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Gas Distribution Price Control Review
One Year Control Initial Proposals Supplementary Appendices

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Overview:

This document contains the supplementary appendices for the Gas Distribution Price Control Review one year control initial proposals. The supplementary appendices provide more detailed information regarding the issues raised in the main document. The supplementary appendices also contain a summary of the responses to the previous consultation document, together with Ofgem's response.

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Context

The price control that currently applies to the gas distribution networks (GDNs) expires on 31 March 2007. In 2004 we decided to extend the current control by one year in order to allow gas distribution to be considered separately from transmission.

The gas distribution price control review (GDPCR) will reset the revenue allowances that apply to the GDNs for one year from April 2007 and for the next full price control period from 2008 to 2013. This document sets out our initial proposals for the one year control to apply for 2007-08.

We consider that the work associated with extending the price control should be proportionate to a one year interim arrangement, and so where appropriate assumptions underlying the present price control have been extended or updated in a straightforward way to cover 2007-08. Most policy issues associated with GDPCR are being considered as part of the main (five year) price control review. We plan to publish the third consultation document for the main review in November 2006.

Associated Documents

- GDPCR One Year Control Initial Proposals, September 2006 (Ref. No. 169a/06)
- GDPCR Initial Consultation, December 2005 (Ref. No. 259/05): http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13055_259_05.pdf
- GDPCR Second Consultation, July 2006 (Ref. No. 123a/06): http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/15829_GDPCR_2CD_FINAL19July.pdf?wtfrom=/ofgem/work/index.jsp&section=/areasofwork/gasdistpriccon
- GDPCR Second Consultation Supplementary Appendices, July 2006 (Ref. No. 123b/06): http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/15759_GDPCR_2CD_supplementary_appendices_FINAL.pdf?wtfrom=/ofgem/work/index.jsp&section=/areasofwork/gasdistpriccon

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Appendix 5 - Responses to the second consultation document

1.1. This appendix summarises the responses received from GDNs and other interested parties to questions posed in the second consultation document published in December 2005, together with our views. The second consultation document raised issues relating to both the one year price control and the main price control review. This summary contains only comments received in relation to the one year control. Comments received in relation to the main control will be summarised in an appendix to the GDDCR third consultation document, which is scheduled to be issued in November 2006.

1.2. We received 20 responses from the following organisations:

- Centrica,
- Chemical Industries Association (CIA),
- Council for National Parks,
- EDF Energy,
- Energy Networks Association (ENA)[1],
- Energywatch,
- EON UK,
- Fuel Poverty Advisory Group,
- Gas Transportation Company (GTC),
- HSE,
- National Consumers Council,
- National Energy Action,
- National Grid,
- Northern Gas Networks,
- RWE Npower,
- Scotia Gas Networks,
- Total Gas & Power,
- United Utilities,
- Wales & West Utilities, and
- Xoserve Board.

1.3. Responses are available on Ofgem's website (www.ofgem.gov.uk).

Responses to Chapter 2 - High level framework

1.4. Chapter 2 of the second consultation document discussed the high level price control framework to apply to both the one year control and the main control. Respondents were asked to comment on whether Ofgem should retain the form, structure and scope of the current price control during the one year control.

[1] ENA submitted a consultants' report regarding tax allowances.

Views of GDNs

1.5. GDNs supported the retention of the existing high level framework, subject to a number of exceptions such as shrinkage. One GDN owner suggested that Ofgem should remove the meter provider of last resort obligation from GDNs, and one GDN owner suggested that Ofgem should update the revenue driver baseline volumes as part of the one year control.

Views of other respondents

1.6. All respondents supported the retention of the existing high level framework for the purposes of the one year control. Two respondents expressed the view that the shrinkage arrangements should be addressed as part of the one year control.

Ofgem's views

1.7. Given the short duration of the one year control, we want to avoid making changes to the underlying regulatory framework except where there are strong arguments in favour of urgent change. We intend to retain the form, structure and scope of the current control for the purposes of the one year control, subject to the proposed changes to the shrinkage arrangements.

1.8. We do not propose to remove the meter provider of last resort obligation from GDNs as part of the one year control. We note that this issue was consulted upon as part of the GDN sales process.

1.9. As discussed in paragraph 4.9 of the main document, the form of the volume driver means that it is not applicable during the one year control. This is a consequence of allowances being set for a single year and not a change in policy.

Responses to Chapter 3 - Cost assessment

1.10. Chapter 3 of the second consultation document discussed the treatment of historical capital and replacement expenditure, and also the approach that we should adopt when setting opex, capex and repex allowances for 2007-08. We raised the following questions relating to the one year control:

- Is our proposed approach to carrying out ex-post assessments of historical efficiency appropriate?
- Is our proposed regulatory treatment of our conclusions on efficiency appropriate, transparent and practical?
- Is our initial view on how to set capital and replacement expenditure allowances for 2007-08 appropriate?
- Which of our options is most appropriate for setting the operating expenditure allowance for 2007-08?

Views of GDNs

Treatment of historical capital and replacement expenditure

1.11. GDNs expressed a number of concerns regarding our proposed treatment of historical expenditure. In particular, they suggested that:

- our proposals do not reflect GDNs' expectations in light of the March 2004 open letter,[2]
- it is inappropriate to apply the methodology ex post, as GDNs would have behaved differently if they had been aware that this was the treatment that excess spend would receive,
- the proposed process gives undue weight to unit costs/forecasts that were acceptable only as part of an overall package when Transco plc accepted the price control in 2002,
- it is inequitable to assess Pot 2 workload at the allowed unit cost rather than the efficient level as determined by our consultants,
- the proposed treatment of underspends within sub-categories of spend is unprecedented and creates perverse incentive,
- penalising GDNs for under-forecasting volumes creates perverse incentives to over-forecast, and creates a new risk that would not have been taken into account when the controls were agreed,
- as a significant proportion of GDN capex is non- discretionary, our process penalises GDNs for efficiently complying with their statutory and licence obligations, and
- our process introduces new forms of regulatory risk and deters otherwise efficient investment.

1.12. Most GDNs considered that a reasonable interpretation of the March 2004 open letter is that Pot 3 treatment is applied to all non-discretionary, efficient expenditure, irrespective of the original allowance.

1.13. One GDN owner did not support Ofgem's proposal to adjust the RAVs for actual expenditure incurred between January 2001 and March 2002.

1.14. Finally, NGG suggested that it is necessary to realign the RAVs to reflect shared assets following GDN sales. They suggested that where the RAV for shared assets had been split among the RAVs of all eight GDNs, but following GDN sales the assets were used solely by NGG's GDNs, then the value of these assets should be solely attributable to NGG's networks.

[2] Ofgem open letter, Gas Distribution Price Controls, 16 March 2004.

Setting allowances for 2007-08

1.15. GDNs generally supported our proposed approach to setting 2007-08 capex and repex allowances, however they were concerned that our consultants would make adjustments to their forecasts by extrapolating their findings of past inefficiency. In particular, new GDN companies were concerned that we would adjust their forecasts without taking account of the new management teams that are now in place. Several GDNs said that the consultants' role is to verify GDNs' forecasts rather than provide their own forecasts.

1.16. GDNs suggested a variety of approaches to setting 2007-08 opex allowances. One GDN owner expressed concern that a roll forward based on 2004-05 or 2005-06 actual costs would favour inefficient GDNs or GDNs that submitted inflated cost forecasts.

Views of other respondents

Treatment of historical capital and replacement expenditure

1.17. Respondents other than GDNs were broadly supportive of our proposed treatment of historical capex and repex.

1.18. That said, three respondents expressed reservations about certain aspects of the proposals. Two respondents were concerned that Ofgem's proposed approach would be applied retrospectively rather than being established in advance. One respondent was concerned that companies could be disadvantaged by the disaggregation of expenditure. This respondent argued that the calculation of efficient unit costs must include some average of jobs - including instances of costs below the 'efficient' level - and any detailed review of historical spend had the potential to penalise asymmetrically above average spend.

1.19. Respondents sought further clarity on:

- whether the portion of expenditure deemed inefficient is treated as falling above the allowance (with the efficient portion being treated as falling within the allowance) and
- the level of disaggregation at which the proposed process applies.

Setting allowances for 2007-08

1.20. There was general support for our proposed approach to setting 2007-08 capex and repex allowances. One respondent added that the role of consultants is to verify GDNs' forecasts rather than provide their own forecasts. This respondent also said that any adjustments to GDNs' forecasts must take into account the more efficient practices introduced since GDN sales.

1.21. Most respondents supported an approach to setting 2007-08 opex allowances based on a roll forward of 2006-07 allowances.

1.22. One respondent expressed concern that our one year control could be one sided if we address the areas of cost increases (eg capex overspend, shrinkage) but adopt a high level approach in relation to areas where allowances are higher than necessary. This respondent considered that a consistent approach to opex, capex and return on capital is key - all three areas should be fully reviewed, or all should be subject to a simple rollover.

Ofgem's views

Treatment of historical capital and replacement expenditure

1.23. Our views on the treatment of capital and replacement expenditure are set out in Chapter 3 of the main document. In particular, we respond to the criticisms made by GDNs in paragraphs 3.10 to 3.16 of the main document.

1.24. The approach to the RAV roll forward set out in the second consultation paper still provides incentives for GDNs to defer capex or non-mains repex efficiently. If a GDN underspends within a particular cost category it will retain the allowed capital charges for a period of 5 years. This is equivalent to the GDN retaining 31 per cent[3] of the net present value (NPV). If it then overspends by an equal amount it will be exposed to 31 per cent of the NPV at that time. Overall it will make a gain in NPV terms due to the timing difference. For example, if the spend is deferred by 2 years the GDN will make a gain of 3 per cent of the NPV. GDNs can also make similar trade-offs across areas of spend.

1.25. Under a rolling incentive regime the incentives to defer capex are weaker in the earlier years of the price control and stronger in the later years than the traditional approach to rolling forward the RAVs because the periodicity of incentives is removed. Under the traditional approach, there is a very strong incentive to defer capex in the first year of the price control and a very weak incentive to defer capex in the last year of the price control. A rolling incentive regime creates constant incentives that do not vary within the price control period.

1.26. A number of respondents sought further clarity on whether the portion of expenditure deemed inefficient is treated as falling above the allowance (with the efficient portion being treated as falling within the allowance). The treatment of inefficient spend depends on whether the efficient level of spend is greater than the original price control allowance. Where efficient spend is greater than the allowance, then the inefficient spend is treated as falling above the allowance. Where the efficient spend is less than the allowance, some or all of the inefficient spend will be treated as falling within the allowance.

[3] Based on a 5.25% vanilla WACC and straight line depreciation with a 45 year asset life for post-2002 assets.

1.27. Several respondents sought clarity on the level of disaggregation used for the RAV roll forwards analysis. We disaggregated into the following categories: LTS and storage capex, general mains reinforcement, governor capex, mains connection capex, service connection capex, plant & machinery, land & buildings, non-operational capex, service repex and other repex.

Setting allowances for 2007-08

1.28. Our views on 2007-08 opex allowances are set out in paragraphs 2.1 to 2.6 of main document, and our views on 2007-08 capex allowances are set out in paragraphs 3.67 to 3.71 of the main document.

1.29. If we calculated 2007-08 opex allowances by rolling forwards existing allowances for 2006-07 we would be relying on NGG's 2000 allocation of costs and not taking account of subsequent changes such as the merger of local distribution zones (LDZs) or changes in the balance of costs post-GDN sales. On balance we consider that basing the allowances on historical actuals less 2.5 per cent for further efficiency reductions is more reliable because it is based on more recent GDN specific data and results in reasonable projections compared to the GDNs' forecasts. By using an average of 2004-05 and 2005-06 actuals we reduce any distortions that may have arisen because of atypicals in either year. In practice both methods produce very similar numbers at an aggregate level.

Responses to Chapter 4 - Outputs and incentives

1.30. Chapter 4 of the second consultation document discussed the outputs and incentives arrangements to apply to GDNs, including the arrangements for setting shrinkage allowances. We raised the following questions with regard to the one year control:

- Is Ofgem's initial view on how to update the mains replacement incentive mechanism for 2007-08 appropriate?
- Is Ofgem's initial view on rolling incentives during the one year control appropriate?
- How should Ofgem determine shrinkage allowances? Should Ofgem adopt one of the options presented in this chapter or a different option?
- Should Ofgem carry out any further work on incentives as part of the one year control review, other than that set out in paragraphs 4.1 to 4.23?

1.31. We also consulted on a proposal to roll over the existing third party and water ingress arrangements, but with the removal of the annual liability cap that exists under the present arrangements.

Views of GDNs

1.32. GDNs generally supported Ofgem's proposed approach to updating the mains replacement mechanism. Several GDNs suggested additional changes to the

mechanism, including the inclusion of a larger diameter band, service pipes and arrangements for recovering additional costs associated with risers.

1.33. GDNs had mixed views on the application of capex rolling incentives during the one year control. Two GDN owners considered that capex rolling incentives should apply for the period of the one year control and two did not.

1.34. All GDNs supported the adoption of Option 1a (link allowances to a market index) for the shrinkage arrangements. Two GDN owners stated that conceptually, they preferred Option 2 (electricity-style approach), but given the long lead times involved they support Option 1a. One GDN owner stated that Ofgem should make retrospective adjustment to compensate GDNs for historical excess shrinkage costs.

1.35. Two GDN owners opposed the removal of the annual liability cap that applies to third party and water ingress compensation payments, suggesting that it would result in a material increase in risk that would not be provided for in the GDNs' one year control allowances.

1.36. GDNs did not consider that it was necessary to carry out any further work on incentives for the purposes of the one year control.

Views of other respondents

1.37. Respondents other than GDNs did not have strong views on the update of the mains replacement incentive mechanism and the use of rolling incentives during the one year control.

1.38. With regard to shrinkage, two respondents considered that the shrinkage arrangements should be addressed as part of the main review rather than the one year control. One of these respondents considered that it was important to reform the method by which shrinkage volumes are assessed. This respondent suggested that the GDN shrinkage incentive should be expanded to cover all types of losses. Of the options proposed, one of these respondents preferred Option 1a (link allowances to a market index) and the other preferred Option 1b (link allowances to a GDN benchmark cost).

1.39. One respondent did not support the transfer of price and throughput risk to customers on grounds that GDNs are able to hedge and remove part of the price risk and have more ability than shippers or consumers to control volume risk.

1.40. One non-GDN respondent stated that conceptually, they preferred Option 2 (electricity-style approach), but they acknowledged that longer lead times were required for a change of this nature.

1.41. One respondent expressed support for Ofgem's proposal to remove the annual liability cap for third party and water ingress.

1.42. Respondents did not consider that it was necessary to carry out any further work on incentives for the purposes of the one year control.

Ofgem's views

1.43. We propose to adopt a simple process for updating the mains replacement mechanism as set out in the second consultation document. We propose to consider further changes to the mains replacement incentive mechanism as part of the main review.

1.44. As discussed in paragraph 3.31 of the main document, we are minded to carry forward the approach we have used for assessing historical capex to the one year control, i.e. an ex post efficiency assessment, with rolling incentives for efficiently incurred capex that is in excess of allowances, and symmetric treatment of underspend.

1.45. We consult further on the arrangements for shrinkage in an impact assessment (see Appendix 9), however our preferred option continues to be Option 1a. Among other things, the impact assessment sets out our reasons for not addressing the shrinkage measurement arrangements as part of GDPCR.

1.46. Having considered respondents views, we propose to roll over the existing third party and water ingress arrangements without making changes to the annual liability cap. We will consider this issue further as part of the main control.

1.47. For reasons set out in the second consultation document, Ofgem does not propose to make retrospective adjustments for historical excess shrinkage costs.

