APPENDIX 3

Extracts from Oxera report to NAO

Sale prices and financial structure

1 The distribution networks (DNs) were sold for a significant cash premium to their regulatory asset value (RAV). This section examines the price that was paid, the reasons for paying a premium, and potential responses by the firms and regulator to the price paid.

How much did they pay?

2 All three purchasers paid approximately 14% more for the companies than Ofgem's estimate of the RAV at the time of the sales; this is an interesting coincidence, and may have been driven by similar assumptions on the part of all three bidders. It is not possible to ascertain the ultimate drivers of the premia; however, several possible reasons are discussed further below.

3 In some circumstances, regulators and industry commentators have interpreted substantial premia to RAV as implying that a regulatory settlement was too weak, or as providing new insight into the likely gains in efficiency that the acquiring firm believes it is possible to make. Consequently, understanding how large the premia paid actually was, how it compares with premia paid for other similar acquisitions, and why such a premia might have been paid are all of potential interest to the way the industry is regulated.

4 On the first of these three points, it seems that the premia paid may not actually be as large as set out above. The premia calculated above use the most recently published RAV estimates from Ofgem. However, Ofgem has also stated in an open letter to the industry in March 2004 that it intends to add certain elements of efficient capital overspend – efficiently incurred capital expenditure (CAPEX) and which can be shown to provide significant benefits to consumers – to the companies' RAVs.[38] Ofgem also made clear that if the spending were deemed wasteful or unnecessary, it would not be included in the RAV.

5 Inclusion of this CAPEX overspend, or the expectation that it will be included at a future date, increases the implicit RAV associated with the DNs, thereby reducing the premia paid. A press release from Macquarie, the purchaser of the Wales and West DN, suggested that when actual levels of investment are included, the premia is approximately 10% – almost one-third lower than the 14% premia set out above.

6 Even if the premia to RAV is as large as 13-14%, this is not particularly exceptional. Figure 23 (page 31 of the NAO's report) sets out a selection of takeover premia paid for regulated electricity distribution network operators and water companies in the UK in recent years. With the exception of the two water companies in 2003, all show substantial premia to the companies' RAVs. Following the periodic review of water prices in 1999, companies were trading at a large discount to their RAV, mainly due to a market perception of a tough regulatory settlement. Despite still being at a significant discount to the RAV, these bids offered small uplifts over the reduced market values. These comparisons suggest that the premium paid by the gas DN acquirers was in line with that paid in other UK regulated industries.

7 In addition, as **Figure 29 overleaf** shows, the premia for regulated company acquisitions tend to be substantially smaller than comparable premia in unregulated sectors. The table illustrates that the average takeover premium paid by acquiring companies in the UK and USA during the 1980s and 1990s was substantially in excess of that seen in the gas DN sales.

8 In light of this evidence, the premiums paid to acquire the gas DNs do not seem particularly abnormal in comparison to takeovers in both regulated and unregulated sectors. In addition, if the RAV is adjusted upwards to include CAPEX overspend, these premia may fall by around one-third.

(paragraphs 2 – 8 above are considered by the NAO in Part 5 paragraphs 5.6 – 5.7).

38 Ofgem (2004), *Gas Distribution Price Controls,* open letter to industry from Andrew Walker, Director of Regulation and Financial Affairs, March.

29 Takeover premia for unregulated firms (% premium to pre-takeover market value)

	1980s	1990s
UK	18 to 34	n/a
USA	35 to 92	22 to 60

Sources: Franks, J. and Mayer, C. (1996), 'Hostile Takeovers and the Correction of Managerial Failure', Journal of Financial Economics, 40, pp. 163–81; and Vijay B., Gondhalekar, R., Sant, R. and Ferris, S.P. (2002), 'The Price of Corporate Acquisition: Determinants of Takeover Premia', Contracting and Organizations Research Institute, Working Paper No. 2002–03, December.

NOTE

Premia ranges shown are mean averages of a large number of takeover premia paid. For the UK the low value represents accepted takeovers, while the high value represents successful hostile takeovers. For the USA the low (high) values are the lowest (highest) mean average premia in any year in the appropriate decade.

9 However, this still leaves the question of why the firms were willing to pay a value above the RAV for each of the companies. The possible reasons for the price paid are examined below.

Why did the companies pay what they paid?

