document also said that Transco's operations are subject to a safety case that has been accepted by the HSE. Any material change to the safety case requires approval from the HSE.

## ***Replacement of mains and services***

- 3.40. There are approximately 91,000 km of iron mains within 30 metres of properties and since 1977 Transco has managed a mains replacement programme designed to minimise the risk of fire or explosion due to the failure of iron mains. Much of the replacement activity involves replacing iron mains with PE pipes. Historically Transco has prioritised replacement by assessing relative risk of failure of mains. In September 2001 the HSE agreed a programme with Transco to further mitigate the risk from failure of iron mains and Transco is now required to replace all iron mains within 30 metres of property over a period of 30 years.
- 3.41. Transco's eight regional network business units are designed to improve efficiency and increase management focus on gas distribution activities. Nevertheless Transco has said it will retain central control over key elements of the 30 year replacement programme. Given the continued use of the Mains Risk Prioritisation Scheme (MRPS) there would be no difference between the profile of mains replacement under the present price control or separate regional price controls.

### ***The supplementary incentive mechanism***

- 3.42. The September 2001 price control proposals recognised that there is uncertainty over the mix of mains diameter to be replaced each year and that the diameter of mains is a significant driver of replacement expenditure. To deal with this uncertainty and improve incentives the September 2001 proposals included a supplementary incentive mechanism designed to accommodate certain changes in the workload mix of the replacement programme and share efficiency gains with consumers. In the light of the importance of these matters separate incentive mechanisms would need to be established for each regional network.
- 3.43. The incentive mechanism returns about  $\frac{2}{3}$  of efficiency gains from mains replacement to consumers and allows Transco to raise prices to about recover about  $\frac{1}{2}$  of overspends. The July document noted that under the present incentive mechanism Transco's performance is aggregated across all the regional networks. With individual incentive mechanisms there may be less scope for netting off underspend against overspend. It may be appropriate to adjust the regional network incentive mechanisms to ensure that revenues would match those produced under the aggregate mechanism.

### **Views of respondents**

- 3.44. Two respondents stressed that it was very important that separate regional network price controls did not adversely impact Transco's ability to run the Gas Emergency Service. The HSE noted that it was presently reviewing Transco's ability to fulfil its existing emergency service responsibilities. Additionally the HSE highlighted that it is presently developing (in consultation with the industry) a more proactive role for the emergency service in terms of identifying and isolating gas appliances emitting dangerous fumes. The HSE said it would scrutinise any changes that would affect these arrangements. One respondent noted that if Transco sold any of the regional networks its safety case would have to be re-examined by the HSE.
- 3.45. The HSE was concerned that any drive for further cost efficiencies within the regional networks should not be achieved at the expense of safety.

- 3.46. One respondent said that separate regional price controls should not affect the mains replacement programme. Another respondent said that the restructuring of Transco's management would provide increased focus on replacement activity within each regional network. Another respondent said that it would be important for Transco to retain central control of key aspects of the replacement programme.
- 3.47. Transco said that safety was its number one priority and stated that separate controls would not affect its ability to deliver the 30 years mains replacement programme. Individual network replacement programmes would be determined by risk assessments of pipes and governed by the policies accepted by the HSE. The risk assessments would be regularly reviewed by Transco and the regional network programmes would be amended each year on the basis of new assessments. Both Transco and the HSE said that they were continuing to develop policy for mains replacement.
- 3.48. Transco said that it would be appropriate to adjust supplementary incentive mechanisms for the regional networks in order that the revenues would match the existing mechanism. Another respondent noted that difficulties in separating the incentive mechanism arose from the asymmetry of its design and this could mean complex rebalancing between the regional networks to achieve equivalence.

### **Ofgem's views**

- 3.49. Separating Transco's distribution price control should not have a detrimental impact on safety. The Gas Emergency Service will continue to be run centrally by Transco and will not be affected by the separation of Transco's distribution price control.
- 3.50. Transco is required under the Gas Safety (Management) Regulations 1996 (GS(M)R) to operate in accordance with a safety case approved by the HSE. Any developments within the regional networks that could impact on safety will be subject to scrutiny by and will require the approval from the HSE. Given that the regional networks operate within this framework any initiatives to achieve further efficiency gains should be consistent with Transco's safety case.

3.51. Annex 3 to this document will set out in detail how the regional network expenditure allowances have been derived including the draft proposals for individual network supplementary incentive mechanisms. It will be for Transco to demonstrate and quantify any adjustments necessary to align these mechanisms with the arrangements associated with the existing price control.

### ***Quality of service***

3.52. The July document discussed Transco's quality of service and whether this would be influenced by separating its distribution price control.