Responses to Chapter 5 - Financial issues

1.48. Chapter 5 of the second consultation document set out Ofgem's initial view on how to address financial issues such as the cost of capital, tax, depreciation, financeability and the treatment of pensions for the one year control. We asked the following questions:

- Is Ofgem's approach of calculating a post-tax cost of capital and an ex ante tax allowance appropriate?
- What, if any, financial indicators should be used to assess financeability (also relevant for the main control)?
- Is Ofgem's initial view on the treatment of pensions, and in particular the treatment of the GDNs' pension deficits, appropriate?
- Should all ERDCs be for the account of shareholders within GDPCR?
- Is Ofgem's proposal on the mechanism for recharging NTS pension costs appropriate?
- What should be the timing of allowances for under recoveries from the current price control and deficit repair costs?

- How will the changes to pensions law affect the price control?

Views of GDNs

1.49. The GDNs accept a post-tax approach in principle, but they oppose its introduction as part of the one year control. Several GDNs pointed out that this change would result in a significant reduction in their allowed revenue. GDNs considered that it would be inappropriate to impose this change without full review of all other factors affecting the cost of capital. GDNs tended to support the retention of current assumptions on the cost of capital, including a pre-tax approach.

1.50. One GDN owner suggested that the significant financial impact of a move to a post-tax cost of capital should be reflected in an otherwise more conservative approach to other aspects of the price control review.

1.51. One GDN owner considered that Ofgem has not adequately consulted on its proposal to move to a post-tax cost of capital.

1.52. GDNs suggested a variety of indicators that Ofgem should take into account when assessing financeability. These indicators tended to reflect those used by credit rating agencies.

1.53. Overall, GDNs agree with Ofgem's proposed treatment of the pension deficits, in particular, following the approach adopted in DPCR4. Two GDN owners stated that the one year control should reflect increased employee contribution costs and deficit repair costs. Three GDN owners said that companies should be able to recover excess pension costs paid during the current price control period.

1.54. One GDN owner agreed that distribution ERDCs should be funded in line with DPCR4 but made note that some of NGG NTS' ERDCs prior to GDN sales relate to GDNs and so recovery of these should be part of GDPCR and not TPCR.

1.55. Three GDN owners considered that Ofgem's proposal to include an NTS charge for the non-active deficit as a pass through item in the GDN control is appropriate. One GDN owner stated that the mechanism is unnecessarily complex and involves a pass through of costs that have nothing to with the GDNs.

1.56. So long as they were held neutral in net present value terms, GDNs did not have strong views on whether they should recover under-recoveries and deficit repair costs over the course of the one year control and main control combined, or just as part of the main control.

1.57. GDNs considered that the effect of changes to pensions law would be to increase pension costs and that it is appropriate for these costs to be funded through the control.

Views of other respondents

1.58. All non-GDN respondents that expressed a view supported a move to a post-tax cost of capital. One respondent suggested that tax allowances should be adjusted to reflect the historical benefit that GDNs have received from being able to defer tax liabilities. This respondent also said that Ofgem should not make ex post adjustments to tax allowances to reflect gearing levels and/or interests costs.

1.59. One respondent considered that an assessment of specific financial indicators is not required for the one year control. Another respondent suggested that Ofgem should use same financial indicators as were used in DPCR4 unless there is evidence that they are inappropriate.

1.60. Two respondents considered that Ofgem's proposal to include an NTS charge for the non-active deficit as a pass through item in the GDN control is appropriate under the circumstances.

1.61. One respondent stated that under-recoveries should be recovered over the period of the main review to ensure a smoothing effect, provided they are valid and acceptable. Another respondent stated that GDNs should not be given an allowance for any pension deficit and should instead use part of their declared profits to pay for deficits or force members of their pension fund to accept reduced benefits.

1.62. One non-GDN respondent stated that changes to pensions law will impose further costs on GDNs, and that it is appropriate for these costs to be funded through the control.

Ofgem's views

1.63. We continue to propose to move to a post-tax cost of capital as part of the one year control (see paragraph 4.2 of the main document).

1.64. Ofgem's policy with regard to a pre or post-tax approach to calculating the cost of capital has been consulted upon thoroughly in both the developing monopoly price controls consultation and DPCR4. We also moved from a pre-tax cost of capital to a post-tax cost of capital as part of the one year extension to NGET's price control. In the two year extension of the Scottish TO controls, company specific allowances for tax were calculated on the assumption that their effective tax rates would be similar to those of the affiliated DNOs as reflected in the tax allowance determined at DPCR4. This rate was then used to calculate a pre-tax equivalent WACC for purposes of setting the TO controls. Finally, we consulted upon our proposal to apply this policy to GDNs in both the initial consultation document (page 34) and the second consultation document (page 44).

1.65. This policy results in GDNs losing the benefit of an implied tax allowance in excess of their actual tax payments, however we consider that the overall package for the one year is balanced. The one year control resolves those areas where costs

have been higher than allowances – e.g. shrinkage and pensions. It would be inappropriate going forward to allow GDNs to retain the overfunding on tax and at the same time to increase allowances elsewhere.

1.66. We intend to continue the policy established in DPCR4 of discouraging excess gearing by making an ex post adjustment where a GDN has higher gearing and higher actual interest costs (see paragraph 4.4 of the main document).

1.67. As all the GDNs currently have an investment grade credit rating, and, overall, our proposals do not worsen their financial position, we are satisfied that they pass the financeability test.

1.68. In respect of pensions, we intend to apply our principles, which allow for the recovery of costs of providing pension benefits to employees of the regulated business as part of an efficient package of pay and other benefits. We will have regard to any changes in legislation which result in unavoidable increases in pension costs. We have not performed a full review of the potential impact of recent changes in legislation on the GDNs for the one year control.

1.69. We intend to allow for the under-recovery of higher cash pension contributions during the current control period, compared to the allowances for ongoing contributions we have made, on an NPV-neutral basis, as outlined in paragraph 2.14. We believe that a smoothing over a number of years is appropriate.

1.70. We intend to apply the approach proposed within the second consultation for financing the deficit attributable to non-active former employees of the GDNs, as outlined in paragraph 2.15.

1.71. We intend to provide allowances for the funding of actuarial deficits, to the extent that the assumptions used are reasonable and in line with best practice. We have not completed a full review of the actuarial valuations of the GDNs, and in the case of the GDNs not owned by National Grid, the initial actuarial valuations have yet to be completed. However, we believe it is appropriate to provide an allowance in the one year control for an estimated level of the deficit. These will be updated either in final proposals or in the main control, once full valuations have been completed.

1.72. All ERDCs in respect of former employees of GDNs who retired prior to GDN sales will be the subject of the TPCR and, if allowances are provided, will be recovered from the GDNs under the NTS charge. All ERDCs subsequent to GDN sales will be for the account of shareholders, as stated clearly in our pension principles.

Appendix 6 - Options for 2007-08 opex allowances

1.1. The following table shows the 2007-08 opex costs (excluding shrinkage and pensions) forecast by the GDNs and the comparable opex allowances calculated by either:

- Rolling forward the 2006-07 allowance with a 2.5 per cent reduction for efficiency improvements, or
- Taking the average of 2004-05 and 2005-06 actual costs with a 2.5 per cent reduction for efficiency.

Table A6.1 Comparison of 2007-08 opex allowances (excluding pensions and shrinkage) using Options 1 and 2 (£m, 2005-06 prices)

	GDN BPQ submission	**Option 1** 06-07 allowances less 2.5%	**Option 2** 04/05 & 05/06 actuals less 2.5%
East England	101.7	94.5	96.5
% change to BPQ		-7%	-5%
London	69.2	59.1	62.3
% change to BPQ		-15%	-10%
North West	84.0	66.1	70.5
% change to BPQ		-21%	-16%
West Midlands	59.6	48.5	53.4
% change to BPQ		-18%	-10%
North England	69.3	72.9	67.7
% change to BPQ		5%	-2%
Scotland	59.1	57.7	52.9
% change to BPQ		-2%	-11%
South England	107.7	94.2	89.6
% change to BPQ		-13%	-17%
Wales & West	70.8	72.5	70.6
% change to BPQ		2%	0%
Total	621.4	565.6	563.4
% change to BPQ		-9%	-9%

Appendix 7 - Historical capital and replacement expenditure

1.1. This appendix shows the treatment of capital and replacement expenditure for 2002-03 to 2006-07. There are 3 tables for GDN including a comparison of allowances and actuals and the allocation of allowed and overspend into the 3 pots.

National Grid Gas

East England

Table A7.1 Comparison of actual and allowed capex and non-mains repex and treatment of spend, East England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	51.4	38.7	35.8	38.0	33.4	197.4
Total Actual	62.7	58.2	54.5	88.7	84.4	348.4
Overspend	11.3	19.4	18.7	50.7	50.9	151.0
% overspend against allowances	22%	50%	52%	133%	152%	77%
Treatment of overspend						
Related party margins	1.2	0.8	0.7	1.0	0.8	4.6
DN sales costs	0.0	0.0	0.0	0.0	0.0	0.0
Under recovery of connections income	2.1	1.0	0.8	2.8	1.5	8.2
Inefficient above allowance (Pot 1)	1.4	1.5	1.8	0.5	0.5	5.6
Efficient overspend (Pot 2b)	4.9	14.5	12.3	37.9	37.4	106.9
Reopener (Pot 3b)	1.8	1.6	3.1	8.4	10.7	25.7
Total overspend	11.3	19.4	18.7	50.7	50.9	151.0
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	1.1	0.6	0.1	0.0	0.0	1.9
Efficient allowed spend (Pot 3a)	50.3	38.1	35.7	38.0	33.4	195.5
Total allowance	51.4	38.7	35.8	38.0	33.4	197.4

Table A7.2 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, East England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.4	0.3	0.0	0.0	0.0	0.7
Connections capex	0.5	0.5	0.5	0.4	0.5	2.5
Other capex	0.0	0.0	0.5	0.1	0.0	0.6
Repex Services	0.5	0.7	0.7	0.0	0.0	1.9
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.4	1.5	1.8	0.5	0.5	5.6
Split of efficient over (under) spend by category (Pot 2b)						
LTS & Storage capex	-11.5	0.9	0.0	7.1	2.1	-1.5
Mains Reinf. & Gov capex	9.4	5.1	0.1	-3.1	1.5	12.9
Connections capex	7.2	5.5	4.9	8.2	6.4	32.0
Other capex	-0.3	-2.3	1.4	9.0	9.1	16.9
Repex Services	2.2	5.9	5.8	16.9	19.3	50.0
Repex other	-2.1	-0.5	0.2	-0.1	-1.0	-3.5
Total	4.9	14.5	12.3	37.9	37.4	106.9
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	1.8	1.0	1.0	0.9	1.3	6.0
Other capex	0.0	0.0	0.0	0.0	0.0	0.0
Repex Services	0.0	0.6	2.2	7.5	9.4	19.6
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.8	1.6	3.1	8.4	10.7	25.7

Table A7.3 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, East England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.1	0.0	0.0	0.1
Connections capex	0.0	0.0	0.0	0.0	0.0	0.0
Other capex	1.1	0.6	0.0	0.0	0.0	1.7
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.1	0.6	0.1	0.0	0.0	1.9
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	13.8	2.0	3.5	5.7	2.5	27.5
Mains Reinf. & Gov capex	6.8	6.3	5.2	5.0	4.8	28.1
Connections capex	4.3	3.3	2.3	1.6	1.3	12.8
Other capex	13.0	11.3	7.2	8.6	9.1	49.2
Repex Services	11.6	14.2	17.3	17.2	15.4	75.8
Repex other	0.8	1.1	0.1	-0.2	0.3	2.1
Total	50.3	38.1	35.7	38.0	33.4	195.5

Table A7.4 GDN RAV roll forward, East England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	2,115.8				
Additions to pre-2002 assets	18.1				
Revised Opening value bf	2,133.9	2,134.0	2,113.1	2,095.0	2,081.9
Depreciation	-74.9	-75.2	-75.1	-75.0	-75.0
Net capex additions	77.7	54.7	57.2	62.3	61.0
Disposals	-2.7	-0.4	-0.2	-0.3	-1.0
Closing RAV (incl. Pot 3, excl. Pot 2)	2,134.0	2,113.1	2,095.0	2,081.9	2,066.9
Pot 2 additions (cumulative)	3.8	17.7	29.9	68.7	105.1
Pot 2 depreciation (cumulative)	0.0	-0.1	-0.5	-1.1	-2.6
Total closing RAV	**2,137.8**	**2,130.7**	**2,124.4**	**2,148.5**	**2,169.3**

London

Table A7.5 Comparison of actual and allowed capex and non-mains repex and treatment of spend, London (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	30.5	22.1	17.5	18.0	17.2	105.2
Total Actual	35.2	32.5	34.0	38.2	42.9	182.8
Overspend	4.7	10.4	16.6	20.2	25.7	77.6
% overspend against allowances	15%	47%	95%	112%	149%	74%
Treatment of overspend						
Related party margins	0.5	0.3	0.4	0.3	0.3	1.7
DN sales costs	0.0	0.0	0.0	0.0	0.0	0.0
Under recovery of connections income	0.9	0.2	0.2	0.1	0.8	2.2
Inefficient above allowance (Pot 1)	0.9	0.9	1.0	0.4	0.3	3.4
Efficient overspend (Pot 2b)	2.4	8.8	14.0	19.4	24.2	68.8
Reopener (Pot 3b)	0.0	0.3	0.9	0.0	0.2	1.4
Total overspend	4.7	10.4	16.6	20.2	25.7	77.6
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	0.6	0.3	0.0	0.0	0.0	0.9
Efficient allowed spend (Pot 3a)	29.9	21.8	17.4	18.0	17.2	104.3
Total allowance	30.5	22.1	17.5	18.0	17.2	105.2

Table A7.6 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, London (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.1	0.1	0.0	0.0	0.0	0.2
Connections capex	0.3	0.3	0.3	0.3	0.3	1.4
Other capex	0.0	0.0	0.2	0.1	0.0	0.3
Repex Services	0.5	0.5	0.5	0.0	0.0	1.5
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.9	0.9	1.0	0.4	0.3	3.4
Split of efficient over (under) spend by category (Pot 2b)						
LTS & Storage capex	-6.1	0.3	0.3	2.8	5.6	3.0
Mains Reinf. & Gov capex	2.7	2.1	-0.3	-0.5	2.3	6.2
Connections capex	4.2	2.8	3.6	2.4	2.0	15.0
Other capex	0.4	-0.4	2.1	4.1	7.0	13.3
Repex Services	1.4	4.7	8.0	10.7	7.5	32.2
Repex other	-0.1	-0.7	0.3	-0.2	-0.3	-1.0
Total	2.4	8.8	14.0	19.4	24.2	68.8
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	0.0	0.0	0.0	0.0	0.2	0.2
Other capex	0.0	0.0	0.0	0.0	0.0	0.0
Repex Services	0.0	0.3	0.9	0.0	0.0	1.2
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.3	0.9	0.0	0.2	1.4

Table A7.7 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, London (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	0.0	0.0	0.0	0.0	0.0	0.0
Other capex	0.6	0.3	0.0	0.0	0.0	0.9
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.6	0.3	0.0	0.0	0.0	0.9
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	8.1	1.5	1.7	1.1	1.4	13.8
Mains Reinf. & Gov capex	2.1	2.2	2.0	1.9	1.8	10.0
Connections capex	1.3	1.0	0.7	0.5	0.3	3.9
Other capex	4.6	4.0	2.4	3.1	3.4	17.5
Repex Services	13.2	12.6	10.6	11.4	10.3	58.1
Repex other	0.6	0.5	0.0	0.0	0.0	1.1
Total	29.9	21.8	17.4	18.0	17.2	104.3