10 The RAV of a regulated company represents the asset base on which it is allowed to earn a return. This rate of return, which is set by the regulator, provides the company with the revenue with which to pay its debt and equity holders. If the company and capital markets perform in line with the regulator's assumptions (e.g. the company improves its efficiency at the rate assumed by the regulator, and issues debt at the same cost as allowed for), the purchase of a regulated company would not be expected to involve a premium to the RAV (i.e. the company is worth the value of its RAV since this represents the present value of the future expected cash flows that investors will receive).

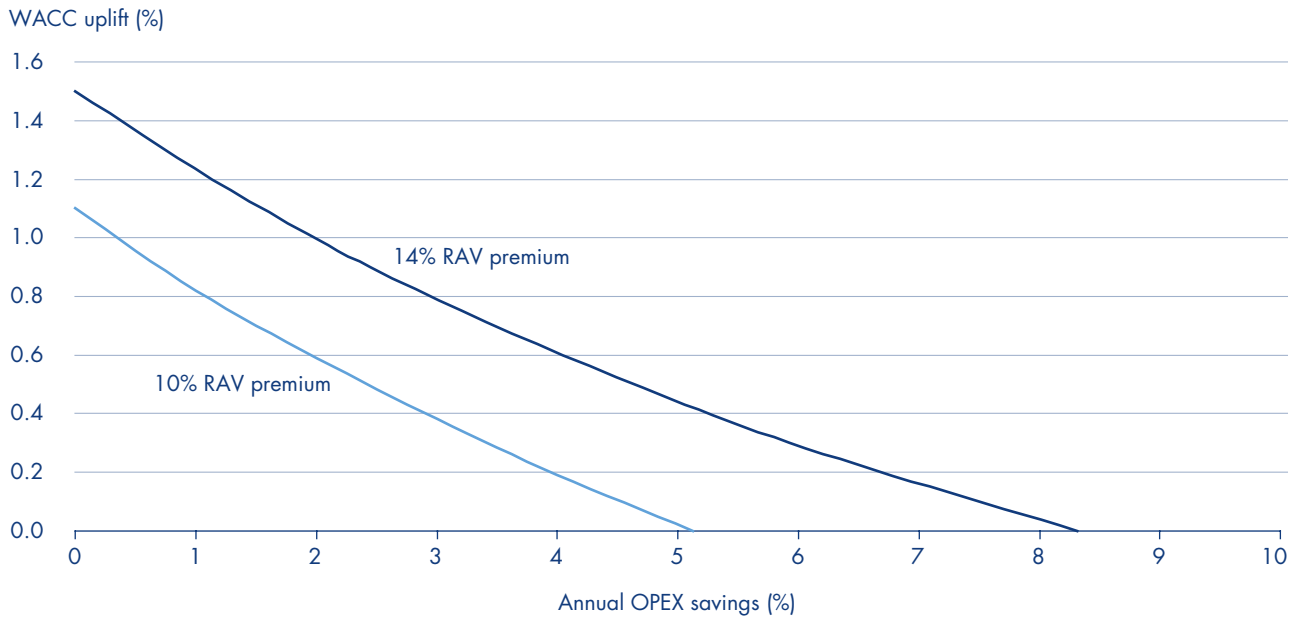
11 However, if the regulator's assumptions about either the company or the capital markets do not hold then investors may value the company above or below the RAV. In addition, there may be inefficiencies in the sale process, which can also lead to sale prices that deviate significantly from the RAV. There are at least four possible explanations why the purchasers were willing to pay prices in excess of the RAV:

a **Expectation of an increase in the RAV** – expectation of receiving an increase in the currently quoted RAV to incorporate CAPEX overspend (see previous section).

b **Expectation of outperforming against regulatory assumptions** – perhaps the most obvious explanation for a premia to the RAV is that either the company can achieve greater cost savings than the regulator assumed, or that the true cost of capital is lower than that assumed by the regulator:

- If the purchaser believes that it can achieve cost savings in excess of those assumed by the regulator in the current price control period, or future efficiency assumptions made by Ofgem, it can keep the value of these savings over a period of five years. Oxera's calculations suggest that real operating cost savings of around 5-8% per annum over and above Ofgem's assumptions would be required to justify the RAV premia range via this method alone. It is important to note that these savings are in excess of Ofgem's assumptions.
- If the purchaser's true cost of capital is lower than the value assumed by the regulator, or the purchaser is able to achieve corporation tax savings, they require a lower rate of return in the RAV than is actually being allowed. Consequently, the return offered by this investment justifies paying a higher purchase price. Oxera's calculations suggest that cost of capital savings in the region of 1.0-1.5% would be required to account for most or all of the RAV premia via this method alone.
- A purchaser may well be expecting to achieve a mixture of both cost of capital and cost savings. **Figure 30** illustrates the trade-off between these two parameters for a 10% and 14% RAV premia. This suggests that a 10% RAV premia could be justified by a cost of capital saving of around 0.6%, and annual OPEX savings of 2% in excess of the regulator's assumptions.

30 Trade-off between cost of capital and OPEX savings



Source: Oxera modelling

c **Economies of scope and control premium** – a further possible explanation is that buyers had a particular control premium associated with owning a particular gas DN – i.e. the gas DN was worth more to that buyer than to other potential buyers. Particular buyers might be able to exploit scale or scope economies not available to others. This explanation may be particularly relevant for the acquisition by Scotia Gas Networks of the gas DNs in Scotland and the South of England, since these overlap substantially with one of the consortium member's electricity distribution network operators (DNOs).[39] It may also have some relevance to the Northern Gas Networks purchase, which included United Utilities, although the geographic overlap of United Utilities North West Water with the gas DN in the North of England is less pronounced.

d **Scarcity value** – buyers may also be exhibiting a scarcity premium to purchase assets, such as regulated utilities, which provide a long-term protection against inflation via the RPI indexation of prices. For example, pension schemes, often from a desire to match their assets and liabilities, may value these stable income streams particularly highly. This explanation is analogous to arguments made about why the yields on index-linked government debt are so low at present (e.g. the real risk-free rate is currently around 1.5%; it was generally above 2.5% between 2000 and 2002).[40] In the case of bonds, a high level of investor demand pushes up the price, consequently pushing down the yield.

12 It is likely that a mixture of all four of the reasons set out above explains the cash premia paid by the purchasers. To ascertain which were the key drivers would require examination of the detail of the financial models and projections drawn up by the successful bidders; however these were not available.

(paragraphs 9 – 12 above are considered by the NAO in Part 5 paragraphs 5.8 – 5.9).

39 Scottish and Southern Energy plc, part of the consortium, owns both Southern Electric Power Distribution (the South of England DNO) which overlaps with the Southern DN, and Scottish Hydro Electric Power Distribution (the Scottish DNO) which overlaps with the Scottish DN.

40 Bank of England estimates of implied real yield to redemption on five-year index-linked government debt.

Responses to the price paid

a Company response

13 The management of a gas DN might be incentivised to take excessive risks because of the price paid by the purchasers. For example, the investors may translate the assumptions they made in their bids into incentive agreements for the DN's management. If these assumptions were unrealistic, they could encourage excessive risk-taking by management, perhaps pushing the staff or infrastructure too hard.

14 There is no evidence available in the academic literature to suggest that companies that are sold for more than their RAVs behave significantly differently from those sold for a value equal to or less than the RAV. More generally, there is scant evidence that the price paid has any significant impact on the way that the asset is operated.

15 This evidence suggests that the more general economic argument – that the price paid for an asset has no effect on the incentives to use it – seems more applicable. This is because the incentive to use an asset is based on marginal decisions, which in turn are based on its current value, rather than the value paid for it. However, while the price paid for an asset may have little impact on the way in which a firm behaves, the financing structure can affect incentives – e.g. high gearing can make the companies risk-averse. High gearing has been examined at some length by the DTI and HM Treasury.[41] Their joint study highlighted three risks associated with high gearing: an increased risk of company failure; potentially weaker incentives for efficiency; and the possibility that highly geared firms may have less flexibility to deliver large investment programmes when faced with financial shocks.

(paragraphs 13 – 15 above are considered by the NAO in Part 5 paragraph 5.5).

b Regulatory response

16 There are two notable examples in the UK where regulators have reacted explicitly to the price paid to purchase a company with an established history of being regulated. The first, in 1995, was when Trafalgar House made a bid for Northern Electric. The regulator responded to the high offer price by substantially reducing prices, which had only recently been published.[42] The second more recent example occurred in 2005 when Terra Firma bid for Phoenix Gas in Northern Ireland. The regulator threatened to respond by adjusting certain elements of the price control (e.g. the cost of capital) downwards in light of this new information.[43] This eventually led to the bid being abandoned.