### ***Output measures***

3.53. To ensure that Transco delivers an appropriate quality of service under the present price control Ofgem will monitor Transco's performance relating to certain output measures. The September 2001 price control proposals stated that Transco's performance would be monitored for the:

- ◆ number of non contractual supply interruptions;
- ◆ duration of non contractual supply interruptions;
- ◆ resolution of shipper queries;
- ◆ reliability of the M-number CD-ROM service;
- ◆ mains replacement; and
- ◆ LDZ capacity.

3.54. In addition Transco would be required to report on environmental performance and provide additional supporting information. The July document noted that Transco was already required to report the output measures on a national and regional network basis (except the M- number CD-ROM and shipper queries which are provided centrally by Transco). Therefore the separation of the price control would have no implications in this respect

3.55. The July document said that Ofgem had proposed to introduce an incentive scheme by April 2004 whereby Transco's performance on duration and number

of non-contractual interruptions would be penalised or rewarded by up to 2 per cent of LDZ allowed revenue. The document stated that if the distribution price control was separated then it would be appropriate to consider separate incentive schemes for each regional network.

### ***Standards of performance***

- 3.56. The Gas Act empowers Ofgem and the Secretary of State to set Guaranteed and Overall Standards of Performance. Guaranteed Standards specify a level of service which Transco must meet in every individual case, otherwise Transco must pay a fixed amount to the consumer concerned. Overall Standards cover areas where it is not feasible or appropriate to give individual guarantees, but it is reasonable for consumers in general to expect a certain level of service. The July document stated that the separation of the distribution price control would not have any implications for the standards of service, as the standards already apply to each regional network.

### **Views of Respondents**

- 3.57. A few respondents said that the separation of the distribution price control would allow comparative benchmarking between regional networks using performance on outputs similar to the framework in the electricity distribution sector.
- 3.58. Some respondents commented on the incentive scheme for non-contractual supply interruptions and said incentives should be set for each regional network. Two respondents suggested that the scheme would need to factor in regional differences such as topography, age of pipes and so on.
- 3.59. Transco said in principle setting the incentive scheme for each regional network would be a sensible way forward. Transco also suggested that separate controls could provide scope to vary the Guaranteed and Overall Standards between the regional networks.

### **Ofgem's views**

- 3.60. The Information and Incentives Project for the electricity distribution network operators has shown the importance of having accurate and consistent

information and a track record on which to base an incentive scheme. In light of this experience Ofgem proposes to focus work in 2003 on developing a robust process for auditing Transco's measurement systems and data for non-contractual interruptions and discussing the initial performance in detail with Transco. A consultation paper will be published on the form of the quality of service incentive scheme for Transco during 2004, with a view to the scheme taking effect from 1 April 2005, one year later than originally planned. The additional year's data will enable Ofgem to set more robust targets and incentives for each regional network.

### ***Commercial arrangements***

- 3.61. The July document discussed implications of separate regional network price controls for Transco's network code and other commercial arrangements within the gas industry.
- 3.62. The network code and associated documents set out the contractual arrangements between Transco and shippers. The July document noted that certain modifications to the network code would be required to accommodate separate regional network price controls.
- 3.63. The July document discussed the services provided by Transco to shippers such as supply point administration, capacity booking and trading, gas nomination and daily balancing. It also discussed Transco's charging and invoicing process. The July document said that the introduction of separate price controls could potentially lead to separate capacity and commodity charges for each regional network. This would increase the volume of Information required as part of the charging and invoicing process and may result in modifications to Transco's and shipper's systems.

### **Views of respondents**

- 3.64. A number of respondents commented on these issues and said separate regional network price controls would require only minor changes to the network code and other commercial arrangements between Transco and shippers.

3.65. Many respondents discussed issues that should be considered if a regional network changed ownership. Some discussed the interactions between the NTS SO and separately owned regional networks. Others were concerned that separate ownership would have an adverse impact on services such as supply point administration, reconciliation by difference, meter registration, invoicing and so on. Some respondents said charging methods and invoicing should be kept consistent across the networks to keep down costs to the industry.

### **Ofgem's views**

3.66. The creation of separate price controls should require only minor changes to the network code and other commercial arrangements. There are much wider issues associated with the possible sale of regional networks. As noted earlier such changes are outside the scope of this document and if Transco were to bring such proposals forward in the future these would be subject to separate and detailed consultation.

## 4. Regional Network Price Controls

- 4.1. This chapter sets out the calculations of revenue for each regional network based on the approach set out in the July 2002 consultation document. These calculations involve allocating the revenue from Transco's existing distribution price control to each of the regional networks, consistent with arguments made in paragraphs 3.19 to 3.25. The calculations include an adjustment to the initial attribution of RAVs designed to minimise any regional variations in gas distribution charges. It also discusses the financial viability of the regional networks operating under separate price controls.
- 4.2. 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.