Table A7.8 GDN RAV roll forward, London (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	1,161.5				
Additions to pre-2002 assets	9.9				
Revised Opening value bf	1,171.4	1,176.3	1,168.5	1,157.2	1,144.5
Depreciation	-41.1	-41.4	-41.4	-41.3	-41.2
Net capex additions	47.4	36.7	30.7	32.1	32.3
Disposals	-1.4	-3.1	-0.5	-3.5	0.3
Closing RAV (incl. Pot 3, excl. Pot 2)	1,176.3	1,168.5	1,157.2	1,144.5	1,135.9
Pot 2 additions (cumulative)	1.8	10.4	24.4	68.7	67.9
Pot 2 depreciation (cumulative)	0.0	0.0	-0.3	-0.8	-1.8
Total closing RAV	**1,178.1**	**1,178.8**	**1,181.3**	**1,187.4**	**1,202.0**

North West

Table A7.9 Comparison of actual and allowed capex and non-mains repex and treatment of spend, North West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	28.7	29.6	22.0	26.0	23.0	129.4
Total Actual	64.3	30.4	31.3	52.6	54.3	232.9
Overspend	35.6	0.8	9.2	26.6	31.3	103.5
% overspend against allowances	124%	3%	42%	102%	136%	80%
Treatment of overspend						
Related party margins	0.6	0.4	0.4	0.5	0.4	2.4
DN sales costs	0.0	0.0	0.0	0.0	0.0	0.0
Under recovery of connections income	1.0	0.3	0.4	1.8	0.9	4.5
Inefficient above allowance (Pot 1)	4.5	0.8	1.1	0.3	0.3	6.9
Efficient overspend (Pot 2b)	29.5	-0.7	6.8	23.6	29.2	88.5
Reopener (Pot 3b)	0.0	0.0	0.4	0.3	0.4	1.2
Total overspend	35.6	0.8	9.2	26.6	31.3	103.5
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	0.4	0.4	0.0	0.0	0.0	0.8
Efficient allowed spend (Pot 3a)	28.4	29.2	22.0	26.0	23.0	128.6
Total allowance	28.7	29.6	22.0	26.0	23.0	129.4

Table A7.10 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, North West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	3.3	0.0	0.0	0.0	0.0	3.3
Mains Reinf. & Gov capex	0.1	0.1	0.0	0.0	0.0	0.1
Connections capex	0.3	0.2	0.3	0.2	0.3	1.3
Other capex	0.4	0.0	0.3	0.1	0.0	0.7
Repex Services	0.5	0.5	0.5	0.0	0.0	1.4
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.5	0.8	1.1	0.3	0.3	6.9
Split of efficient over (under) spend by category (Pot 2b)						
LTS & Storage capex	18.8	2.3	-0.3	-0.3	1.7	22.3
Mains Reinf. & Gov capex	1.0	0.2	-1.5	-0.7	0.2	-0.7
Connections capex	5.9	3.4	3.6	4.4	3.4	20.7
Other capex	2.6	-1.3	1.5	7.7	7.9	18.4
Repex Services	3.1	0.8	4.4	13.0	16.3	37.6
Repex other	-1.9	-6.1	-0.9	-0.5	-0.4	-9.8
Total	29.5	-0.7	6.8	23.6	29.2	88.5
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	0.0	0.0	0.4	0.3	0.4	1.2
Other capex	0.0	0.0	0.0	0.0	0.0	0.0
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.4	0.3	0.4	1.2

Table A7.11 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, North West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	0.0	0.0	0.0	0.0	0.0	0.0
Other capex	0.3	0.4	0.0	0.0	0.0	0.7
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.4	0.4	0.0	0.0	0.0	0.8
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	6.7	1.1	1.2	2.9	0.3	12.1
Mains Reinf. & Gov capex	2.6	2.3	2.1	1.9	1.9	10.8
Connections capex	1.2	1.0	0.9	0.6	0.4	4.1
Other capex	6.6	5.5	3.8	4.6	4.9	25.5
Repex Services	9.4	13.3	14.1	16.0	15.6	68.3
Repex other	1.8	6.1	0.0	0.0	0.0	7.9
Total	28.4	29.2	22.0	26.0	23.0	128.6

Table A7.12 GDN RAV roll forward, North West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	1,290.1				
Additions to pre-2002 assets	11.0				
Revised Opening value bf	1,301.2	1,301.8	1,299.8	1,293.7	1,294.0
Depreciation	-45.7	-45.9	-46.0	-46.1	-46.3
Net capex additions	47.9	43.7	40.0	46.8	47.5
Disposals	-1.6	0.2	-0.1	-0.3	-1.3
Closing RAV (incl. Pot 3, excl. Pot 2)	1,301.8	1,299.8	1,293.7	1,294.0	1,293.9
Pot 2 additions (cumulative)	29.1	28.1	34.9	68.7	87.7
Pot 2 depreciation (cumulative)	0.0	-0.6	-1.3	-2.0	-3.3
Total closing RAV	**1,330.9**	**1,327.2**	**1,327.3**	**1,350.5**	**1,378.3**

West Midlands

Table A7.13 Comparison of actual and allowed capex and non-mains repex and treatment of spend, West Midlands (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	44.3	21.5	15.5	17.0	22.4	120.7
Total Actual	33.9	36.7	25.2	36.3	36.5	168.6
Overspend	-10.4	15.2	9.7	19.4	14.0	47.9
% overspend against allowances	-23%	71%	62%	114%	62%	40%
Treatment of overspend						
Related party margins	0.4	0.4	0.3	0.4	0.3	1.7
DN sales costs	0.0	0.0	0.0	0.0	0.0	0.0
Under recovery of connections income	0.8	0.5	0.3	1.3	0.7	3.6
Inefficient above allowance (Pot 1)	0.5	0.7	0.8	0.2	0.2	2.4
Efficient overspend (Pot 2b)	-13.2	11.2	6.7	14.8	10.3	29.8
Reopener (Pot 3b)	1.1	2.4	1.6	2.7	2.5	10.4
Total overspend	-10.4	15.2	9.7	19.4	14.0	47.9
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	0.5	0.3	0.1	0.0	0.0	0.9
Efficient allowed spend (Pot 3a)	43.8	21.2	15.4	17.0	22.4	119.8
Total allowance	44.3	21.5	15.5	17.0	22.4	120.7

Table A7.14 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, West Midlands (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.1	0.0	0.0	0.0	0.0	0.1
Connections capex	0.2	0.2	0.2	0.2	0.2	1.0
Other capex	0.0	0.0	0.1	0.0	0.0	0.1
Repex Services	0.2	0.5	0.5	0.0	0.0	1.2
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.5	0.7	0.8	0.2	0.2	2.4
Split of efficient over(under) spend by category (Pot 2b)						
LTS & Storage capex	-14.5	7.3	0.4	1.2	-5.8	-11.4
Mains Reinf. & Gov capex	0.0	-1.3	-1.1	-1.3	-0.6	-4.3
Connections capex	2.0	3.4	2.7	3.3	2.7	14.1
Other capex	-1.4	-2.0	-0.1	3.1	4.6	4.3
Repex Services	0.5	4.9	5.7	8.5	9.7	29.4
Repex other	0.1	-1.0	-1.0	-0.1	-0.3	-2.2
Total	-13.2	11.2	6.7	14.8	10.3	29.8
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	1.1	0.2	0.2	0.2	0.2	1.9
Other capex	0.0	0.0	0.0	0.0	0.0	0.0
Repex Services	0.0	2.2	1.5	2.5	2.4	8.5
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.1	2.4	1.6	2.7	2.5	10.4

Table A7.15 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, West Midlands (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.1
Connections capex	0.0	0.0	0.0	0.0	0.0	0.0
Other capex	0.5	0.3	0.1	0.0	0.0	0.9
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.5	0.3	0.1	0.0	0.0	0.9
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	26.8	3.4	0.0	0.7	7.0	37.9
Mains Reinf. & Gov capex	2.8	2.3	2.3	2.2	2.1	11.6
Connections capex	1.3	0.8	0.4	0.2	0.0	2.7
Other capex	6.0	5.3	3.4	4.1	4.4	23.1
Repex Services	6.5	8.8	9.4	9.9	8.9	43.5
Repex other	0.4	0.5	0.0	0.0	0.0	0.9
Total	43.8	21.2	15.4	17.0	22.4	119.8

Table A7.16 GDN RAV roll forward, West Midlands (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	1,024.6				
Additions to pre-2002 assets	8.8				
Revised Opening value bf	1,033.4	1,060.6	1,059.4	1,051.7	1,045.9
Depreciation	-36.3	-37.0	-37.2	-37.2	-37.2
Net capex additions	67.5	34.1	29.0	31.8	37.5
Disposals	-4.0	1.7	0.4	-0.3	-1.4
Closing RAV (incl. Pot 3, excl. Pot 2)	1,060.6	1,059.4	1,051.7	1,045.9	1,044.8
Pot 2 additions (cumulative)	-13.7	-2.8	3.7	68.7	28.9
Pot 2 depreciation (cumulative)	0.0	0.3	0.4	0.3	-0.1
Total closing RAV	**1,046.8**	**1,056.9**	**1,055.8**	**1,064.8**	**1,073.5**

Northern Gas Networks

North England

Table A7.17 Comparison of actual and allowed capex and non-mains repex and treatment of spend, North England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	52.6	33.3	32.6	29.6	33.9	182.0
Total Actual	52.7	46.2	39.1	49.1	54.8	242.0
Overspend	0.1	12.9	6.5	19.6	20.9	60.0
% overspend against allowances	0%	39%	20%	66%	62%	33%
Treatment of overspend						
Related party margins	0.7	0.4	0.6	0.0	0.0	1.8
DN sales costs	0.0	0.0	0.0	3.6	0.0	3.6
Under recovery of connections income	0.6	0.3	0.5	1.1	1.2	3.7
Inefficient above allowance (Pot 1)	0.8	0.8	0.9	0.1	2.5	5.0
Efficient overspend (Pot 2b)	-2.7	10.0	3.2	12.4	16.2	39.1
Reopener (Pot 3b)	0.6	1.4	1.3	2.4	1.2	6.8
Total overspend	0.1	12.9	6.5	19.6	20.9	60.0
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	0.7	0.4	0.3	1.4	0.0	2.9
Efficient allowed spend (Pot 3a)	51.9	32.9	32.3	28.1	33.9	179.1
Total allowance	52.6	33.3	32.6	29.6	33.9	182.0

Table A7.18 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, North England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	0.0	0.0	0.0	0.8	0.0	0.8
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.1
Connections capex	0.3	0.3	0.3	0.4	0.4	1.8
Other capex	0.0	0.0	0.0	-1.9	1.9	0.0
Repex Services	0.4	0.5	0.6	0.7	0.2	2.4
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.8	0.8	0.9	0.1	2.5	5.0
Split of efficient over (under) spend by category (Pot 2b)						
LTS & Storage capex	-6.0	12.2	-3.6	0.0	-7.2	-4.5
Mains Reinf. & Gov capex	0.8	-0.9	0.0	-0.5	0.4	-0.1
Connections capex	4.3	1.8	4.1	6.0	5.6	21.8
Other capex	-5.3	-5.6	-2.0	3.0	4.8	-5.1
Repex Services	4.6	3.5	4.5	4.8	10.3	27.7
Repex other	-1.0	-1.1	0.2	-0.9	2.3	-0.5
Total	-2.7	10.0	3.2	12.4	16.2	39.1
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	0.6	0.0	0.7	1.2	1.2	3.7
Other capex	0.0	0.0	0.0	0.0	0.0	0.0
Repex Services	0.0	1.4	0.5	1.2	0.0	3.2
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.6	1.4	1.3	2.4	1.2	6.8

Table A7.19 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, North England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	0.0	0.0	0.0	1.4	0.0	1.4
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	0.0	0.0	0.0	0.0	0.0	0.0
Other capex	0.7	0.4	0.3	0.0	0.0	1.4
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	0.4	0.3	1.4	0.0	2.9
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	21.5	3.8	6.1	0.2	7.3	39.0
Mains Reinf. & Gov capex	5.0	4.4	4.4	4.1	4.0	21.9
Connections capex	4.0	3.4	2.6	1.9	1.6	13.5
Other capex	12.7	11.5	7.1	8.7	9.2	49.2
Repex Services	7.4	8.8	12.2	13.2	11.8	53.4
Repex other	1.2	1.0	0.0	0.0	0.0	2.2
Total	51.9	32.9	32.3	28.1	33.9	179.1

Table A7.20 GDN RAV roll forward, North England (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	1,216.2				
Additions to pre-2002 assets	10.4				
Revised Opening value bf	1,226.6	1,257.5	1,260.5	1,263.7	1,266.0
Depreciation	-43.0	-43.9	-44.2	-44.5	-44.7
Net capex additions	74.6	47.1	47.6	46.7	50.4
Disposals	-0.5	-0.2	-0.2	0.0	0.0
Closing RAV (incl. Pot 3, excl. Pot 2)	1,257.5	1,260.5	1,263.7	1,266.0	1,271.6
Pot 2 additions (cumulative)	-3.4	6.2	9.1	68.7	36.3
Pot 2 depreciation (cumulative)	0.0	0.1	-0.1	-0.3	-0.7
Total closing RAV	**1,254.2**	**1,266.8**	**1,272.8**	**1,285.8**	**1,307.2**

Scotia Gas Networks

Scotland

Table A7.21 Comparison of actual and allowed capex and non-mains repex and treatment of spend, Scotland (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	40.2	36.0	22.5	22.0	18.6	139.4
Total Actual	43.7	33.8	53.1	72.7	57.6	260.8
Overspend	3.6	-2.3	30.5	50.6	39.0	121.4
% overspend against allowances	9%	-6%	136%	230%	209%	87%
Treatment of overspend						
Related party margins	1.1	0.7	0.9	0.0	0.0	2.7
DN sales costs	0.0	0.0	0.0	0.0	0.0	0.0
Under recovery of connections income	1.4	0.4	0.5	1.7	1.4	5.3
Inefficient above allowance (Pot 1)	0.9	0.8	1.0	1.0	1.3	5.0
Efficient overspend (Pot 2b)	0.2	-6.2	28.2	47.5	34.7	104.4
Reopener (Pot 3b)	0.0	2.0	0.0	0.4	1.6	4.1
Total overspend	3.6	-2.3	30.5	50.6	39.0	121.4
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	0.6	0.3	0.1	0.1	0.0	1.0
Efficient allowed spend (Pot 3a)	39.6	35.8	22.4	21.9	18.6	138.3
Total allowance	40.2	36.0	22.5	22.0	18.6	139.4

Table A7.22 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, Scotland (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.3	0.2	0.0	0.0	0.2	0.7
Connections capex	0.4	0.3	0.4	0.5	0.4	1.9
Other capex	0.0	0.0	0.2	0.0	0.0	0.2
Repex Services	0.2	0.3	0.4	0.5	0.7	2.1
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.9	0.8	1.0	1.0	1.3	5.0
Split of efficient over (under) spend by category (Pot 2b)						
LTS & Storage capex	-12.6	-13.5	11.8	30.5	6.7	22.9
Mains Reinf. & Gov capex	3.3	1.0	0.2	-0.1	4.2	8.6
Connections capex	10.6	5.9	8.7	12.8	11.3	49.4
Other capex	-3.2	-1.6	0.2	-4.6	-1.0	-10.1
Repex Services	2.0	1.7	6.2	8.2	12.6	30.8
Repex other	0.1	0.3	1.1	0.7	0.8	2.9
Total	0.2	-6.2	28.2	47.5	34.7	104.4
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	0.0	0.0	0.0	0.4	0.6	1.0
Other capex	0.0	0.0	0.0	0.0	0.0	0.0
Repex Services	0.0	2.0	0.0	0.0	1.1	3.1
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	2.0	0.0	0.4	1.6	4.1