17 However, there are problems, particularly with interventions that occur within regulatory periods. In particular, a regulator's credibility can be badly damaged if it is perceived as opportunistically reducing the prices that regulated companies can charge. Ultimately, if a regulator lacks credibility then it will struggle to incentivise the companies it regulates, since they may fear that they will be unable to gain a reasonable share of any savings they make, and therefore will be reluctant to generate the savings in the first place.

18 Therefore, there is no economic justification for intervention of this kind.

(paragraphs 16 – 18 above are considered by the NAO in Part 5 paragraph 5.10).

Setting future price controls

19 Ofgem estimated that the sale of the gas DNs could result in benefits of £325m to consumers over the next three regulatory periods. These benefits are expected to be passed to consumers via lower prices; hence the method and nature in which price controls are set in the future will be crucial to the delivery of this value. The key change in the approach to regulation is that Ofgem will make comparisons between independently owned companies at future price controls; without the sales it would only have been possible to make internal National Grid comparisons.

41 HM Treasury and DTI, *The Drivers and Public Policy Consequences of Increased Gearing*, October 2004.
42 Green, R. (1997), *Has Price Cap Regulation of UK Utilities Been a Success?*, Public Policy for the Private Sector: Note Number 132, World Bank, November.
43 Ofreg (2005), *A Statement by the Northern Ireland Authority for Energy Regulation: The Proposed Acquisition of East Surrey Holdings plc by Kellen Acquisitions Limited – Implications for Phoenix Natural Gas Limited*, June, part 2.

20 This section first considers how Ofgem is able to use the new comparators. Next, it identifies that changes in both the regulators' and firms' behaviour are necessary to deliver these expected benefits to consumers. Finally, it considers whether the current price control should be extended, since doing so could provide the regulator with valuable additional data with which to set prices.

Use of comparators

21 The ability to use comparative analysis of the gas DNs' performance is at the centre of Ofgem's belief in its ability to deliver benefits to consumers. This was recognised throughout the cost–benefit analyses that were undertaken to justify the sales. Indeed, Ofgem's analysis indicated that around 95% of the total £325m estimated gross consumer benefit would arise because of Ofgem's ability to use comparative analysis.[44]

22 Ofgem currently uses a comparative regulatory regime – allowing the regulator to compare the performance of similar regulated companies against one another – to set the price controls for the electricity DNOs, as does Ofwat for the water and sewerage companies in England and Wales. This contrasts with Ofgem's current approach of non-comparative regulation where only a single company is being regulated.

23 There are several benefits from comparative regulation, including those outlined below:

- **Credibility** – using comparative analysis allows regulators to better assess the true cost function of firms, and helps gauge the likely improvement in performance in future. This reduces the probability of the excessive volatility in the regulated firm's profit/loss, due to poor information on the part of the regulator. Therefore, comparative regulation, since it improves cost estimation, helps to strengthen the regulator's credibility, which in turn helps to bolster the incentive mechanisms it puts in place, as the regulator is less likely to have to reopen the price control.
- **Principal–agent/company–investor relationship** – comparative efficiency analysis provides investors and managers with an impartial view of the relative performance of each company; consequently, it may improve the monitoring of a firm's progress, making it easier for appropriate incentives to be put in place, which in turn may improve company performance.

(paragraphs 21 – 23 above are considered by the NAO in Part 3 paragraphs 3.6 – 3.8).

24 However, the quality and quantity of data available on the companies being compared is a key constraint on the use of comparative regulation; if the quantity is too small, or the quality too low, the regulator will be unable to make robust comparisons between the firms, and the benefits of this approach to regulation will be reduced. In this regard, the small number of gas DNs, and the problems with data collection Ofgem encountered at the 2004 electricity DNO review, both pose potentially important challenges for the regulator to overcome at the next regulatory review in 2008 and beyond.