- 4.3. The numbers presented throughout this chapter reflect a reallocation of costs between East England and London regional networks, this reallocation was not included in the July 2002 consultation document. The geographic boundaries of the East of England and London networks overlap over a particular area. Revenue from gas distribution charges within this overlap had been attributed to East England while the costs and asset value were assigned to London. Reallocating the appropriate level of costs from London to East England will ensure that that costs and revenue are aligned and reinforce the robustness of the revised price controls.

### ***Operating Expenditure***

- 4.4. Transco has 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 4.1, 4.2 and 4.3.

**Table 4.1 derivation of transaction model total operating costs from Transco's regulatory accounts (£ millions)**

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

4.5. The first section of table 4.2 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).

**Table 4.2 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
77	48	92	52	77	66	47	57	76	79	52	53	776*

Regional network Percentages (%)							
Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England
10.0	12.9	11.8	17.3	8.4	12.9	9.8	16.9

\* LDZ total less prescribed rates £143 million

4.6. Table 4.3 below shows the allocation of LDZ operating cost allowance between the regional networks based on the percentages in table 4.2. The figures for prescribed rates are based of the revised distribution of RAVs shown in table 4.9.

**Table 4.3 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*
<b>2002/03</b>									
Op costs	68	88	81	117	58	89	67	116	
Rates	12	18	19	31	15	15	18	30	
Total	80	106	100	148	73	104	85	146	842
<b>2003/04</b>									
Op costs	65	85	79	115	56	86	65	112	
Rates	12	18	19	30	15	15	18	31	
Total	77	103	98	145	71	101	83	143	821
<b>2004/05</b>									
Op costs	63	83	76	111	54	83	63	108	
Rates	12	18	20	31	15	16	18	32	
Total	75	101	96	142	69	99	81	140	803
<b>2005/06</b>									
Op costs	62	80	73	107	52	80	61	105	
Rates	13	19	21	33	17	17	19	33	
Total	75	99	94	140	69	97	80	138	792
<b>2006/07</b>									
Op costs	60	77	71	103	51	78	59	101	
Rates	13	21	22	35	17	18	20	35	
Total	73	98	93	138	68	96	79	136	781

\* Ofgem Final Proposals September 2001

4.7. Deloitte & Touche have reviewed the attribution of operating costs in the transaction model and have identified certain cost drivers that could be modified so to produce more appropriate cost allocations. However these changes are relatively minor and should not have a significant impact on the percentages shown in table 4.2. Following further discussions with Transco any changes arising from these issues will be addressed in the final proposals document.

### ***Capital Expenditure***

4.8. 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 is explained in greater detail in Annex 2 to this document and summarised in table 4.4 below.

**Table 4.4 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***

4.9. Transco has used the unit costs per LDZ to allocate 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 4.5 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	58	52	34	31	48	71	359
2004/05	27	43	59	56	37	31	54	77	384
2005/06	27	45	61	60	39	32	57	85	407
2006/07	29	47	53	63	40	33	57	88	410

4.10. Annex 3 to this document will provide a detailed explanation regarding the allocation of replacement expenditure between regional networks and the establishment of separate incentive mechanisms for each network.

## ***Regulatory Asset Values***

4.11. Transco has attributed its distribution network RAV between the eight regional networks. The table below shows the distribution of the RAV at the beginning of this price control period.

**Table 4.6 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

4.12. Deloitte & Touche have examined the method used by Transco to separate its RAV between the regional networks, their findings are set out in Annex 1 to this document. The consultants concluded that Transco's method and its allocation of RAVs is reasonable.

### ***Regional Network Revenue***

4.13. In the July 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 July document and on the basis of the information set out above the calculation of revenues for 2002/03 (using the RAVs in table 4.6) is shown in the table below.

**Table 4.7 Regional network revenue 2002/03 (£ millions, 2000 prices)**

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
<b>RAV open</b>	902	1,104	1,082	1,725	747	1,354	858	1,603	9,376
<b>Depreciation</b>	(32)	(39)	(38)	(61)	(26)	(48)	(30)	(56)	(329)
<b>Cap Exp #</b>	44	65	42	67	59	59	42	64	442
<b>RAV close</b>	914	1,130	1,086	1,732	780	1,366	869	1,611	9,489

<b>Op exp #</b>	97	134	126	180	96	130	108	181	1,051
<b>Depreciation</b>	32	39	38	61	26	48	30	56	329
<b>Return</b>	57	70	68	108	48	85	54	100	590
<b>Total</b>	186	242	232	348	170	262	192	338	1,970

# includes 50 percent of replacement expenditure

## Transportation Charges

- 4.14. As explained in paragraph 4.1 it is appropriate to adjust the attribution of RAVs between the regional networks to minimise any regional variations in gas distribution charges.
- 4.15. Table 4.8 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 4.13).