Table A7.23 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, Scotland (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.1	0.1	0.0	0.2
Connections capex	0.0	0.0	0.0	0.0	0.0	0.0
Other capex	0.6	0.3	0.0	0.0	0.0	0.9
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.6	0.3	0.1	0.1	0.0	1.0
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	18.4	13.9	1.9	1.6	0.8	36.7
Mains Reinf. & Gov capex	4.8	4.1	3.7	3.4	3.3	19.3
Connections capex	2.8	2.4	2.1	1.5	1.1	10.0
Other capex	7.7	7.5	5.5	6.1	5.2	32.1
Repex Services	6.4	8.1	9.2	9.3	8.2	41.1
Repex other	-0.5	-0.3	0.0	0.0	0.0	-0.8
Total	39.6	35.8	22.4	21.9	18.6	138.3

Table A7.24 GDN RAV roll forward, Scotland (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	759.4				
Additions to pre-2002 assets	6.5				
Revised Opening value bf	765.9	789.3	807.1	810.5	813.0
Depreciation	-26.9	-27.5	-28.0	-28.3	-28.5
Net capex additions	49.8	44.0	31.0	30.8	28.8
Disposals	0.5	1.3	0.4	0.0	0.0
Closing RAV (incl. Pot 3, excl. Pot 2)	789.3	807.1	810.5	813.0	813.3
Pot 2 additions (cumulative)	-0.4	-6.9	21.3	68.7	103.4
Pot 2 depreciation (cumulative)	0.0	0.0	0.2	-0.3	-1.8
Total closing RAV	**788.9**	**800.3**	**831.9**	**881.4**	**914.9**

Southern

Table A7.25 Comparison of actual and allowed capex and non-mains repex and treatment of spend, Southern (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	49.0	54.7	57.0	47.2	53.0	260.8
Total Actual	74.7	77.9	68.0	69.6	97.2	387.5
Overspend	25.7	23.3	11.1	22.4	44.2	126.7
% overspend against allowances	52%	43%	19%	48%	83%	49%
Treatment of overspend						
Related party margins	1.1	0.7	0.7	0.0	0.0	2.4
DN sales costs	0.0	0.0	0.0	0.0	0.0	0.0
Under recovery of connections income	1.1	0.4	0.2	0.6	1.2	3.5
Inefficient above allowance (Pot 1)	1.4	1.7	1.9	1.9	2.7	9.6
Efficient overspend (Pot 2b)	21.0	18.7	6.6	18.2	38.5	103.1
Reopener (Pot 3b)	1.1	1.8	1.7	1.7	1.9	8.1
Total overspend	25.7	23.3	11.1	22.4	44.2	126.7
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	1.0	0.6	0.2	0.0	0.0	1.8
Efficient allowed spend (Pot 3a)	48.0	54.1	56.8	47.1	53.0	259.0
Total allowance	49.0	54.7	57.0	47.2	53.0	260.8

Table A7.26 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, Southern (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.4	0.5	0.1	0.2	0.7	1.8
Connections capex	0.4	0.3	0.4	0.4	0.5	2.0
Other capex	0.0	0.0	0.5	0.0	0.0	0.5
Repex Services	0.6	0.9	0.9	1.2	1.6	5.3
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.4	1.7	1.9	1.9	2.7	9.6
Split of efficient over (under) spend by category (Pot 2b)						
LTS & Storage capex	3.7	0.7	-9.0	-0.2	-0.4	-5.2
Mains Reinf. & Gov capex	6.0	8.3	-0.8	0.7	11.0	25.3
Connections capex	8.0	3.2	4.3	8.5	9.0	33.1
Other capex	0.4	-1.3	1.8	-1.5	0.1	-0.6
Repex Services	4.5	7.8	10.9	10.4	18.7	52.3
Repex other	-1.7	-0.1	-0.6	0.4	0.1	-1.9
Total	21.0	18.7	6.6	18.2	38.5	103.1
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	1.1	1.8	1.7	1.7	1.9	8.1
Other capex	0.0	0.0	0.0	0.0	0.0	0.0
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.1	1.8	1.7	1.7	1.9	8.1

Table A7.27 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, Southern (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.1	0.0	0.0	0.1
Connections capex	0.0	0.0	0.1	0.0	0.0	0.1
Other capex	1.0	0.6	0.0	0.0	0.0	1.6
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.0	0.6	0.2	0.0	0.0	1.8
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	6.4	7.5	16.5	2.9	8.4	41.9
Mains Reinf. & Gov capex	5.6	6.3	5.4	5.1	4.8	27.2
Connections capex	3.9	3.3	2.6	1.9	1.6	13.3
Other capex	12.4	10.9	7.1	8.4	8.7	47.4
Repex Services	18.6	25.0	25.3	28.9	29.4	127.1
Repex other	1.2	1.0	0.0	0.0	0.0	2.2
Total	48.0	54.1	56.8	47.1	53.0	259.0

Table A7.28 GDN RAV roll forward, Southern (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	2,029.1				
Additions to pre-2002 assets	17.3				
Revised Opening value bf	2,046.5	2,046.4	2,045.3	2,048.3	2,043.0
Depreciation	-71.8	-72.1	-72.4	-72.8	-73.0
Net capex additions	74.0	70.6	74.6	67.5	76.1
Disposals	-2.2	0.4	0.8	0.0	0.0
Closing RAV (incl. Pot 3, excl. Pot 2)	2,046.4	2,045.3	2,048.3	2,043.0	2,046.1
Pot 2 additions (cumulative)	20.0	38.2	44.6	68.7	101.3
Pot 2 depreciation (cumulative)	0.0	-0.4	-1.3	-2.3	-3.7
Total closing RAV	**2,066.4**	**2,083.0**	**2,091.7**	**2,103.5**	**2,143.7**

Wales and West Utilities

Wales and West

Table A7.29 Comparison of actual and allowed capex and non-mains repex and treatment of spend, Wales and West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Comparison of actual and allowed spend						
Total Allowed Capex and Non-Mains Repex	53.2	36.9	26.4	26.1	28.0	170.6
Total Actual	76.4	62.3	43.8	79.9	63.3	325.7
Overspend	23.2	25.4	17.4	53.9	35.3	155.1
% overspend against allowances	44%	69%	66%	207%	126%	91%
Treatment of overspend						
Related party margins	1.2	0.9	0.9	0.0	0.0	3.0
DN sales costs	0.0	0.0	0.0	14.1	0.0	14.1
Under recovery of connections income	0.6	0.6	0.7	1.2	1.0	4.1
Inefficient above allowance (Pot 1)	1.2	1.0	1.3	1.3	7.1	11.9
Efficient overspend (Pot 2b)	19.2	20.3	10.1	25.7	18.2	93.5
Reopener (Pot 3b)	1.0	2.6	4.4	11.5	9.0	28.6
Total overspend	23.2	25.4	17.4	53.9	35.3	155.1
Treatment of allowed spend						
Inefficient spend within the allowance (Pot 2a)	3.2	0.5	0.1	0.0	0.0	3.8
Efficient allowed spend (Pot 3a)	50.0	36.4	26.3	26.1	28.0	166.8
Total allowance	53.2	36.9	26.4	26.1	28.0	170.6

Table A7.30 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, Wales and West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend above allowance (Pot 1)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.5	0.2	0.0	0.1	0.1	0.9
Connections capex	0.5	0.5	0.5	0.4	0.3	2.1
Other capex	0.0	0.0	0.4	0.2	6.1	6.6
Repex Services	0.2	0.4	0.4	0.6	0.7	2.3
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.2	1.0	1.3	1.3	7.1	11.9
Split of efficient over (under) spend by category (Pot 2b)						
LTS & Storage capex	-2.4	7.1	0.1	2.3	0.8	7.9
Mains Reinf. & Gov capex	9.7	2.1	-0.9	1.6	0.8	13.4
Connections capex	9.9	7.2	7.0	7.6	3.9	35.6
Other capex	-1.8	-3.6	0.0	5.9	4.6	5.1
Repex Services	4.9	7.4	4.9	8.2	8.0	33.5
Repex other	-1.1	0.1	-1.1	0.0	0.2	-1.9
Total	19.2	20.3	10.1	25.7	18.2	93.5
Split of reopener by category (Pot 3b)						
LTS & Storage capex	0.0	0.0	0.0	0.0	0.0	0.0
Mains Reinf. & Gov capex	0.0	0.0	0.0	0.0	0.0	0.0
Connections capex	1.0	0.9	0.9	1.0	0.8	4.7
Other capex	0.0	0.0	0.0	6.6	2.8	9.4
Repex Services	0.0	1.6	3.5	4.0	5.4	14.5
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.0	2.6	4.4	11.5	9.0	28.6

Table A7.31 Treatment of overspend and inefficient expenditure within the allowance by expenditure category, Wales and West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Split of inefficient spend within allowance by category (Pot 2a)						
LTS & Storage capex	2.4	0.0	0.0	0.0	0.0	2.4
Mains Reinf. & Gov capex	0.0	0.0	0.1	0.0	0.0	0.1
Connections capex	0.0	0.0	0.0	0.0	0.0	0.0
Other capex	0.9	0.5	0.0	0.0	0.0	1.4
Repex Services	0.0	0.0	0.0	0.0	0.0	0.0
Repex other	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.2	0.5	0.1	0.0	0.0	3.8
Split of efficient allowed spend by category (Pot 3a)						
LTS & Storage capex	22.3	9.6	1.7	1.2	4.9	39.7
Mains Reinf. & Gov capex	5.1	4.5	4.3	4.0	3.8	21.6
Connections capex	3.8	3.3	2.4	1.7	1.4	12.7
Other capex	11.9	10.7	6.8	8.0	8.6	46.0
Repex Services	5.5	7.3	9.9	10.1	8.9	41.8
Repex other	1.4	1.0	1.2	1.0	0.5	5.1
Total	50.0	36.4	26.3	26.1	28.0	166.8

Table A7.32 GDN RAV roll forward, Wales and West (£m, 2005-06 prices)

	2002-03	2003-04	2004-05	2005-06	2006-07
Opening value per last price control	1,038.0				
Additions to pre-2002 assets	8.9				
Revised Opening value bf	1,046.9	1,078.9	1,091.2	1,094.6	1,103.7
Depreciation	-36.7	-37.6	-38.1	-38.3	-38.7
Net capex additions	68.2	48.6	41.2	47.4	46.8
Disposals	0.5	1.3	0.2	0.0	0.0
Closing RAV (incl. Pot 3, excl. Pot 2)	1,078.9	1,091.2	1,094.6	1,103.7	1,111.7
Pot 2 additions (cumulative)	16.0	35.8	45.8	68.7	89.7
Pot 2 depreciation (cumulative)	0.0	-0.4	-1.2	-2.2	-3.8
Total closing RAV	**1,094.9**	**1,126.6**	**1,139.2**	**1,173.0**	**1,197.7**

Appendix 8 - Forecast capital and replacement expenditure

1.1. This appendix shows the GDN forecast and Ofgem view for capital expenditure and replacement expenditure for 2007-08. There are tables at disaggregated levels for connections, mains reinforcement, governors, replacement services and mains.

Calculation of mains abandonment unit costs

1.2. The GDNs' mains abandonment ratios have been reviewed against historical figures and by comparison across GDNs. Where a GDN was forecasting to install greater than 900m of main for every 1km abandoned the mains lay figure has been revised down to 900m.

1.3. The mains abandonment ratio was applied to each of the diameter bands for mains abandoned workloads submitted by the GDNs within their BPQs. This gave a mains lay volume for each of the diameter bands of mains to be abandoned.

1.4. The mains laid workload was split across the diameter bands starting with the largest diameter of main to be abandoned. e.g. Where a GDN identified it was to abandon 0.8km of 24" main and had identified that the largest diameter of main it was laying was >500-630mm PE main, 0.72km of >500mm PE was allocated to this diameter. (assuming a ratio of 0.9km of mains laid for every 1km abandoned). Where there was insufficient length of >500-630mm PE required to complete the replacement the next available diameter down was used, in this case 355-500mm pipe. If there was a surplus of the diameter laid this was then allocated to the next diameter down of main to be abandoned, in this case 18-24". This process continued through all the diameter bands down to <=3".

1.5. The mains lay unit costs were then applied to lengths laid allocated to each diameter of abandonment. The sum of all the lay costs for each diameter band, was divided by the length of main to be abandoned to provide a unit cost for mains abandonment. e.g. To replace 16km of 10-12" mains, 10km of 250-355mm main and 4.4km of 180 to 250mm were allocated. The sum of the laid costs were then divided by the abandonment length to then give a unit cost of abandonment. e.g. £4.8m divided by 16km gives a unit cost of abandonment of £300 per metre. This process was repeated across all diameter bands.

NGG

East England

Table A8.1 Forecast capital expenditure for connections, East England, (£m, 2005-06 prices)[4]

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	227.9	201.0	763.2	672.9
Workload (per metre for mains and per service)	88.4	88.4	24,619.0	24,619.0
Gross cost (£m's)	20.2	17.8	18.8	16.6
Contributions (£m's)	19.2	17.2	12.0	10.6
Net Cost (£m's)	1.0	0.6	6.8	6.0

Table A8.2 Forecast capital for mains reinforcement, East England, (£m, 2005-06 prices)[5]

Mains Reinforcement 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per Km of main)	212.0	212.0
Workload (Km's)	18.4	18.4
Gross cost (£m's)	3.9	3.9
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	3.9	3.9

Table A8.3 Forecast capital expenditure for governors, East England, (£m, 2005-06 prices)[6]

Governors 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£000's per unit)	27.8	27.8
Workload (units)	18.0	18.0
Gross cost (£m's)	0.5	0.5
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	0.5	0.5

[4] Note the GDN forecast and Ofgem view will not reconcile to the numbers in table 3.6 due to the outer met adjustment. In East England add £0.2m to connections costs, the corresponding amount will need to be subtracted for London.
[5] Note the GDN forecast and Ofgem view will not reconcile to the numbers in table 3.6 due to the outer met adjustment. In East England add £0.3m to total mains reinforcement and governors costs, the corresponding amount will need to be subtracted for London.
[6] Note the GDN forecast and Ofgem view will not reconcile to the numbers in table 3.6 due to the outer met adjustment. In East England add £0.3m to total mains reinforcement and governors costs, the corresponding amount will need to be subtracted for London.

Table A8.4a Forecast service replacement expenditure- domestic, East England, (£m, 2005-06 prices)

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	46,874	385.8	18.1	37,689	378.4	14.3
Relaid services not associated with mains replacement (bulk relays)	3,327	942.3	3.1	500	942.3	0.5
Services relaid after escape	4,867	885.4	4.3	3,500	885.4	3.1
Service test & transfer to new or other main	32,950	280.4	9.2	42,212	291.0	12.3
Reposition domestic meter - service relays	0	0.0	0.0	0	0.0	0.0
Purge & relight after domestic service work	115,447	19.3	2.2	115,447	19.3	2.2
Service relay domestic meterwork	0	0.0	0.0	0	0.0	0.0
Other domestic services	0	0.0	0.0	0	0.0	0.0
Total domestic services	**203,465**	**181.8**	**37.0**	**199,348**	**162.3**	**32.3**

Table A8.4b Forecast service replacement expenditure- non domestic, East England, (£m, 2005-06 prices)

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	1,384	1,630.4	2.3	500	1,630.4	0.8
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**1,384**	**1,630.4**	**2.3**	**500**	**1,630.4**	**0.8**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	33,849	159.6	5.4	33,849	159.6	5.4
Renew service connections	5,658	458.1	2.6	5,658	458.1	2.6
Total	**39,507**	**202.4**	**8.0**	**39,507**	**202.4**	**8.0**

Table A8.5 Forecast mains replacement expenditure, East England, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	53.4	48.4	2.6
4-5"	484.6	50.9	24.7
6-7"	129.4	79.5	10.3
8-9"	47.4	145.6	6.9
10-12"	31.2	220.7	6.9
>12"	28.6	270.7	7.7
Total	**774.5**		**59.0**

London

Table A8.6 Forecast capital expenditure for connections, London, (£m, 2005-06 prices)[7]

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	426.1	407.8	830.7	795.1
Workload (per metre for mains and per service)	23.0	23.0	10,626.6	10,626.6
Gross cost (£m's)	9.8	9.4	8.8	8.4
Contributions (£m's)	9.4	9.1	7.0	6.7
Net Cost (£m's)	0.4	0.3	1.8	1.7

[7] Note the GDN forecast and Ofgem view will not reconcile to the numbers in table 3.6 due to the outer met adjustment. In London subtract away £0.2m from total connections costs; the corresponding amount will need to be added to East England.