Small number of DNs

25 There are only eight DNs, compared with 14 DNOs, and 22 water companies. This number could be reduced further to only four if the regulator chooses to consider only independent observations (one for National Grid, three for the independent DNs), although Ofgem compared all 14 DNOs at the last price control review, even though they were only owned by eight groups. However, it is possible that National Grid will choose to operate its four retained gas DNs as a single unit, potentially reducing the scope for comparisons between them. If this were the case, Ofgem would only be able to treat National Grid's gas DNs as single comparator. Having only a few comparators creates problems for the standard approach to comparative analysis, which uses cross-sectional ordinary least squares (OLS)[45] regression analysis. With such a small number of companies, the regression is based on a limited amount of data, in turn restricting its explanatory power. Consequently, gaining access to a good time-series dataset, adopting alternative methods of calculating efficiency frontiers, or using process modelling are likely to be important if Ofgem wishes to ensure robust efficiency analysis.

44 Calculated as £310/£325m. Ofgem (2004), *National Grid Transco – Potential Sale of Gas Distribution Network Businesses: Final Impact Assessment.*
45 Technique for estimating coefficients in a linear model by minimising the sum of the squared differences between the observed dependent data points and those predicted by the linear regression model.

Alternative estimation methods

26 One possible response to the limited number of DNs is to adopt alternative estimation approaches either to augment or replace the standard OLS approach. For example, in its review of the proposed acquisition of First Aqua (which in turn owned Southern Water) by Vivendi in 2002, the Competition Commission extensively analysed the importance of the number of independent comparators for different methods of estimating the efficiency of different firms.[46]

27 Data envelopment analysis (DEA)[47] and stochastic frontier analysis (SFA)[48] were both examined, but were considered by the Commission to be just as sensitive to the number of comparators as the existing method of OLS regression. However, this is an area that needs to be explored in future research.

28 In contrast, carrying out modelling at a sub-company level was seen as substantially more promising. This involves collecting data on sub-units within each of the companies being assessed. This approach is currently used by Ofwat to assess efficiency in the sewerage sector, as it has fewer comparators (only ten, compared with 22 for water). Ofwat collects data on the costs and outputs of each company's sewerage treatment works. The same approach is used by the Office of Rail Regulation, which compared the relative efficiency of Network Rail's geographic engineering regions. Ofgem may wish to examine the potential for adopting a similar approach for the gas DNs, perhaps by dividing them up into multiple areas. For example, the Wales and West DN could have separate areas for each large metropolitan district, such as Bristol and Cardiff, and several other areas for the more rural parts of its network. However, such sub-company comparisons may be more difficult if National Grid chooses to operate its gas DNs as a single unit, or in a substantially different way from those of the independent DNs.

Time-series data

29 This data can provide regulators with additional insight, particularly when it is combined into a panel dataset across companies. Analysing panel data[49] in this fashion generally leads to more robust results than using a series of cross-sectional analyses, since the panel dataset has a larger number of observations, making the regressions more precise.

30 For the time-series element to be useful, it needs to be as long as possible and be consistent over time. The longer the time series, the more observations are present. Thus, for time-series data to be useful to Ofgem, it needs to begin collecting data as soon as possible, while ensuring that the data is consistent both between companies and over time. Interestingly, Ofgem may be in a unique situation at present, since all the DNs were owned by National Grid, consistent accounting methods may have been used. If so (and there may have been differences between DNs around the country), Ofgem could seek to lock in the procedures and allocation approaches used by National Grid, which may make it easier to ensure consistent data across the companies. However, since there is only a short time until the next price control, only one or two years of reliable data may be available to the regulator when setting prices. Thus time-series or panel data analysis may be a more useful tool at subsequent reviews.

31 In addition, even with good time-series data there are limits to its use. In particular, it is not necessarily reliable if the cost function of the firms being examined changes significantly over the period of estimation. Using a panel data approach was suggested during the Competition Commission inquiry into Mid Kent Water's price control; however, Ofwat argued that the cost function had changed too significantly for multi-year observations to be valid. This approach was subsequently endorsed by the Commission in the more recent water merger inquiry involving Vivendi. In addition, more recent work commissioned by Ofwat has used more flexible functional forms to cope with changes in the cost function.[50] Thus, panel data can be used in most situations to enhance the estimation process.