**Table 4.8 Forecast transportation charge revenue 2002/03\* (£ millions)**

	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ total
<b>2002/03*</b>	171	245	254	372	191	220	227	383	2,063
<b>2000 prices</b>	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
<b>Allowed rev</b>	163	234	242	355	183	210	217	365	1,969

\*Source Transco

- 4.16. 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 set out in Annex 1 to this document.
- 4.17. Comparing the final section of table 4.8 with the final section of table 4.7 shows that if the regional network price controls remain unadjusted some regional networks (for example Wales and Scotland) would have more allowed revenue than presently raised by gas distribution charges. If the price controls were not adjusted consumers in these regional networks would pay higher distribution charges and other consumers would pay lower charges.

4.18. The table below sets out the allocation of LDZ RAV as shown in table 4.6. The second line sets out the revised distribution of RAVs required to generate allowed revenues for 2002/03 that equal the revenue figures in table 4.8. In broad terms the revised allocation of RAVs would be sufficient to eliminate any initial regional variations in charges. The figures for the adjusted network RAVs in table 4.8 differ slightly from those presented in the July 2002 consultation document. This difference reflects the changes already discussed in this chapter i.e. prescribed rates, revised gas distribution revenue forecasts and the reallocation of costs between London and East England.

**Table 4.9 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
<b>RAV</b>	902	1,104	1,082	1,725	747	1,354	858	1,603	9,376
<b>Adj RAV</b>	698	1,053	1,151	1,805	893	907	1,059	1,811	9,376
<b>Difference</b>	(23%)	(5%)	6%	5%	20%	(35%)	23%	13%	0%

4.19. As the table above shows these reallocations leaves the aggregate RAV unchanged. Table 4.10 sets out the calculation of regional network revenues using the adjusted allocation of regional network RAVs. The differences in operating expenditures between table 4.10 and table 4.8 are due to the reallocation of rates following the adjusted allocation of RAVs.

**Table 4.10 revised regional network revenue 2002/03**

£ millions 2000 prices	Scotland	N & Yorks	North West	East England	West Midlands	Wales & SW	North London	South & SE	LDZ Total
<b>RAV Open</b>	698	1,053	1,151	1,805	893	907	1,059	1,811	9,376
<b>Deprec'tion</b>	(24)	(37)	(40)	(63)	(31)	(32)	(37)	(64)	(329)
<b>C'tal Exp</b>	44	65	42	67	59	59	42	64	442
<b>RAV close</b>	717	1,081	1,153	1,809	920	934	1,064	1,812	9,489

<b>Op'ting Exp</b>	94	133	127	181	98	122	112	184	1,051
<b>Deprec'tion</b>	24	37	40	63	31	32	37	64	329
<b>Return</b>	44	67	72	113	57	58	66	113	590
<b>Total</b>	162	236	240	358	186	214	215	361	1,970

4.20. The revised regional network revenues for the price control period are shown in table 4.11 below.

**Table 4.11 Revised regional network revenue 2002/03 –2006/07**

£ millions 2000 prices	Scotland	North England	North West	East England	West Midlands	Wales & West	London	South England	LDZ Total
2002/03	162	236	240	358	186	214	215	361	1,970
2003/04	160	228	240	347	178	208	210	355	1,926
2004/05	160	228	238	345	177	205	212	356	1,920
2005/06	159	228	237	344	176	204	212	358	1,919
2006/07	159	228	232	343	176	203	211	358	1,909

4.21. 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 4.12 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	165	237	245	358	184	213	219	369	1,990
2003/04	163	233	241	353	182	210	215	363	1,960
2004/05	160	230	237	347	179	206	212	357	1,929
2005/06	157	225	233	341	176	203	208	351	1,893
2006/07	154	221	229	335	172	199	204	344	1,860

4.22. Following the September 2001 price controls proposals further minor adjustments were made to Transco's price control, these adjustments were published in notes<sup>5</sup> accompanying the modification to Transco's licence required to implement the new price control arrangements. Firstly LDZ costs

<sup>5</sup>April 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.