Table A8.7 Forecast capital for mains reinforcement, London, (£m, 2005-06 prices)[8]

Mains Reinforcement 2007/08	GDN Forecast	Ofgem View
Unit cost (£'s per Km of main)	301.6	222.8
Workload (Km's)	12.6	12.6
Gross cost (£m's)	3.8	2.8
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	3.8	2.8

Table A8.8 Forecast capital expenditure for governors, London, (£m, 2005-06 prices)[9]

Governors 2007/08	GDN Forecast	Ofgem View
Unit cost (£000's per unit)	127.8	69.3
Workload (units)	18.0	18.0
Gross cost (£m's)	2.3	1.2
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	2.3	1.2

[8] Note the GDN forecast and Ofgem view will not reconcile to the numbers in table 3.6 due to the outer met adjustment. In London subtract £0.3m from total mains reinforcement and governors costs, the corresponding amount will need to be added to East England.
[9] Note the GDN forecast and Ofgem view will not reconcile to the numbers in table 3.6 due to the outer met adjustment. In London subtract £0.3mfrom total mains reinforcement and governors costs, the corresponding amount will need to be added to East England.

Table A8.9a Forecast service replacement expenditure- domestic, London, (£m, 2005-06 prices)

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	14,892	537.3	8.0	13,572	519.8	7.1
Relaid services not associated with mains replacement (bulk relays)	912	1,285.7	1.2	500	1,260.0	0.6
Services relaid after escape	2,857	1,347.0	3.8	2,857	1,320.1	3.8
Service test & transfer to new or other main	8,859	321.8	2.9	10,179	327.0	3.3
Reposition domestic meter - service relays	0	0.0	0.0	0	0.0	0.0
Purge & relight after domestic service work	27,792	28.7	0.8	27,792	28.1	0.8
Service relay domestic meterwork	0	0.0	0.0	0	0.0	0.0
Other domestic services	0	0.0	0.0	0	0.0	0.0
Total domestic services	**55,312**	**301.4**	**16.7**	**54,900**	**283.5**	**15.6**

Table A8.9b Forecast service replacement expenditure- non domestic, London, (£m, 2005-06 prices)

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	765	982.8	0.8	500	963.1	0.5
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**765**	**982.8**	**0.8**	**500**	**963.1**	**0.5**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	22,488	158.7	3.6	22,488	158.7	3.6
Renew service connections	4,008	329.3	1.3	4,008	329.3	1.3
Total	**26,496**	**184.5**	**4.9**	**26,496**	**184.5**	**4.9**

Table A8.10 Forecast mains replacement expenditure, London, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	11.7	67.3	0.8
4-5"	111.1	67.4	7.5
6-7"	51.0	70.6	3.6
8-9"	21.2	117.8	2.5
10-12"	14.8	143.2	2.1
>12"	15.5	421.8	6.5
Total	**225.1**		**23.0**

North West

Table A8.11 Forecast capital expenditure for connections, North West, (£m, 2005-06 prices)

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	238.1	221.6	722.0	671.8
Workload (per metre for mains and per service)	43.6	43.6	13,346.3	13,346.3
Gross cost (£m's)	10.4	9.6	6.3	9.0
Contributions (£m's)	9.8	9.3	3.3	6.0
Net Cost (£m's)	0.5	0.3	3.3	3.0

Table A8.12 Forecast capital for mains reinforcement, North West, (£m, 2005-06 prices)

Mains Reinforcement 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per Km of main)	180.4	180.4
Workload (Km's)	19.4	19.4
Gross cost (£m's)	3.5	3.5
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	3.5	3.5

Table A8.13 Forecast capital expenditure for governors, North West, (£m, 2005-06 prices)

Governors 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£000's per unit)	26.7	26.7
Workload (units)	15.0	15.0
Gross cost (£m's)	0.4	0.4
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	0.4	0.4

Table A8.14a Forecast service replacement expenditure- domestic, North West, (£m, 2005-06 prices)

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	40,992	404.5	16.6	36,850	409.9	15.1
Relaid services not associated with mains replacement (bulk relays)	2,980	824.2	2.5	500	1,311.2	0.7
Services relaid after escape	6,913	695.0	4.8	6,000	707.6	4.2
Service test & transfer to new or other main	14,841	188.4	2.8	18,983	183.6	3.5
Reposition domestic meter - service relays	0	0.0	0.0	0	0.0	0.0
Purge & relight after domestic service work	87,935	25.4	2.2	87,935	25.4	2.2
Service relay domestic meterwork	0	0.0	0.0	0	0.0	0.0
Other domestic services	0	0.0	0.0	0	0.0	0.0
Total domestic services	**153,661**	**187.9**	**28.9**	**150,268**	**171.2**	**25.7**

Table A8.14b Forecast service replacement expenditure- non domestic, North West, (£m, 2005-06 prices)

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	1,427	1,646.1	2.3	500	1,646.1	0.8
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**1,427**	**1,646.1**	**2.3**	**500**	**1,646.1**	**0.8**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	1,500	753.3	1.1	1,500	753.3	1.1
Renew service connections	300	3,433.3	1.0	300	3,433.3	1.0
Total	**1,800**	**1,200.0**	**2.2**	**1,800**	**1,200.0**	**2.2**

Table A8.15 Forecast mains replacement expenditure, North West, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	146.6	48.0	7.0
4-5"	272.7	49.3	13.4
6-7"	43.7	88.1	3.9
8-9"	23.5	152.2	3.6
10-12"	26.2	255.3	6.7
>12"	47.9	340.7	16.3
Total	**560.5**		**50.9**

West Midlands

Table A8.16 Forecast capital expenditure for connections, West Midlands, (£m, 2005-06 prices)

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	291.2	262.1	708.5	637.6
Workload (per metre for mains and per service)	29.6	29.6	9,647.0	9,647.0
Gross cost (£m's)	8.6	7.8	6.8	6.2
Contributions (£m's)	8.2	7.5	4.6	4.2
Net Cost (£m's)	0.4	0.2	2.2	1.9

Table A8.17 Forecast capital for mains reinforcement, West Midlands, (£m, 2005-06 prices)

Mains Reinforcement 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per Km of main)	161.9	161.9
Workload (Km's)	10.5	10.5
Gross cost (£m's)	1.7	1.7
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	1.7	1.7

Table A8.18 Forecast capital expenditure for governors, West Midlands, (£m, 2005-06 prices)

Governors 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£000's per unit)	83.3	57.7
Workload (units)	12.0	12.0
Gross cost (£m's)	1.0	0.7
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	1.0	0.7

Table A8.19a Forecast service replacement expenditure- domestic, West Midlands, (£m, 2005-06 prices)

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	28,609	403.5	11.5	20,386	427.0	8.7
Relaid services not associated with mains replacement (bulk relays)	1,681	1,078.9	1.8	500	1,446.9	0.7
Services relaid after escape	4,444	995.6	4.4	4,444	995.6	4.4
Service test & transfer to new or other main	12,162	301.5	3.7	20,386	283.9	5.8
Reposition domestic meter - service relays	0	0.0	0.0	0	0.0	0.0
Purge & relight after domestic service work	60,027	10.7	0.6	60,027	10.7	0.6
Service relay domestic meterwork	0	0.0	0.0	0	0.0	0.0
Other domestic services	0	0.0	0.0	0	0.0	0.0
Total domestic services	**106,923**	**206.6**	**22.1**	**105,742**	**191.8**	**20.3**

Table A8.19b Forecast service replacement expenditure- non domestic, West Midlands, (£m, 2005-06 prices)

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	300	1,493.0	0.4	300	1,493.0	0.4
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**300**	**1,493.0**	**0.4**	**300**	**1,493.0**	**0.4**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	0	0.0	0.0	0	0.0	0.0
Renew service connections	0	0.0	0.8	0	0.0	0.8
Total	**0**	**0.0**	**0.8**	**0**	**0.0**	**0.8**

Table A8.20 Forecast mains replacement expenditure, West Midlands, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	142.2	46.1	6.6
4-5"	114.7	52.7	6.0
6-7"	30.3	73.0	2.2
8-9"	16.8	118.7	2.0
10-12"	12.6	199.7	2.5
>12"	50.8	249.6	12.7
Total	**367.5**		**32.0**

Northern Gas Networks

North England

Table A8.23 Forecast capital expenditure for connections, North England, (£m, 2005-06 prices)

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	152.4	150.7	954.7	944.0
Workload (per metre for mains and per service)	47.4	47.4	15,845.3	15,845.3
Gross cost (£m's)	7.2	7.1	15.1	15.0
Contributions (£m's)	5.1	5.6	7.7	7.9
Net Cost (£m's)	2.1	1.5	7.4	7.0

Table A8.23 Forecast capital expenditure for mains reinforcement, North England, (£m, 2005-06 prices)

Mains Reinforcement 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per Km of main)	198.3	198.3
Workload (Km's)	25.0	25.0
Gross cost (£m's)	5.0	5.0
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	5.0	5.0

Table A8.23 Forecast capital expenditure for governors, North England, (£m, 2005-06 prices)

Governors 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£000's per unit)	21.9	21.9
Workload (units)	58.0	58.0
Gross cost (£m's)	1.3	1.3
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	1.3	1.3

Table A8.24a Forecast service replacement expenditure- domestic, North England, (£m, 2005-06 prices)

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	27,156	441.7	12.0	27,156	441.7	12.0
Relaid services not associated with mains replacement (bulk relays)	100	442.5	0.0	100	442.5	0.0
Services relaid after escape	5,883	412.3	2.4	5,883	412.3	2.4
Service test & transfer to new or other main	16,540	227.7	3.8	16,540	227.7	3.8
Reposition domestic meter - service relays	1,524	1,857.4	2.8	1,524	1,857.4	2.8
Purge & relight after domestic service work	49,427	18.5	0.9	49,427	18.5	0.9
Service relay domestic meterwork	0	0.0	0.0	0	0.0	0.0
Other domestic services	416	411.8	0.2	416	411.8	0.2
Total domestic services	**101,046**	**219.2**	**22.1**	**101,046**	**219.2**	**22.1**

Table A8.24b Forecast service replacement expenditure- non domestic, North England, (£m, 2005-06 prices)

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	379	1,392.0	0.5	379	1,392.0	0.5
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**379**	**1,392.0**	**0.5**	**379**	**1,392.0**	**0.5**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	0	0.0	0.0	0	0.0	0.0
Renew service connections	0	0.0	0.0	0	0.0	0.0
Total	**0**	**0.0**	**0.0**	**0**	**0.0**	**0.0**

Table A8.25 Forecast mains replacement expenditure, North England, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	105.2	54.3	5.7
4-5"	354.3	58.7	20.8
6-7"	70.9	82.6	5.9
8-9"	12.3	126.2	1.6
10-12"	17.3	210.3	3.6
>12"	13.5	298.9	4.0
Total	**573.5**		**41.6**

Scotia Gas Networks

Scotland

Table A8.26 Forecast capital expenditure for connections, Scotland, (£m, 2005-06 prices)

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	71.5	71.5	986.7	986.7
Workload (per metre for mains and per service)	76.6	76.6	19,951.0	19,951.0
Gross cost (£m's)	5.5	5.5	19.7	19.7
Contributions (£m's)	2.7	4.3	7.9	8.5
Net Cost (£m's)	2.7	1.1	11.7	11.2

Table A8.27 Forecast capital for mains reinforcement, Scotland, (£m, 2005-06 prices)

Mains Reinforcement 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per Km of main)	191.9	191.9
Workload (Km's)	39.5	39.5
Gross cost (£m's)	7.6	7.6
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	7.6	7.6

Table A8.28 Forecast capital expenditure for governors, Scotland, (£m, 2005-06 prices)

Governors 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£000's per unit)	91.5	86.0
Workload (units)	23.6	23.6
Gross cost (£m's)	2.2	2.0
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	2.2	2.0

Table A8.29a Forecast service replacement expenditure- domestic, Scotland, (£m, 2005-06 prices)

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	21,795	588.1	12.8	14,040	525.5	7.4
Relaid services not associated with mains replacement (bulk relays)	200	379.2	0.1	200	352.6	0.1
Services relaid after escape	2,469	1,147.4	2.8	2,469	1,067.0	2.6
Service test & transfer to new or other main	9,796	351.4	3.4	17,551	374.8	6.6
Reposition domestic meter - service relays	402	565.8	0.2	402	526.2	0.2
Purge & relight after domestic service work	34,662	0.0	0.0	34,662	0.0	0.0
Service relay domestic meterwork	955	1,727.5	1.6	955	1,606.6	1.5
Other domestic services	0	0.0	0.0	0	0.0	0.0
Total domestic services	**70,279**	**299.4**	**21.0**	**70,279**	**261.9**	**18.4**

Table A8.29b Forecast service replacement expenditure- non domestic, Scotland, (£m, 2005-06 prices)

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	326	675.9	0.2	326	628.6	0.2
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**326**	**675.9**	**0.2**	**326**	**628.6**	**0.2**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	13	189,561.0	2.5	13	189,561.0	2.5
Renew service connections	13	63,187.0	0.8	13	63,187.0	0.8
Total	**26**	**126,374.0**	**3.3**	**26**	**126,374.0**	**3.3**

Table A8.30 Forecast mains replacement expenditure, Scotland, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	53.1	71.3	3.8
4-5"	147.6	70.7	10.4
6-7"	62.7	75.6	4.7
8-9"	21.4	219.3	4.7
10-12"	15.2	288.7	4.4
>12"	13.1	267.5	3.5
Total	**313.2**		**31.6**

Southern

Table A8.31 Forecast capital expenditure for connections, Southern, (£m, 2005-06 prices)

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	66.6	66.6	954.7	954.7
Workload (per metre for mains and per service)	94.9	94.9	23,912.0	23,912.0
Gross cost (£m's)	6.3	6.3	22.8	22.8
Contributions (£m's)	4.4	5.1	10.6	11.1
Net Cost (£m's)	1.9	1.2	12.3	11.7

Table A8.32 Forecast capital for mains reinforcement, Southern, (£m, 2005-06 prices)

Mains Reinforcement 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per Km of main)	200.9	200.9
Workload (Km's)	70.3	70.3
Gross cost (£m's)	14.1	14.1
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	14.1	14.1

Table A8.33 Forecast capital expenditure for governors, Southern, (£m, 2005-06 prices)

Governors 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£000's per unit)	108.5	102.7
Workload (units)	40.9	40.9
Gross cost (£m's)	4.4	4.2
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	4.4	4.2

Table A8.34a Forecast service replacement expenditure- domestic, Southern, (£m, 2005-06 prices)

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	37,354	619.6	23.1	37,354	582.4	21.8
Relaid services not associated with mains replacement (bulk relays)	0	0.0	0.0	0	0.0	0.0
Services relaid after escape	9,314	744.7	6.9	9,314	700.0	6.5
Service test & transfer to new or other main	22,919	404.3	9.3	22,919	380.0	8.7
Reposition domestic meter - service relays	0	0.0	0.0	0	0.0	0.0
Purge & relight after domestic service work	72,394	25.1	1.8	72,394	23.6	1.7
Service relay domestic meterwork	2,807	2,320.0	6.5	2,807	2,180.8	6.1
Other domestic services	0	0.0	0.0	0	0.0	0.0
Total domestic services	**144,788**	**329.3**	**47.7**	**144,788**	**309.5**	**44.8**

Table A8.34b Forecast service replacement expenditure- non domestic, Southern, (£m, 2005-06 prices)