46 Competition Commission (2002), *Vivendi Water UK PLC and First Aqua (JVCo) Limited: A Report on the Proposed Merger*.
47 A non-parametric or mathematical programming approach to determine the best-practice production frontier.
48 SFA is an econometric method used to construct a production or cost frontier. The method explicitly corrects for data or modelling error by adjusting the frontier, using an assumed distribution of the error. The adjusted frontier may be used to carry out comparative efficiency exercises.
49 Observations of the same sample of units at several different points in time.
50 See, for example, Stone and Webster (2004), *Investigation into Evidence for Economies of Scale in the Water and Sewerage Industry in England and Wales*, January, commissioned by Ofwat, which used panel data on the water and sewerage companies.

Process modelling

32 The activities of a company can be divided into a number of different processes, and comparisons drawn between each company using these. For example, within a gas DN the main processes might consist of metering, pumping of gas, gas storage, head office administration and so on. Ofgem has used process modelling for its assessment of Transco, as this allowed it to compare certain of the company's activities with companies in other industries. On its own, process modelling does not provide more data for a particular analysis, although it can be combined with sub-company modelling to increase the number of observations. However, a bottom-up approach such as process modelling does allow clearer comparisons of the particular activities of the individual companies being regulated. Therefore, Ofgem could choose to use simple average unit costs of particular activities to benchmark the gas DNs against one another. Indeed, in comparison with the other approaches, this method, albeit simple, may be the most promising, since it would allow direct comparisons between the companies even with limited data.

33 Adopting these alternative estimation methods would be likely to enhance substantially Ofgem's ability to carry out robust comparative efficiency analysis of the gas DNs, increasing the likelihood that substantial benefits will be able to be passed to shippers, and in turn to consumers.

Problems with data collection

34 As noted above, consistency of data both over time and between companies is central to comparative analysis; Ofgem had significant problems with the consistency of the data provided to it by the DNOs at the last periodic review of charges, and had to go through an extensive normalisation process before it could begin the comparative analysis. In its post-project review, Ofgem stated that:

> *It is generally recognised and accepted that the process of data collection did not work well and that annual information gathering is likely to be the best way to improve matters. Ofgem and the distribution companies have already put significant effort over the last eight months into working together on a new system of cost reporting.*[51]

35 In addition, Ofgem noted that the recommendations from this post-project review are being incorporated into the planning for the gas DN review. Indeed, the regulator has already taken steps to ensure that annual data collection begins soon. It has inserted a clause into the DN licences that requires them to supply Ofgem with consistent data once a year. Requiring annual reporting of information is a substantially different approach from that used by Ofgem for assessing the DNO's efficiency; at the two previous electricity distribution price control reviews (sometimes referred to as DPCR3 and DPCR4), it requested all the information it required from the DNOs in the run-up to the review, rather than annually.

36 In addition, the DN licence condition contains clauses that allow for the setting up of 'price control review reporting rules', which would set clear reporting requirements for the data, with the aim of ensuring consistency across companies and over time.[52] The presence of clear guidelines on cost reporting should help ensure that data is consistent both between companies and over time.

37 The steps taken by Ofgem suggest that it intends to attempt to avoid the problems that it encountered at the previous electricity distribution price controls reviews, and begin collecting robust comparable data as soon as possible.

Other issues

38 Ofgem may wish to consider initiating a whole industry research project on cost functions in the industry and the use of benchmarking. This approach has been used particularly successfully by Ofwat, and Oxera understands that it has helped build industry consensus around the approaches it employs to assess firms' relative efficiency.

39 Ofgem may also wish to consider publishing an annual ranking of the efficiency of the firms that it assesses. This is an approach used by both Ofwat and the Performance Review Commission of Eurocontrol, the European civil air traffic control coordinator.[53] Both bodies use the annual data submitted to them to assess the relative efficiency rankings of the firms in their industries; these assessments are then published.

51 Ofgem (2005), 'Assessment of the Electricity Distribution Price Control Review Process: Conclusions', July, summary section.
52 See special condition A40, part D, of the gas DN licences, which is a new condition as part of the sale. Available from www.ofgem.gov.uk.
53 See, for example, Eurocontrol Performance Review Commission (2005), *Performance Review Report,* PRR8, April.

Publishing the assessments may spur companies to compete more aggressively against one another in achieving efficiency gains, and may aid investors in understanding how the company is performing relative to its peers. This information could then be used to incentivise and reward management.

(paragraphs 24 – 39 above are considered by the NAO in Part 4 paragraphs 4.4 – 4.12).