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 4.13 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	234	242	355	183	210	217	365	1969

### ***Financial viability***

- 4.23. The July document explained that in setting network price controls Ofgem considers whether the company could continue to secure access to finance on reasonable terms, so giving it flexibility to fund future investment at a reasonable cost. A key test of this is whether the company can retain an investment grade credit rating. The main credit rating agencies consider both qualitative and quantitative factors when determining ratings. In terms of financial analysis they place emphasis on levels of debt, cash and cash flow, in view of the difficulty of comparing reported earnings and balance sheet data under different regulatory regimes and accounting conventions. Therefore measures such as the coverage of interest charges by funds from operations (FFO) and the ratio of FFO to net debt are considered more relevant and reliable.
- 4.24. At present the financing (debt, equity and tax) of the regional networks is undertaken by Transco at the company level. In order to determine the financial indicators described above it is necessary to hypothecate a financial structure to each regional network.
- 4.25. Ofgem has assumed that the regional networks have a similar financial structure to that of Transco. The key assumptions used for the regional networks are summarised in the table below these are consistent with the September 2001 price control proposals for Transco. The second part of table 4.12 sets out the ranges of the financial indicators across the regional networks.

**Table 4.14 Financial structure and indicators**

<b>Assumptions</b>	
WACC	6.25%
Gearing	62.5%
Interest	7%
Dividends	4.5% yield, 4% annual growth thereafter
Tax	Transco's effective tax rate
<b>Financial indicator</b>	<b>Projected range 02/03-06/07</b>
FFO interest cover	2.20 to 2.11
FFO net debt	15%-14%
Gearing (Net Debt/RAV)	63%-58%

4.26. The September 2001 price control final proposals set out assumptions for the minimum level of key financial indicators consistent with an investment grade credit rating. These indicators are shown in table 4.13.

**Table 4.15 Ofgem's financial indicators**

<b>Indicator</b>	<b>Level</b>
FFO interest coverage	(min) 2.0 times
FFO to net debt	(min) 12 %
Gearing	(max) 60 to 70 %

4.27. On the basis of the projections in table 4.12 and the minimum levels shown in 4.13 then each of the regional networks price controls is consistent with these basic indicators of financial viability for the period 2002 to 2007.

## 5. Transportation Charges

- 5.1. This chapter discusses the impact of separate regional network price controls on gas distribution charges and examines the effects of phasing in regional variations in charges by sculpting the initial allocation of the regional network RAVs.
- 5.2. The table below sets out the gas transmission and distribution charges presently paid by suppliers in respect of domestic consumers on each of the regional networks. These charges are based on average domestic consumption for each network and have been derived from the data on NTS (transmission) and LDZ (distribution) charges set out in appendix 4.

**Table 5.1 Domestic consumer (<73 MWh) charges under the aggregate LDZ price control (2000 prices)\***

Network	Load Factor #	Annual Consumption (kWh) +	NTS Charge £/annum ^	LDZ Charge £/annum	Total Charge £/annum
South of England	33.7%	18724	9.12	76.52	85.64
Wales & West	34.6%	18266	10.58	73.97	84.55
London	36.8%	18972	8.61	75.22	83.83
East of England	37.0%	19673	5.76	77.91	83.67
North & Yorkshire	37.4%	19538	2.97	77.14	80.14
West Midlands	34.7%	18377	5.66	74.32	79.98
North West	38.4%	18809	5.89	73.57	79.46
Scotland	39.7%	20041	3.02	71.27	74.29

\*Source: Transco

#Load factors are taken from Transco's latest charging statements

+ Annual consumption figures are baseline forecasts underlying the September 2001 price control proposals

^NTS charge is a weighted average of all exit zones within each regional network

- 5.3. NTS charges already include regional variations in the costs of gas transmission, for example lower charges in Scotland reflect the proximity to the principal beach terminals for gas. LDZ charges form a much narrower range and do not reflect the full regional differences in the costs of distributing gas.
- 5.4. Table 5.2 shows gas transmission and distribution charges as in table 5.1 but with the gas distribution charges calculated to reflect the present pattern of regional costs. Further information on costs is set out in chapter 4 and further information on charges is set out in appendix 4.

**Table 5.2 Domestic consumer (< 73 MWh) charges under separate regional network price controls – unadjusted RAVs (2000 prices)\***

Network	Load Factor	Annual Consumption (kWh)	NTS Charge £/annum	LDZ Charge £/annum	Total Charge £/annum
Wales & West	34.6%	18266	10.58	83.06	93.64
Scotland	39.7%	20041	3.02	78.94	81.96
London	36.8%	18972	8.61	69.01	77.62
North & Yorkshire	37.4%	19538	2.97	72.42	75.39
South of England	33.7%	18724	9.12	65.69	74.81
North West	38.4%	18809	5.89	73.57	79.46
East of England	37.0%	19673	5.76	64.81	70.57
West Midlands	34.7%	18377	5.66	62.89	68.55

\*Source: Transco

5.5. The above table shows that if distribution charges were to reflect existing variations in costs then charges in respect of consumers in regions such as Wales & South West and Scotland would increase significantly. Ofgem's principle objective is to protect the interests of consumers, wherever appropriate by promoting effective competition, and it must also have regard to the interests of consumers residing in rural areas. In the light of these considerations the July 2002 consultation paper suggested adjusting the initial allocation of regional network RAVs to minimise initial regional variations in gas distribution charges.