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	1,986	2,018.1	4.0	500	1,897.0	0.9
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**1,986**	**2,018.1**	**4.0**	**500**	**1,897.0**	**0.9**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	47	189,164.6	8.9	47	189,164.6	8.9
Renew service connections	47	63,054.9	3.0	47	63,054.9	3.0
Total	**94**	**126,109.8**	**11.9**	**94**	**126,109.8**	**11.9**

Table A8.35 Forecast mains replacement expenditure, Southern, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	25.0	80.9	2.0
4-5"	433.8	77.8	33.7
6-7"	108.2	77.4	8.4
8-9"	30.6	178.5	5.5
10-12"	22.5	265.4	6.0
>12"	33.4	265.4	8.9
Total	**653.4**		**64.4**

Wales and West Utilities

Wales and West

Table A8.36 Forecast capital expenditure for connections, Wales and West, (£m, 2005-06 prices)

	Mains Connections		Service Connections	
Connections 2007/08	**GDN Forecast**	**Ofgem View**	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per metre for mains and £'s per service)	114.5	114.5	903.5	903.5
Workload (per metre for mains and per service)	58.5	58.5	15,384.0	15,384.0
Gross cost (£m's)	6.7	6.7	13.9	13.9
Contributions (£m's)	4.3	5.2	8.9	9.1
Net Cost (£m's)	2.4	1.5	5.0	4.8

Table A8.37 Forecast capital for mains reinforcement, Wales and West, (£m, 2005-06 prices)

Mains Reinforcement 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£'s per Km of main)	180.6	180.6
Workload (Km's)	21.0	21.0
Gross cost (£m's)	3.8	3.8
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	3.8	3.8

Table A8.38 Forecast capital expenditure for governors, Wales and West, (£m, 2005-06 prices)

Governors 2007/08	**GDN Forecast**	**Ofgem View**
Unit cost (£000's per unit)	4.5	4.5
Workload (units)	530.0	530.0
Gross cost (£m's)	2.4	2.4
Contributions (£m's)	0.0	0.0
Net Cost (£m's)	2.4	2.4

Table A8.39a Forecast service replacement expenditure- domestic, Wales and West, (£m, 2005-06 prices)[10]

Replacement Services- domestic 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services-domestic						
Relaid services associated with mains replacement	24,746	497.1	12.3	23,261	461.7	10.7
Relaid services not associated with mains replacement (bulk relays)	0	0.0	0.0	0	0.0	0.0
Services relaid after escape	3,575	531.5	1.9	3,575	491.1	1.8
Service test & transfer to new or other main	23,472	298.2	7.0	22,064	277.1	6.1
Reposition domestic meter - service relays	0	0.0	0.0	0	0.0	0.0
Purge & relight after domestic service work	53,987	27.8	1.5	51,094	25.8	1.3
Service relay domestic meterwork	0	0.0	0.0	0	0.0	0.0
Other domestic services	1,844	921.9	1.7	1,844	851.9	1.6
Total domestic services	**107,974**	**226.0**	**24.4**	**102,188**	**210.4**	**21.5**

[10] The GDN forecast for all service repex includes TMA costs which of £1.2m for 2007-08. Therefore to reconcile these numbers with those in table 3.6, £1.2m needs to be removed from total service repex.

Table A8.39b Forecast service replacement expenditure- non domestic, Wales and West, (£m, 2005-06 prices)[11]

Replacement Services- non domestic and risers 2007/08	GDN forecast			Ofgem forecast		
	Vol	Unit Cost	Total	Vol	Unit Cost	Total
	No.	£/unit	£m	No.	£/unit	£m
Replacement Services- non domestic						
Non-domestic service replacement	526	760.5	0.4	526	702.7	0.4
Non-domestic meterwork ass. replacement	0	0.0	0.0	0	0.0	0.0
Other non-domestic service work	0	0.0	0.0	0	0.0	0.0
Total non-domestic Services	**526**	**760.5**	**0.4**	**526**	**702.7**	**0.4**
Multiple occupancy buildings/riser costs						
Renew risers (>40m length) to multiple occupancy buildings	0	0.0	0.0	0	0.0	0.0
Renew service connections	0	0.0	0.0	0	0.0	0.0
Total	**0**	**0.0**	**0.0**	**0**	**0.0**	**0.0**

[11] The GDN forecasts for service repex includes TMA costs which is assumed £1.2m for 2007/08. Therefore to reconcile these numbers with those in table 3.6, £1.2m needs to be removed from total service repex.

Table A8.40 Forecast mains replacement expenditure, Wales and West, (£m, 2005-06 prices)

2007/08			
Diameter of Mains Abandoned	**Length of mains actually abandoned (km)**	**Unit cost of abandonment (£/m)**	**Matrix Cost (£m)**
</=3"	75.6	63.0	4.8
4-5"	229.8	63.3	14.5
6-7"	68.1	65.2	4.4
8-9"	15.0	92.1	1.4
10-12"	14.0	206.8	2.9
>12"	11.3	218.5	2.5
Total	**413.8**		**30.5**

Appendix 9 – Impact assessment on the price control treatment of shrinkage

Objectives

1.1. As the regulatory and commercial environment faced by GDNs changes over time, one of our key objectives for GDPCR is to find long-term sustainable solutions for new developments and regulatory problems. Changes in the market price of gas since the time of the last price control review have led to upward pressure on shrinkage costs and could result in a disproportionate effect on the profitability of GDNs.

1.2. The objective of this impact assessment is to further Ofgem's principal objective to protect the interests of consumers. It also helps Ofgem secure that:

- licence holders are able to finance their authorised activities, and
- there is a diverse and viable long-term energy supply.

1.1. This impact assessment fulfils this objective by exploring options[12] for the allocation of risk associated with changes in shrinkage gas prices, while ensuring consumers are not unduly affected.

1.2. The Authority's principal objective and statutory duties are set out in more detail in Attachment 2.

Key issues

1.3. Shrinkage gas is gas lost from the distribution system due to leakage, theft and gas used for operational purposes. It makes up about 0.7 per cent of annual throughput of which 90 per cent relates to leakage. The GDNs are forecasting flat leakage volumes due to two opposing effects. The mains replacement programme is helping to reduce leakage volumes but at the same time average system pressures (ASPs) are forecast to increase which implies more leakage.

1.4. Shrinkage gas costs constitute a portion of the main operating expenditure allowance under the current price control. In particular, the shrinkage portion of the allowance is based on a target shrinkage factor (expressed as a proportion of throughput) and a fixed price of gas. This provides strong incentives for GDNs to reduce costs by decreasing shrinkage volumes and purchasing gas efficiently but leaves them fully exposed to price risk unless they are able hedge against it at a reasonable price.

[12] These options were set out in Gas Distribution Price Control Second Consultation Document, 123a/06, July 2006, paragraphs 4.18 - 4.19.

Price and volume risk

1.5. There are two main risks faced by GDN owners with respect to shrinkage gas:

- Volume risk: There are two types of volume risk which are throughput volume risk and shrinkage volume risk. The former includes risk associated with changes in throughput and the latter includes risk associated with leakage, theft and own use of gas as a percentage of throughput. Shrinkage gas volumes are within the control of GDNs due to the mains replacement programme, pressure at which the network is operated, regular maintenance of pipes and gas conditioning, therefore GDN owners should bear this risk, and
- Price risk: This is a result of changes in the wholesale market price of gas which are beyond the control of GDNs, and can have a disproportionate effect on their overall operating costs. GDNs however may be able to mitigate some of the risk of future price increases through hedging.

Changes in wholesale gas prices

1.6. Since the time of the last price control review, the UK wholesale gas market has experienced increases in prices, which have been fluctuating widely. This is shown in Figure A9.1. The gas price for the shrinkage allowance in the current price control was fixed at about 21 pence per therm. The average one year forward quarterly gas price for 2006-07 is 56.6 pence per therm using data from Heren. Accordingly, it is necessary to reconsider the appropriateness of the risk apportioned to GDNs.

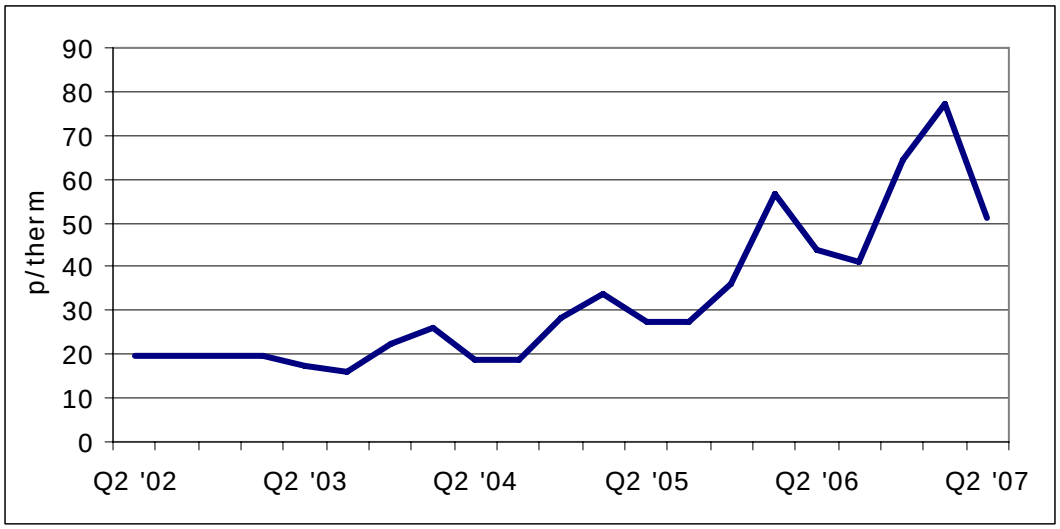
1.7. To gauge price volatility over 2002 to 2007, we have calculated the standard deviation of wholesale gas prices for each year as set out in Table A9.1. Based on day ahead price data from Heren, it appears that price volatility steadily increased from 2002-03 to 2005-06 and decreased in 2006-07 (up to 25 August 2006). The fall in volatility in 2006-07 may reflect the fact that it does not include price data from colder months in quarters 3 and 4.

Table A9.1 - Day ahead wholesale gas price volatility over 2002 to 2007, pence/therm

	2002-03	2003-04	2004-05	2005-06	2006-07*
Standard deviation	5.7	6.7	11.0	28.6	5.9

* Up to 25 August 2006.

Figure A9.1 – Wholesale gas prices (average one year forward quarterly)



Source: Heren

1.8. To provide further perspective on the impact of the price increases on GDNs since the time of the last price control review, we have conducted a sensitivity analysis comparing the overspend to GDN profits. The results show that the total estimated GDN overspend of approximately £125 million has reduced overall profitability by 20% over the period 2002-07.

Shrinkage measurement

1.9. As discussed in the second consultation document, there is scope for further consideration of the arrangements for measuring shrinkage gas.[13] If industry proposes and implements a change to the arrangements, it will be necessary for us to update the target shrinkage factor under all of the options (which are discussed below) in order to ensure they effectively remain at an equivalent level under the new measurement system.

Options

"Do minimum" option – Keep current arrangements but adjust allowances

1.10. Since we need to set a price control for 2007-08, there is no "do nothing" option. We have considered a "do minimum" option, which consists of retaining the existing shrinkage gas arrangements with an adjustment to the allowances for 2007-08 to reflect the increase in gas prices compared with the price assumed in setting the current control. This would address the recent development of higher wholesale gas prices but would leave GDNs fully exposed to price risk (although they may be

[13] Gas Distribution Price Control Second Consultation Document, 123a/06, July 2006, paragraph 4.14.

able to mitigate this through hedging) and residual volume risk. This option also exposes customers to the risk that Ofgem overestimates gas prices.

1.11. Given the significant impact of shrinkage costs on the GDNs, we do not consider that retaining the level of shrinkage allowance set at the last price control review is consistent with our statutory duty to secure that licence holders are able to finance their authorised activities.

Option 1 – Allowed shrinkage factors & pass through market price

1.12. Under this option, GDNs would be given an incentive to manage shrinkage volumes by continuing to expose them to volume risk, subject to the caveat discussed in paragraph 1.13 below. Price risk would be addressed through one of the following mechanisms:

- Option 1a – base allowances on a pre-defined index of market prices. Under this option, a shrinkage allowance would be calculated annually at the end of each financial year based on the shrinkage factor, actual throughput and a gas cost reference price (GCRP) per unit of energy that would be applied to the volumes. The GCRP would be an index of forward prices flow weighted to take into account higher throughput in winter months, or
- Option 1b – base allowances on benchmarking the GDNs' costs of procuring shrinkage gas. The shrinkage allowance would also be calculated at the end of each financial year and would be based on the shrinkage factor, actual throughput and the benchmark price that would be applied to the volumes.

1.13. As total throughput depends on consumers' gas consumption (which in turn is strongly influenced by the weather), GDNs are not well placed to manage throughput risk. We propose that under Options 1a and 1b, risk associated with changes in total throughput would be passed on to consumers and not be borne by GDNs.

1.14. The second consultation document discussed a further option where the GDNs' obligation to purchase shrinkage gas is removed and a separate incentive is introduced. Some respondents considered this option to be conceptually appealing but acknowledged its impracticality in the short term. Having considered respondents' views, we have decided not to carry out a cost benefit analysis of this option because:

- it is unlikely to create significantly stronger incentives than the other options for GDNs to manage losses (although this depends on the strength of the incentive that is implemented), and
- it would be problematic to implement for the one year control because it would require significant changes from the current arrangements which would not be achievable in the short term.

Competition assessment

Wholesale market

1.15. There are no expected impacts of the "do minimum" option, Options 1a or 1b on competition in the wholesale market as the amount of shrinkage gas purchased by GDNs is small relative to total gas trades.

Supply market

1.16. None of the options are expected to have an impact on competition in the supply market.

Comparative competition between GDNs

1.17. The "do minimum" option would have no effect on comparative competition between GDNs as they would continue to be incentivised in the same way. Similarly, in Option 1a, allowances are based on the same pre-defined index of market prices for each GDN so comparative competition would be unaffected between GDNs. Finally, Option 1b encourages competition among GDNs as it rewards relatively efficient GDNs (in terms of purchasing shrinkage gas) and penalises relatively inefficient ones. On the downside, there is a risk of GDNs adopting similar purchasing strategies with a common objective in mind, which is discussed below.

Impacts, costs and benefits

Environment

1.18. The options listed above principally address the increased price risk that GDNs are exposed to when procuring shrinkage gas. We are aware that the total volume of gas lost through leakage pollutes the land, groundwater and air, contributing to greenhouse gas and methane emissions. Each of our options incentivises GDNs to manage shrinkage volumes in addition to shrinkage gas costs. Any mechanism which incentivises GDNs to control shrinkage volumes is environmentally friendly but relative to the "do minimum" option, Options 1a and 1b have a neutral effect on the environment.

1.19. Options 1a and 1b differ from the "do minimum" option in that they remove throughput-related volume risk from GDNs. To the extent that throughput risk is beyond the control of GDNs, the removal of this risk does not affect the environment.

Security of supply

1.20. The options being assessed in this document primarily differ in the approach to the management of price risk which relates to Ofgem's duty to ensure GDNs are able to finance their authorised activities. Decreasing shrinkage volumes would help to achieve security of supply. As stated above, all options incentivise GDNs to manage shrinkage volumes.

1.21. Any mechanism which incentivises GDNs to control shrinkage volumes helps security of supply but relative to the "do minimum" option, Options 1a and 1b have a neutral effect on the security of supply.

Health and safety issues

1.22. Lowering shrinkage volumes would alleviate health and safety concerns that indirectly result from leakage through the pollutants emitted. Again we have been careful to ensure that our options address this. We note that the mains replacement incentive scheme has contributed to reducing shrinkage volumes as it consists of replacing iron pipes with polyethylene (PE) pipes which have lower rates of leakage.