Change in firms' or regulator's behaviour

40 Two key mechanisms allow the sale of the gas DNs to provide benefits to consumers: changes in the way Ofgem regulates, and changes in the way firms operate. Ultimately, therefore, Ofgem cannot guarantee that the benefits that it estimated will arise, since, to a great extent, it must rely on the behaviour of both National Grid and the three new owners. However, Ofgem can ensure that it puts in place a robust framework that incentivises firms to deliver efficiency benefits, making it likely that these are passed on to consumers within a reasonable period.

41 Ofgem sets the regulatory framework in which the gas DNs operate. As such, it determines the incentive mechanisms and more generally the regulatory structure. The comparative regime discussed above is likely to give Ofgem greater confidence in the data being provided from independent firms than in data being submitted from the wholly owned subsidiaries of National Grid. This is because the costs incurred by National Grid's gas DNs are accounted for centrally, and then allocated across the different businesses using a transactions model. Therefore, Ofgem can have greater confidence in its estimates of the location of the efficiency frontier if one or more of the sold networks are at, or close to, the frontier. Consequently, it can set a more challenging frontier target, or a faster rate of catch-up for laggard firms, passing more benefits to customers than would otherwise be the case.

42 The firms ultimately generate the efficiency savings, which Ofgem then passes to shippers via lower prices, and which in turn may be passed on to consumers via lower prices from shippers. The efficiency gains are likely to come from the following three main sources:

- **New management approaches** – the new owners may adopt new styles and approaches to the management of the DNs. For example, they may bring experience of operating other utility businesses in the UK (e.g. the consortium including United Utilities), or they may bring experience of operating gas networks in other countries. They may also change or increase the use of information technology in the businesses; for example computerised despatch systems could be used to increase the productivity of the gas DNs' field force by minimising driving times.
- **New organisational structures** – allied with new management approaches, the new owners may adopt new internal organisational structures. Oxera understands that some of the gas DNs still operate along the old local distribution zone (LDZ) boundaries (National Grid's gas distribution business was previously divided into 12 LDZs; these were amalgamated into eight DNs in April 2002). Several of the DNs therefore contain two largely separate organisations within them. The new buyers may choose to merge these operations into one.
- **Economies of scale and scope** – finally, the firms may benefit from economies of scale and/or scope under the new ownership. For example, during the sale process, National Grid characterised the sale process as an efficient mechanism for determining which of these effects dominated for each DN.[54] National Grid considered that being part of the National Grid conferred various economies of scale, while new owners, particularly those with other businesses that overlap geographically, were likely to benefit from economies of scope.

43 In addition, the independent DNs may face greater incentives than the retained DNs to draw out efficiency savings. This is because the independent DNs will not take into account (e.g. by holding back their own efficiency savings) the external negative effect that this may have on the other retained DNs if they push the frontier out faster. Moving the frontier out faster harms the other DNs since it means Ofgem is likely to set tougher efficiency targets at the next review. DNs retained by National Grid would be likely to take this into account and face less of an incentive to improve their efficiency.

54 Letter from National Grid Transco to Kyran Hanks, Ofgem, 26 September 2003.

44 In summary, firms are ultimately responsible for delivering efficiency benefits, and are the only parties with the ability to do so. Nevertheless, Ofgem can assist, by providing strong incentives and a stable regulatory framework.