### ***Gas distribution charges over time***

5.6. A range of factors will influence the movement of gas distribution charges over time. Two of the most important considerations are changes in RAVs and the scope for future efficiency gains.

### ***Changes in the asset base***

5.7. Over time the RAV of each regional network will be determined by the balance between regulatory depreciation (which reduces the RAV) and new capital expenditure (which increases the RAV). Where RAVs have been adjusted downwards (*upwards*) the rate of capital additions will tend to be higher (*lower*) than the rate of depreciation and the RAV will tend to increase (*decrease*) with time. Existing assets are depreciated over a period of up to 28 years. For the purposes of making projections of prices in the longer term it has been assumed

that RAVs will revert to the levels consistent with those prior to the sculpting adjustments set out in chapter 3.

- 5.8. It is likely that the physical lives of PE assets will be significantly longer than 28 years and 50 per cent of replacement expenditure is now expensed rather than capitalised, suggesting the above approach may be relatively conservative. On the other hand the Transco Price Control Review Final Proposals document explained that the value of pre-1992 assets has been reduced by a market to asset ratio (MAR) adjustment. As a supporting check the above estimates have been compared to estimates made by Transco made on the basis of more detailed projections of capital and replacement expenditure. This supporting check indicates that the estimates of the future RAVs for Wales & West and Scotland are relatively conservative and actually charges any turn out to be lower the estimates in this chapter.

### ***Efficiency savings***

- 5.9. As well as changes in RAVs another influence on distribution charges will be the level of efficiency savings made in the future. For the period 2002/03 to 2006/07 regional network distribution charges are linked to an RPI-2 price control. After this period it is necessary to make assumptions about the overall level of efficiency savings. These can then be used to inform projections of distribution charges.
- 5.10. In setting Transco's present price control Ofgem considered a study by Europe Economics<sup>6</sup> (EE) which assessed the scope for possible efficiency savings that Transco could achieve in future. The work undertaken by EE attempted to establish a consistent analytical framework for assessing the overall scope for future efficiency gains. EE stressed the advantages in considering total factor productivity (TFP) as a measure of productivity growth as this takes into account all of the factors of production including capital, energy, raw materials and labour.

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<sup>6</sup> September 2001, Transco price control review 2002-2007: Report to Ofgem by Mazars Neville Russell, Appendix D – Top Down Study

- 5.11. Changes in efficiency can be expressed in real terms, that is relative to changes in prices across the economy. Increases in the RPI result from increases in the prices of goods and services, which in turn reflect increases in input prices less improvements in overall efficiency. Therefore, changes in input prices for the economy as a whole are reflected in the RPI. Thus a company will have greater scope for real cost reduction if it utilises a mix of inputs that tend to experience relatively low increases in price. Similarly, looking across the economy cost reductions stemming from average improvements in TFP are reflected in movements in the RPI. Therefore, the potential for a company to outperform economy wide average TFP growth is a key determinant of its ability to reduce its costs in real terms.
- 5.12. EE developed certain 'nature of work' comparisons designed to provide comparators for Transco's business activities. These comparators were based on work by O'Mahony (1999)<sup>7</sup>, which provides a comprehensive study of long term UK productivity performance. EE classified Transco's various activities in terms of construction, engineering, utilities, communications and business services. While there are some differences between the overall breakdown of Transco's activities and those for the regional networks these are not significant given that this analysis is designed to produce a broad estimate of TFP growth.
- 5.13. In summary EE found that TFP growth for the economy as a whole could be expected to be around 1.7 per cent and that for Transco it would be around 2.4 per cent, suggesting out performance by Transco of around 0.7 per cent a year. These estimates are based on long term trends in productivity and as such can be used as an estimate for efficiency improvements in the longer-term, suggesting that distribution costs are likely to fall at around RPI-0.7 after the present price control period comes to an end in 2007.
- 5.14. There are a number of factors that suggest that the above calculations should provide a relatively conservative estimate of TFP growth for the regional networks. First, the development of comparative competition between the networks could increase the scope for efficiency savings. As noted in chapter 3 the use of comparators in the electricity distribution sector has enabled further

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<sup>7</sup> O' Mahony (1999) *Britain's Productivity Performance 1950-1996: An International Perspective*: London: NIESR

efficiency savings to be achieved. In future there should be more scope for comparative analysis and assessment in gas distribution than there has been in the past. Second, the calculations of TFP set out above assume that Transco is operating at similar efficiency levels to firms in competitive markets. Most privatised companies have experienced cost reductions at above 0.7 per cent a year, in part reflecting the elimination of inefficiencies associated with public sector control and ownership. While British Gas was privatised in 1986 it remained an integrated monopolist until business separation in the 1990's. Only recently has it reorganised and introduced an increased management focus on gas distribution. Therefore, it may be that there remains some scope for it to catch-up to the efficiency levels of companies operating in competitive markets.