1.23. Any mechanism which incentivises GDNs to control shrinkage volumes promotes health and safety but relative to the "do minimum" option, Options 1a and 1b have a neutral effect on health and safety issues.

Distributional effects

1.24. Distributional effects between different consumer groups should not arise as a result of implementing any of the options. If there are any increases or decreases in costs, they will be spread across all consumers equally.

1.25. As Options 1a and 1b arguably provide a more appropriate allocation of risk between consumers and GDNs, in the long run, consumer bills could decrease if either option is adopted due to the effect on the GDNs' cost of capital (see paragraph 1.34). In the short run, GDNs' shrinkage allowances could be expected to rise since the current price control shrinkage allowances do not provide sufficient funding to cover GDNs' costs.

Small businesses

1.26. As none of the GDNs are small businesses, we do not expect a disproportionate effect on any one of them due to their business size. Other small businesses may be indirectly affected through the impact of the proposals on gas transportation charges. As discussed above we expect Options 1a and 1b to reduce gas transportation charges in the long run.

Risks and unintended consequences

1.27. Although the "do minimum" option would address the recent development of higher wholesale gas prices, it would leave GDNs fully exposed to price risk and residual volume risk. If we overestimated allowances, GDNs would make profits and consumers would overpay. Symmetrically, if we underestimated allowances, GDNs would make losses as is the case in the current price control period.

1.28. We understand that the market in hedging gas prices several years forward is limited at present. Under the "do minimum" option, GDNs may be unable to remove the volatility of the price they pay for shrinkage gas in the later years of a standard five year price control, as suitable hedging products may be unavailable, or, to the extent that they are available, this is likely to involve the GDN paying a premium. Under Option 1a, GDNs will be able to hedge at the chosen market index should they wish their revenues to match their expenditure on shrinkage gas.

1.29. A risk associated with Option 1a could arise if we select a market price index that is not representative of overall market trends. If the index is too challenging, GDNs could suffer losses but if it is too soft, consumers could bear excessive costs associated with shrinkage. There is also the uncertainty associated with longer term market indices. For example, a year ahead index is likely to be riskier than a month ahead index in terms of following actual market trends.

1.30. Option 1b removes the need to set shrinkage allowances on the basis of an Ofgem decision on gas prices but it gives rise to its own risks. GDNs could adopt a similar purchasing strategy and maintain their costs at an unnecessarily high level so that they are permitted to recover a correspondingly higher price. An additional issue relating to Option 1b is that benchmarking may not take into account company-specific circumstances which impact on GDNs' abilities to purchase gas (e.g. commercial affiliates which may give them an undue advantage in terms of procuring gas) as well as differences in weather conditions and shrinkage volumes.

Costs and benefits

1.31. In this section, we compare the quantitative and qualitative benefits and costs associated with Options 1a and 1b compared to the "do minimum" option from the perspective of the consumers and GDNs. The benefits and costs are judged based on five criteria:

- incentives to manage gas losses,
- reducing GDNs' costs by addressing price risk,
- incentives to purchase gas efficiently,
- sharing efficiency savings with consumers, and
- ease of implementation.

Incentive to manage gas losses

1.32. The incentive to manage gas losses depends on the actual price paid for shrinkage gas. As the only factor that GDNs can influence is shrinkage as a percentage of actual throughput under all of the options, the benefit of reducing shrinkage volumes by one therm is the actual price paid for one therm of gas. Consequently, the incentive to manage gas losses is the same under the "do minimum" option and Options 1a and 1b.

Reducing GDNs' costs by addressing price risk

1.33. Options 1a and 1b address price risk in setting shrinkage allowances, in turn, reducing the overall risk to which GDNs are exposed. Adopting one of these options would help to maintain GDNs' stable, low risk character. The "do minimum" option, under which GDNs would remain exposed to price fluctuations, would be likely to deter investors seeking predictable returns, or drive them to seek increased premiums to compensate for the increased risk. The "do minimum" option would also have implications for financing these businesses, pushing GDNs towards structures with a higher proportion of equity, which is generally more expensive than debt.

1.34. Adopting Option 1a or 1b would therefore be likely to reduce the returns required by investors in GDNs relative to the "do minimum" option, and benefit consumers who would need to fund a lower cost of capital. We have estimated this benefit by assessing the impact of removing GDNs' exposure to fluctuations in shrinkage gas prices on the volatility of their returns. Over the period 2002-07, shrinkage gas accounted for around 3% of GDNs' expenditure. For simplicity, we have assumed that a 3% reduction in volatility translates to a 3% reduction in GDNs' equity premium. This equates to a cost of capital impact of -0.04% under our assumptions, equivalent to an NPV benefit to consumers of around £24 million over the period 2007-13 (2005-06 prices)[14]. Table A9.2 compares the effect of addressing price risk under the various options.

Table A9.2 - Comparison of consumer benefit of addressing price risk (£m, 2005-06 prices)[15]

	"Do minimum" option	Option 1a	Option 1b
NPV of addressing price risk	0	24	24

[14] This figure should be treated with caution as the impact of individual factors on the cost of capital is very hard to pin down, and as the proportion of shrinkage to total costs is likely to fluctuate.
[15] See footnote 14.

Incentive to purchase gas efficiently

1.35. We have considered how to quantify the differences between the "do minimum" option and Options 1a and 1b in order to assess the extent to which each option generates incentives to purchase gas efficiently.

1.36. Under the "do minimum" option and Option 1a, allowances are based on Ofgem's assessment of a reasonable estimate of gas prices. The key difference is that the "do minimum" option is based on a fixed gas price, whereas Option 1a is based on a market index. The strength of the incentive to purchase gas efficiently is the same under the "do minimum" option and Option 1a. The difference is that Option 1a is far more likely to reflect actual market outcomes and therefore reduce the risk that shrinkage allowances are based on a price that is either too high or too low resulting in GDN windfall gains or losses. GDNs may be unable to mitigate this risk under the "do minimum" option in the later years of a standard five year price control, as suitable hedging products may be unavailable, or, to the extent that they are available, this is likely to involve the GDN paying a premium

1.37. For the purposes of this section on incentives to purchase gas efficiently, we have assumed that the actual (or ex-post) price variances under the "do minimum" option will average out and that Ofgem's estimate of the gas price reflects the outturn price. As a result, the quantitative outcome under the "do minimum" option is the same as under Option 1a. We note that there is still a significant risk in practice that the allowed and actual costs of shrinkage gas will differ significantly under the "do minimum" option.

1.38. If the benchmark price of shrinkage gas under Option 1b is based on the average price paid by GDNs the incentive to purchase gas efficiently is weakened compared with other options because a lower actual price will result in a lower allowed price. Further if GDNs collectively adopt inefficient purchasing strategies, shrinkage allowances would increase (as they are based on a benchmark of GDN costs) and the excess costs associated with the inefficient purchasing strategies would be borne by consumers.

1.39. In order to consider the potential impact of Option 1b, we have calculated benchmarks based on the GDNs' forecasts of 2007-08 wholesale gas market prices, as set out in their Business Plan Questionnaire responses in the absence of any evidence of the impact of a benchmarking regime on gas networks' shrinkage gas purchasing strategies.

1.40. Table A9.3 sets out total GDN shrinkage allowances for 2007-08 using the three options. In each case, we adopted the GDNs' own forecasts of throughput levels (GWh) and shrinkage factors for 2007-08.

Table A9.3 - Comparison of total GDN shrinkage allowances, £m, 2005-06 prices

	"Do minimum" option†	Option 1a†	Option 1b	
			Lowest GDN*	Ave. GDN**
Allowance	92	92	101.9	103.9

† Based on an assumed gas price of the 2006-07 forward quarterly gas price for 2007-08 (averaged between 1 April 2006 and 1 August 2006)
* Based on the lowest GDN forecast of wholesale market gas prices
** Based on the average GDN forecast of wholesale market gas prices

1.41. Relative to the "do minimum" option, customers pay the same cost of shrinkage gas under Option 1a but a higher cost under Option 1b.

1.42. These results are subject to a number of important caveats:

- actual allowances would depend on out-turn throughput and published forward prices indices, and
- forecast gas prices depend on when the forecast is made.
-

1.43. In practice there may be significantly different outcomes associated with Option 1b because:

- the BPQ process gives rise to its own set of incentives, and
- previous studies by Ofgem suggest that comparative competition (such as benchmarking) may create incentives to reduce costs.[16] The figures in Table A8.4 do not include such efficiency savings.

Sharing of efficiency savings in price control period

1.44. Under Option 1a, there would be no change to the sharing of efficiency savings with consumers relative to the "do minimum" option, unless sharing factors, caps and collars are used on under or over recoveries of allowances. Given that they reduce incentives to procure gas efficiently, we do not propose to adopt sharing factors, caps and collars under Option 1a or 1b. We note this approach differs from gas transmission, where sharing factors, caps and collars apply. We consider that this difference is appropriate because distribution shrinkage volumes are more predictable than transmission shrinkage volumes which are largely driven by compressor usage.

[16] For instance, the base case of the GDN sales cost benefit analysis assumed that an additional 1.13% p.a. in operating efficiencies would be achievable if three new comparators were created. National Grid Transco – Potential sale of gas distribution network businesses, Final Regulatory Impact Assessment Appendices, November 2004, 22/04b.

1.45. Under Option 1b, if GDNs adopt efficient purchasing strategies that allow them to procure gas more cheaply than the market average price then shrinkage allowances adjust downwards and customers benefit. However, as noted above, if GDNs collectively adopt purchasing strategies that result in above market costs, customers will bear the excess costs. With only a small number of GDN groups there is a greater risk that this could happen.

Ease of implementation/enforcement

1.46. Under the "do minimum" option and Option 1a, the target price or target market index that the GDNs are aiming to outperform is known in advance. Compared to the "do minimum" option, Option 1a is slightly easier to implement since it is easier to make a decision on a market index rather than a gas price. If they choose, GDNs can adopt a purchasing strategy that is directly linked to their allowance. Under Option 1b, the benchmark target is more uncertain as it is depends on the purchasing strategies of other GDNs. Further, some GDNs will receive a shrinkage allowance that is lower than their costs.

1.47. Consequently, GDNs may decide to devote more resources to procuring gas efficiently under Option 1b with the effect that administrative costs would be higher. These additional administrative costs may be outweighed by reductions in the cost of procuring shrinkage gas.

1.48. Once the price is set under the "do minimum" option or the market index is chosen under Option 1a, we would collect and analyse GDNs' purchases for monitoring purposes. Option 1b would also require collecting, analysing, monitoring and auditing GDNs' purchases on an ongoing basis but this would be used to set the benchmark, which would need to be regularly updated. This would require more work and it would give rise to additional compliance costs and more regulatory involvement.

Conclusion

1.49. Table A9.4 summarises the impacts of Options 1a and 1b relative to the "do minimum" option. Our initial proposal is that Option 1a (i.e. basing allowances on a pre-defined index of market prices) is the most appropriate way forward.

Table A9.4 – Impacts of Options 1a and 1b relative to the "do minimum" option

Criteria	Option 1a (market index)		Option 1b (benchmarking)	
	Impact	✓ , ×, or -	Impact	✓ , ×, or -
Incentive to manage gas losses	The benefit of reducing shrinkage by one therm equals the actual price paid for one therm. Consequently the incentive to manage gas losses is the same under the "do minimum" option.	-	The benefit of reducing shrinkage by one therm equals the actual price for one them. Consequently the incentive to manage gas losses is the same under the "do minimum" option.	-
Overall impact		**-**		**-**
Reducing GDNs' costs by addressing price risk	Addressing price risk reduces the risk faced by investors and thus reduces GDNs' cost of capital. Under our assumptions, we estimate that this would result in a NPV benefit of £24 million to consumers over 2007-13 (2005-06 prices).	✓	Addressing price risk reduces the risk faced by investors and thus reduces GDNs' cost of capital. Under our assumptions, we estimate that this would result in a NPV benefit of £24 million to consumers over 2007-13 (2005-06 prices).	✓
Overall impact		✓		✓
Incentive to purchase gas efficiently	The strength of the incentive is the same under the "do minimum" option & Option 1a. The difference is that under Option 1a there is lower risk of the regulatory target diverging from the market outcome as it is based on a market index. GDNs may be unable to mitigate this risk under the "do minimum" option in the later years of a standard five year price control, as suitable hedging products may be unavailable, or, to the extent that they are available, this is likely to involve the GDN paying a premium. We have assumed that the cost of shrinkage gas for	- -	The incentive is weaker under Option 1b if an average benchmark is used as a lower actual price implies a lower allowed price of gas. Risk that GDNs collectively adopt inefficient purchasing strategies and the excess costs would be borne by consumers Based on currently available information (which is subject to important caveats), there could be additional consumer costs of £9.9 million if the benchmark is based on lowest GDN price & £11.9 million if it is based on average GDN price.	 ×

Criteria	Option 1a (market index)		Option 1b (benchmarking)	
	Impact	✓ , ×, or -	Impact	✓ , ×, or -
	consumers is the same as under the "do minimum" option, but as GDNs' overall risk is reduced this will result in a lower cost of capital and lower overall costs for consumers.		associated with this option.	
Overall impact		**-**		**×**
Sharing of efficiency savings	Since we do not propose using sharing factors, caps and collars, we expect no change to the sharing of efficiency savings.	-	Since we do not propose using sharing factors, caps and collars, we expect no change to the sharing of efficiency savings. There exists opportunity for consumers to benefit if GDNs purchase gas at lower cost than the average market price. There is also the risk that consumers pay more if GDNs purchase gas at a higher cost than the average market price.	- ✓ ×
Overall impact		**-**		**-**
Ease of implementation	Option 1a is slightly easier to implement than "do minimum" option as it involves a decision regarding the choice of a market index rather than a gas price.	✓	Allowances are uncertain due to Option 1b's moving target. This option requires more GDN time & analysis, a rigorous compliance & monitoring regime, and more regulatory involvement & judgement. Some GDNs will receive a shrinkage allowance that is lower than their costs.	× ××× ×
Overall impact		✓		**××××**
Total impact		✓✓		**××××**

Appendix 10 – Licence modifications

1.1. This appendix sets out the provisions of the licence that require changing and indicates the scope of the changes. The changes that have been identified are:

- inserting a shrinkage incentive mechanism,
- setting a price control allowance for 2007-08, as the allowance will not follow from the existing RPI-X formula (instead it will be based on average actual opex for the last two years, with specific allowances for shrinkage and pensions, as well as the effect of an updated RAV),
- updating the mains replacement incentive parameters in Special Condition E2B (Restriction of revenue in respect of the distribution network transportation activity) Pt 1b (8)(2) & (3),
- updating certain constants in respect of DN exit capacity incentive revenue in Special Condition E2B Part 1b (8)(5),
- omitting Special Condition E11 as it has lapsed, and
- amending the definition of Distribution Network prescribed rates in the principal formula in E2B Part 1b (8)(1).

1.2. All of these changes affect special conditions only, so they need to be agreed by each individual GDN (although we will work with the GDNs jointly for practical reasons).

1.3. For the avoidance of doubt, although we modify serveral conditions when we set a new price control, we do not generally draft them to expire after the end of the control period. Therefore conditions that are not modified continue to apply indefinitely unless they contain a specific expiry date.

Shrinkage incentive

1.4. Appendix 9 describes three options for the price control treatment of shrinkage. In the event that either of Option 1a or Option 1b is adopted, three licence conditions are likely to be affected:

- Special Condition E2B (which outlines the various price control formulae) will require a new part to introduce the new shrinkage incentive,
- Special Condition E6 will require amendment to collect relevant information on the shrinkage incentive, and
- Special Condition E2A will require amendment to insert any definitions required in respect of the shrinkage incentive.

1.5. In the event that the "do minimum" option is adopted, it will be necessary to ensure that our revised allowances are calculated using the updated shrinkage assumptions.