5.15. The table below shows the combined affect of an RPI-2 price control between 2002 and 2007, the gradual unwinding of the adjustments to the RAVs and an RPI-0.7 reduction in total costs after 2007.

**Table 5.3 Domestic distribution charges over 25 years (2000 prices)**

Network	Distribution (LDZ) Charges (£/annum)		
	2002/03	2016/17	2027/28
Scotland	71.27	65.36	63.76
North & Yorkshire	72.08	63.81	57.06
North West	70.80	58.59	50.51
East England	73.46	60.01	49.98
West Midlands	71.53	57.82	48.66
Wales & South West	69.13	68.44	67.21
North London	72.29	61.37	54.17
South & South East	70.50	60.03	50.96

5.16. The figures in table 5.3 demonstrate that under separate regional network price controls and on the basis of the assumptions set out above consumers in all regions of the country should experience real price reductions compared with the present level of gas distribution charges. The table also shows the difference between regional networks increasing over the 25 years as the regional variations in costs of distributing gas begin to emerge, although the differentials remain at a lower level than those shown in table 5.2.

### **Other factors**

5.17. There is a range of other factors that may also influence the path of distribution charges over time. These include the following.

- ◆ **Growth in demand for gas** – increases in the volume of gas transported through the regional networks tends to reduce the unit costs of distributing gas. While the total demand for gas has increased rapidly over the last ten years a significant proportion of this has related to power station demand. Historically the demand from consumers connected to the low pressure distribution networks has increased at a lower and relatively steady rate.
- ◆ **Variances in the mains replacement programme** – because of differences in the distribution of assets and because of the policy of risk prioritisation regional networks may experience different rates of replacement. The replacement programme may also need to be revised in the future.
- ◆ **Completion of the mains replacement programme** - there should be a significant reduction in costs associated with the end of the 30 year programme.
- ◆ **Further environmental or safety obligations** – the mains replacement programme should deal with safety difficulties associated with iron mains. It will also bring significant environmental benefits in terms of reducing losses of methane from the distribution networks. Nevertheless, it is not possible to rule out the introduction of other environmental or safety obligations that will increase the cost of distributing gas.
- ◆ **Lane rentals** – if the government introduces a lane rental scheme for the road network this could significantly increase the cost of the existing mains replacement programme.

5.18. It will be important to consider further whether there is sufficient information available to quantify the effect of these or other additional factors on the path of gas distribution charges over time.

# **Appendix 1 Respondents to the July 2002 consultation document**

Association of Electricity Producers (AEP)

British Gas Trading

BP Gas Marketing

Corus

The Countryside Agency

Dynergy UK

East Midlands

East Midlands Electricity

Energy Intensive Users Group

energywatch

Health and Safety Executive (HSE)

Innogy

London Electricity Group

Powergen

Scottish and Southern Energy

Shell Gas Direct

Society of British Gas Industries

Statoil (UK)

Transco

TXU Energi

## Appendix 2 Timetable of related Ofgem Work Streams

	Separation of Transco's distribution price control	Review of NTS TO and regional network price controls	Regional network incentive schemes on non-contractual interruptions	NTS Exit Arrangements	Other
<b>2002/03 Q4</b>					Statement document on developing monopoly price controls
<b>2003/04 Q1</b>	Final Proposals		Auditing and monitoring data on non contractual interruptions		Consultation on draft Transco RAGs
<b>Q2</b>				Proposals document	RAGs implemented
<b>Q3</b>					
<b>Q4</b>	Consultation on draft Licence mod			Consultation on draft Licence mod	
<b>2004/05</b>	Separate controls implemented (Q1)		Draft Proposals (Q2) Final Proposals (Q3)	Exit Arrangements implemented (Q1)	
<b>2005/06</b>		Initial Consultation (Q1) Further Consultation (Q3)	Incentive schemes implemented (Q1)		
<b>2006/07</b>		Draft Proposals (Q1) Final Proposals (Q3)			
<b>2007/08</b>	New NTS TO and regional; network price controls take effect 1/4/07				

# Appendix 3 Changes required for the implementation of separate regional network price controls

- 3.1 Transco has considered the changes that may be necessitated as a result of separate regional network price controls. And has said that limited changes may be required for distribution charges and invoicing. These are discussed below.
- 3.2 The Network Code relies on definitions of LDZs as set out within Transco's Ten Year Statement. Regional networks comprise one or two LDZs therefore there would be no need to incorporate a definition of a regional network into the Network Code.

## *Gas distribution charges*

- 3.3 As differences between regional network distribution charges emerge gradually over time these will need to be specified in the transportation charges statement. Differences in gas distribution charges would be subject to Transco's obligations to consult on changes to the charging methodology set out in Standard Condition 4A of the Gas Transporter Licence.

## *Invoicing and payment*

- 3.4 There would be a need to change the presentation and amount of information contained in Transco's invoices to accommodate the differences in distribution charges. In addition system changes would be needed to support separate distribution charges. Any changes to UK Link would be subject to the governance procedures set out in the Network Code.
- 3.5 There will be opportunities for the industry and Transco to discuss further changes that may be required to accommodate separate regional network price controls. The changes discussed above are based on Transco's initial assessment and should not be taken as exhaustive or final.

## Appendix 4 NTS and LDZ charges per exit zone

4.1 The table 1.1 sets out the transmission and distribution charges for each NTS exit zone under the present price control for the aggregate of the LDZs. These charges underlie the figures set out in table 5.1 in chapter 5.

**Table 1.1 Domestic (<73MWh) NTS & LDZ charges under the aggregate LDZ price control (2000 prices)**

Exit Zone	NTS Charge £/1000k Wh	LDZ Charge £/1000k Wh	Total Charge £/1000k Wh	Exit Zone	NTS Charge £/1000k Wh	LDZ Charge £/1000k Wh	Total Charge £/1000k Wh
EA1	0.21	3.85	4.06	NW2	0.30	3.76	4.06
EA2	0.37	3.85	4.22	SC1	0.15	3.73	3.87
EA3	0.22	3.85	4.07	SC2	0.17	3.73	3.89
EA4	0.39	3.85	4.24	SC4	0.15	3.73	3.87
EM1	0.21	3.78	3.99	SE1	0.39	3.87	4.27
EM2	0.16	3.78	3.94	SE2	0.62	3.87	4.49
EM3	0.31	3.78	4.09	SO1	0.51	4.02	4.53
EM4	0.28	3.78	4.06	SO2	0.64	4.02	4.67
NE1	0.15	3.75	3.90	SW1	0.34	3.95	4.29
NE2	0.19	3.75	3.94	SW2	0.51	3.95	4.46
NE3	0.16	3.75	3.92	SW3	0.87	3.95	4.82
NO1	0.15	3.85	3.99	WA1	0.37	3.76	4.13
NO2	0.16	3.85	4.01	WA2	0.56	3.86	4.41
NT1	0.59	3.82	4.41	WM1	0.29	3.89	4.19
NT2	0.44	3.82	4.25	WM2	0.31	3.89	4.20
NT3	0.47	3.82	4.28	WM3	0.32	3.89	4.22
NW1	0.32	3.76	4.08				

5.19. Table 1.2 below sets out the transmission and distribution charges for each NTS exit zone under separate regional price controls with unadjusted or natural RAVs. These charges underlie the figures set out in table 5.2 in chapter 5.

**Table 1.2 Domestic (<73MWh) NTS & LDZ charges under separate regional network price controls – unadjusted (2000 prices)**

Exit Zone	NTS Charge £/1000k Wh	LDZ Charge £/1000k Wh	Total Charge £/1000k Wh	Exit Zone	NTS Charge £/1000k Wh	LDZ Charge £/1000k Wh	Total Charge £/1000k Wh
EA1	0.21	3.40	3.60	NW2	0.30	3.45	3.75
EA2	0.37	3.40	3.76	SC1	0.15	3.94	4.09
EA3	0.22	3.40	3.62	SC2	0.17	3.94	4.11
EA4	0.39	3.40	3.78	SC4	0.15	3.94	4.09
EM1	0.21	3.22	3.42	SE1	0.39	3.36	3.75
EM2	0.16	3.22	3.38	SE2	0.62	3.36	3.97
EM3	0.31	3.22	3.53	SO1	0.51	3.74	4.25
EM4	0.28	3.22	3.49	SO2	0.64	3.74	4.38
NE1	0.15	3.56	3.71	SW1	0.34	4.73	5.06
NE2	0.19	3.56	3.75	SW2	0.51	4.73	5.24
NE3	0.16	3.56	3.73	SW3	0.87	4.73	5.60
NO1	0.15	3.86	4.01	WA1	0.37	4.09	4.45
NO2	0.16	3.86	4.02	WA2	0.56	4.38	4.94
NT1	0.59	3.64	4.23	WM1	0.29	3.42	3.72
NT2	0.44	3.64	4.07	WM2	0.31	3.42	3.73
NT3	0.47	3.64	4.11	WM3	0.32	3.42	3.75
NW1	0.32	3.45	3.77				