Setting a price control allowance

1.6. Special Condition E2B Part 1b (8)(1) contains the principal formula for calculating the price control allowed revenue:

DNMRt = DNZt + DNFt + DNExt + DNIAEt - DNMRAt - DNKt

1.7. DNZt is the principal formula term for the RPI-X element (plus the volume driver) and is derived from the previous year's value. For the one year control this will not be applicable. The simplest way to replace it for a single year would be to replace the RPI-X element with a numerical value. This will then of course need to be revised again within the context of an RPI-X element for the main control.

1.8. DNFt is the principal formula term for pass-through items. Currently these are prescribed rates (see below) and the licence fee, but we are also adding an NTS pensions charge. This charge will need to be appropriately defined in E2A.

Updating the mains replacement incentive parameters

1.9. DNMRAt is the principal formula term for the mains replacement incentive and is calculated in E2B 1b (8) (3) from a formula that includes parameters for each year of the price control for each of:

- price control mains allowance, and
- specific matrix costs for each diameter band.

1.10. Currently no parameters are specified for 2007-08. Detailed input on the appropriate parameters for each DN will be calculated by the costs and output team.

Updating DN exit capacity incentive

1.11. DNExt is the principal formula term for the DN exit capacity incentive and is calculated in E2B 1b (8) (5b) from a formula that includes parameters for each year of the price control for each of:

- initial volume allocation of NTS exit capacity in GWh/d,
- initial volume allocation of NTS exit flow flexibility in GWh/d, and
- incentive target in respect of curtailment of rights to off-take gas on plus 15 curtailment days

1.12. We will need to confirm if the parameters for 2007-08 need revising in the light of changes to the interruptions regime that apply from 1 April 2007 and if so, what is entailed.

Deleting Special Condition E11

1.13. This condition (amendment to credit rating of the licensee) was inserted before GDN sales to manage the period between hive-down and share sale, and ceased to have effect after the sales had taken place. Therefore it should be omitted. The requirement in SSC A38 to maintain a credit rating remains for all GDNs and the NTS.

Amending the definition of Distribution Network prescribed rates

1.14. The definition of Distribution Network prescribed Rates (in E2B 1b (8) (1)) covers a number of possible allocations of rates between the NTS and the GDNs and is convoluted. It generates some sixteen definitions in E2A –all deriving from the need to define the NTS transportation owner activity. Since WWU, SGN and NGN are all in separate legal entities and receive separate ratings assessments, this definition can be simplified greatly in their licences, including by removing the phrase “NTS transportation owner activity” and thereby taking sixteen definitions out of E2A. We are also reviewing whether this area can be simplified for the NGG licence, too.

Licence drafting process

1.15. We are in the process of producing the first draft of the updated licence conditions. This will be circulated to the GDNs in advance of a working group meeting in October. We will make amendments as necessary and circulate again. The agreed drafts will be included as an appendix to the one year control final proposals document.

Appendix 11 – Third party water ingress arrangements

1.1. Under the gas distribution price control for 2002-07, Ofgem agreed compensation arrangements with GDNs to make payments to consumers who experience an interruption caused by third party damage or water ingress where their gas supply is not restored within 24 hours. These arrangements provide the same protection for domestic consumers as under the Guaranteed Standard of Performance for other types of interruption. The compensation levels for non-domestic consumers are also the same as under the Uniform Network Code (UNC) provisions.

1.2. These arrangements were implemented through a Letter of Understanding (LoU) and as part of GDN sales these arrangements were migrated to each of the GDNs through an amendment to this LoU. These arrangements expire on 31 March 2007.

1.3. In the GDPCR second consultation document, for the purposes of the one year control, we proposed to roll forward the existing arrangements with a minor change to remove the existing annual liability cap. We did not propose any changes to the existing incident cap of £4 million for each GDN. We considered that the removal of the annual cap had the benefit of simplifying the arrangements while causing no material change in risk for the GDNs. GDNs opex allowance for these arrangements would be reset as part of the general approach to the opex allowance for the one year control.

1.4. Three respondents to the second consultation document commented on the proposed changes to the third party and water ingress arrangements for the one year control. Two respondents did not support the removal of the annual aggregate cap. One respondent raised concerns as the opex allowance that will be rolled forward for the one year control was based only on the insurance costs for covering risk up to the existing caps. A further respondent was not convinced of the need for GDNs to procure insurance for these arrangements and suggested that GDNs self insure or opt for a large excess. They also supported the removal of the cap on payments to customers to ensure equitable treatment.

1.5. Having considered these responses, and the potential impact that removing the annual cap may have on insurance premiums, we are proposing to retain both the incident and annual caps when these arrangements are extended for the 2007-08 period. As part of the main control, we will be undertaking a further review of these arrangements and the way in which GDNs exposure is capped.

1.6. To extend the third party and water ingress arrangements for the 2007-08 period, a new LoU will need to be agreed with each of the GDN owners. A draft of the proposed LoU is included below.

Draft Letter of Understanding

Introduction

Under the previous gas distribution price control, we agreed compensation arrangements with gas distribution networks ("GDNs") to make payments to consumers who experience an interruption caused by third party damage or water ingress where their gas supply is not restored within 24 hours. These arrangements were agreed and implemented through a Letter of Understanding which expires on 31 March 2007.

Ofgem has agreed to extend these arrangements for the period from 1 April 2007 until 31 March 2008 (inclusive). The existing annual aggregate and incident liability caps have not been changed.

Please find below the revised version of the arrangements for third-party damage and water ingress interruptions.

Arrangements for third-party damage and water ingress interruptions for the period 1 April 2007 to 31 March 2008 (inclusive)

Coverage

1. If the conveyance of gas to a domestic customer is interrupted as a result of third-party damage to the Network (other than [GDN name]'s contractors working on [GDN] property) or water ingress to the Network, [GDN] shall restore their gas supply within 24 hours. If their supply is not restored within this time, [GDN] shall make a payment of £30 to the customer affected. Further compensation of £30 will be paid for each additional period of 24 hours that the customer is off supply. The payment received by an individual customer is capped at £1,000.

2. If the conveyance of gas to a non-domestic customer is interrupted as a result of third-party damage to the Network (other than [GDN]'s contractors working on [GDN] property) or water ingress to the Network, [GDN] shall restore their gas supply within 24 hours. If their supply is not restored within this time, [GDN] shall make a fixed payment to the customer affected. A further fixed payment will be paid for each additional period of 24 hours the customer is off supply. The fixed payments shall be calculated in accordance with the Uniform Network Code provision for failure to make gas available for offtake.

3. "Network" shall mean property owned or operated by the GDN – including the pipeline system, transportation system, pipeline and transportation assets

4. After an incident has occurred, [GDN] will seek to reconnect customers with the same level of efficiency and timeliness regardless of the cause of the incident.

5. [GDN] will assume the responsibility for coordinating the reconnection of all customers affected by an incident, including liaison with water companies and other relevant companies and agencies and, subject to 6 below, will procure and deploy CORGI registered contractors for work downstream of a customer's meter.

6. In the case of individual premises where water ingress to the Network has resulted in water entering the gas pipework downstream of the customer's meter, the relevant water company should contract with CORGI registered contractors, but [GDN] must coordinate all remedial works in an efficient and timely fashion. In these circumstances, water companies should have regard to Section 209 of the Water Industry Act 1991.

7. [GDN] agrees for these arrangements to be implemented from 1 April 2007.

Exemptions from the above arrangements (Ofgem cannot exempt [GDN] from any other legal right available to a customer in relation to an incident):

8. Excludes liability absolutely in respect of an incident as a result of which more than 50,000 gas customers' premises are without supply.

9. Excludes liability absolutely where it was not reasonably practicable for [GDN] to take the action required as a result of:

a. industrial action by [GDN]'s employees; or
b. the inability of [GDN] to gain any necessary access to any premises; or
c. the existence of circumstances by reason of which [GDN] could reasonably expect that if it took the action it would be in breach of an enactment;
d. the effects of an event for which emergency regulations have been made under Part 2 of the Civil Contingencies Act 2004;
e. delays imposed by a requirement to obtain a permit for street works under the Traffic Management Act 2004; or
f. any event caused by circumstances of an exceptional nature beyond the control of [GDN].

and [GDN] had taken all such steps as it was reasonable to take both to prevent the circumstances from occurring and to prevent them from having that effect.

10. Excludes liability absolutely if the interruption was caused by the customer's own action or if the customer committed an offence under the Gas Act.

11. Excludes liability absolutely if [GDN] has disconnected or refused to connect the customer's premises in exercise of a power under Schedule 2B to the Gas Act.

12. Excludes liability absolutely if the event was caused by an act of terrorism, war, rebellion, insurrection, industrial disturbance, riots or civil commotion, or unlawful or malicious acts by a third-party.

Annual aggregate and incident liability caps on payments to customers

13. The following table sets out the caps that will apply to each GDN for each incident that gives rise to payments under paragraphs 1 and 2. It also sets out the limits for payments in aggregate per annum for each GDN.

Table 1 Annual aggregate and incident liability caps on payments

	GDN	Incident cap	Aggregate cap
NGG	East of England	£4m	£8.41m
	London	£4m	£5.01m
	North West	£4m	£6.01m
	West Midlands	£4m	£4.31m
NGN	North of England	£4m	£6.51m
SGN	Scotland	£4m	£5.09m
	South of England	£4m	£8.36m
WWU	Wales and West	£4m	£6.30m

14. In the event of an incident that would or may be likely to cause one of the limits to be reached [GDN] will discuss with the Authority the arrangements for allocating compensation to customers.

Information

15. [GDN] will collect appropriately detailed information on each incident that occurs, including information on [GDN]'s performance in restoring gas supplies to customers. [GDN]'s will provide quarterly reports as per Ofgem's guidance for reporting document, detailing incidents that have occurred in the previous year. The following information should be provided:

- the location of each incident, the number of customers' premises to which the gas supply has been affected, the cause of each incident, the time and date the incident started and details of the times and dates that gas supplies were restored;
- an aggregate summary of the incidents in the period;
- details of the payments made to customers; and
- details of payments that fell within the excess.

Appendix 12 - Results of financial model

1.1. We have calculated our initial proposals for the one year control using an Excel spreadsheet (the financial model). We have had this model audited by an external firm (PKF), to ensure its arithmetic accuracy and that its calculations of allowed revenues are consistent with our financial, regulatory and economic assumptions. The model, along with explanatory documentation and PKF's audit opinion, will be published shortly after this document.

Calculating allowed revenue

1.2. Table A12.1 (page 85) demonstrates the calculation of the price control allowances and projected RAV roll-forward for 2007-08. The calculation of the movement in the RAV is shown in lines 1 to 7. The opening value of the RAV (line 1) has been rolled forward as per our analysis in Chapter 3, and is different from the projected closing RAV as per the price control settlement in 2001. The different elements of capital expenditure (lines 2-3) are as follows:

- New capital expenditure (line 2)
- 50 per cent of new replacement expenditure (line 3)

1.3. These are added to the opening RAV and the allowed level of depreciation (line 4) is subtracted from it to give a closing asset value (line 5). The closing value in any year then becomes the next year's opening value.

1.4. The present value of the closing RAV in 2007-08 is shown in line 6. The present value movement in the RAV is then derived by subtracting the present value of the closing RAV from the opening RAV (line 7). Present value calculations involve discounting values by the vanilla WACC of 5.25 per cent.

1.5. The allowed levels of costs and associated items are shown in lines 8 to 17. Operating costs include:

- Operating expenditure excluding pensions and shrinkage costs which have been considered separately (line 8)
- Shrinkage allowances are estimated based on a gas cost reference price of 57p/therm (line 9)
- Ofgem's proposed allowances for pensions costs, including ongoing contributions, and deficit payments (line 10)
- 50 per cent of new replacement expenditure (line 11)

1.6. Our proposed allowances for corporation tax are set out in line 12. The cash allowance in 2007-08 for capital expenditure is the sum of lines 13 and 14, being the return on the RAV plus the depreciation allowance. This is equal to the sum of lines 2, 3 and 7. Line 15 represents the portion of the capital expenditure allowance which is disallowed under the rolling incentive, where the companies do not receive allowances for five years. Finally, line 16 is the allowance in 2007-08 for under-

recoveries from the current control (Pot 3 capital expenditure and pensions), which is spread over the six years until the end of the next main price control. Line 17 is the sum of lines 8-16.

1.7. The total price control revenue is shown in lines 18-21. Line 18 is equal to line 17, and lines 19 and 20 are estimated non-controllable costs, being the NTS pension charge, rates and the licence fee. Line 21 is the sum of lines 18 to 20, and is the total price control revenue allowance. Line 22 is the equivalent for the last year of the current control, and line 23 shows the percentage change in total allowed costs.

Table A12.1 – Price control allowances by GDN, 2007-08 (£m, 2005-06 prices)

		NGG				NGN	SGN		WWU	
		East England	London	North West	West Midlands	North England	Scotland	South England	Wales & West	**Total**
	Regulatory Asset Value (RAV)									
1	Opening asset value	2,169.3	1,202.0	1,378.3	1,073.5	1,307.2	914.9	2,143.7	1,197.7	11,386.7
2	Total capital expenditure	40.7	44.1	27.1	17.8	37.6	61.7	89.5	36.4	354.8
3	Replacement expenditure added to RAV	48.9	21.2	39.2	26.2	34.7	27.2	61.9	26.2	285.5
4	Depreciation	-77.4	-42.7	-48.5	-38.0	-45.9	-30.9	-75.7	-41.1	-400.1
5	Closing asset value	2,181.6	1,224.7	1,396.1	1,079.5	1,333.5	972.9	2,219.4	1,219.2	11,626.9
6	Present value of opening/closing RAV	2,072.8	1,163.6	1,326.5	1,025.6	1,267.0	924.4	2,108.7	1,158.4	11,047.0
7	Allowance for change in RAV	99.0	39.4	53.2	49.1	41.2	-9.7	35.9	40.3	348.5
	Allowed costs									
8	Controllable operating costs (excl. pensions & shrinkage)	96.5	62.2	70.6	53.4	67.6	52.9	89.6	70.6	563.4
9	Shrinkage allowance	15.0	8.7	11.0	9.2	12.9	6.4	17.0	11.8	92.0
10	Pension costs allowance (incl. deficit funding)	13.5	9.6	9.9	7.3	11.2	7.0	11.1	7.7	77.2
11	Repex allowance (50 per cent)	48.9	21.2	39.2	26.2	34.7	27.2	61.9	26.2	285.5
12	Tax allowance	1.7	3.6	0.0	1.1	0.0	0.0	0.0	0.0	6.5
13	Return on RAV (= lines 2+3+4+7)	111.3	62.1	71.0	55.1	67.6	48.3	111.6	61.8	588.8
14	Depreciation	77.4	42.7	48.5	38.0	45.9	30.9	75.7	41.1	400.1
15	Incentive allowance / (disallowance)	-7.4	-4.8	-5.6	-2.4	-2.7	-7.4	-6.7	-6.0	-43.1
16	Under-recoveries from 2002-07 control	5.6	3.8	3.5	3.0	2.7	1.6	2.5	3.2	25.9
17	Total of allowed costs	362.5	209.1	248.0	190.9	239.8	167.0	362.8	216.3	1,996.3
	Price Control Revenue									
18	Total of allowed costs for 2007-08	362.5	209.1	248.0	190.9	239.8	167.0	362.8	216.3	1,996.3
19	NTS charge for pensions	4.3	2.5	3.0	2.1	2.8	1.9	4.4	2.6	23.7
20	Non-controllable costs	59.3	33.1	31.7	24.7	30.9	15.6	51.4	22.3	268.9
21	Price control revenue	426.1	244.7	282.6	217.8	273.5	184.5	418.6	241.2	2,288.9
22	Price Control Revenue for 2006/07	380.1	223.0	258.0	196.3	251.7	172.1	382.8	223.3	2,087.3
23	Change as percentage	12.1%	9.7%	9.5%	11.0%	8.6%	7.2%	9.4%	8.0%	9.7%