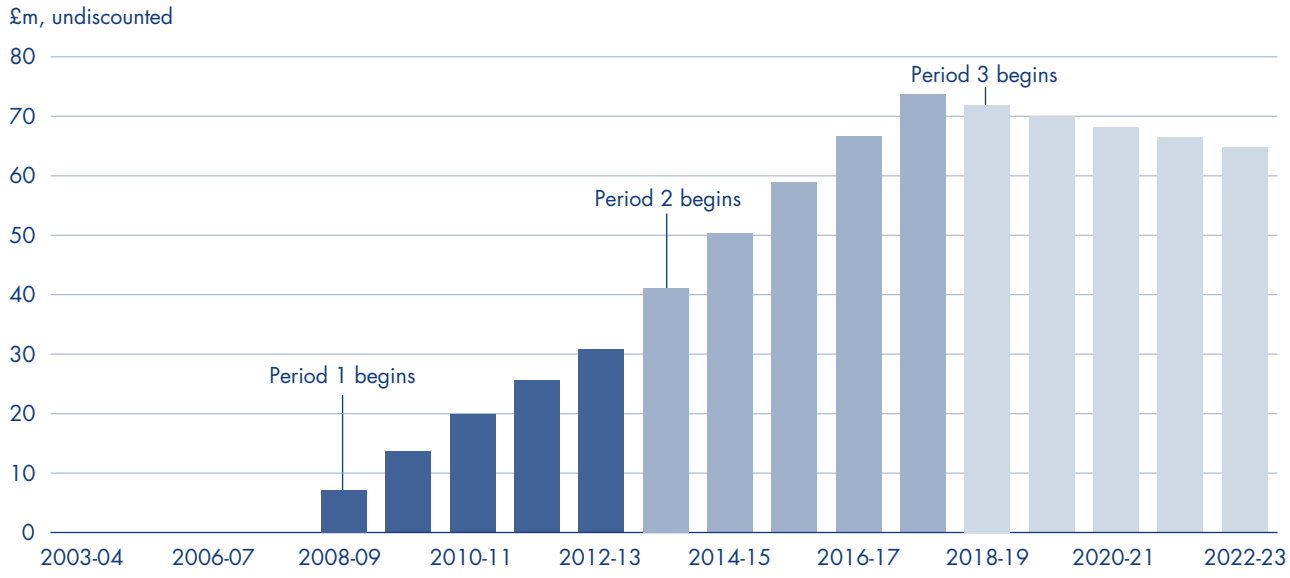
Extending the existing price control

45 Ofgem currently intends to extend the existing gas distribution price control by one year, from its original closing date of March 2007 to March 2008. The stated purpose of this is to separate the gas distribution and gas transmission price controls. Ofgem believes that this will have 'considerable advantages in terms of providing a more balanced work load' for both Ofgem and industry.[55] In many ways, Ofgem's roll-forward proposals are similar to those examined recently by the Civil Aviation Authority in respect of the timing of Manchester Airport's price control review; the stated purpose of which is also to balance the workload of industry.[56]

46 An added advantage of this roll-forward is that it provides an additional year for the new owners of the gas DNs to bed down, and an additional year of data with which Ofgem can compare company performance. This might suggest that if Ofgem were to delay the price control further, it may be able to transfer benefits to consumers sooner; this may be particularly attractive since the current profile implies that the benefits will not be delivered to consumers quickly.

47 **Figure 31** sets out the timing of benefits to consumers under Ofgem's best estimate. The figure shows that the bulk of the undiscounted benefits arrive during the second and third control periods.

31 Timing of undiscounted benefits from gas DN sales, Ofgem best estimate, 2004



Sources: Oxera modelling based on Ofgem (2004), 'National Grid Transco – Potential Sale of Gas Distribution Networks Businesses: Final Regulatory Impact Assessment Appendices', Appendix 7, November; and Ofgem (2003), 'Separation of Transco's Distribution Price Control', Table 2.3, p. 23, June

55 Ofgem (2003), *Timetables for Price Control Reviews*, open letter to the industry from David Gray, November.
56 CAA (2004), *Airport Regulation: Looking to the Future – Learning from the Past*, December, p. 16.

48 Possible options available to Ofgem include:

- **no roll-forward** – the regulator has yet to formally commit to rolling forward the price control and therefore could still choose to end the current price control in 2007, as originally planned;
- **the current one-year roll-forward proposal**;
- **a longer roll-forward, of two years** – this would provide Ofgem with more data on which to base the next price control review. However, it is not clear that one year of additional data would necessarily make a significant difference to the prices that the regulator could set;
- **a short price control period, e.g. 3-4 years** – beyond a two-year roll-forward, it may be worth considering opting for a shorter price control period, perhaps of only 3 or 4 years. This is the approach being adopted by the National Electricity Regulator in South Africa, which has only recently switched from rate of return regulation to incentive regulation, and so wishes to choose a short initial price control to allow the new form of regulation to bed down. The energy regulator in the Netherlands has also adopted this approach for the regulation of gas transportation prices.

49 Despite the possible attraction of these alternative options, Ofgem is unlikely to be able to change the date of the price control now, as to do so could harm the regulator's credibility. In particular, Ofgem issued a letter indicating that it had agreed to the one-year roll-forward plan, and based its cost-benefit analysis of the sales on five-year price controls starting from 2008.[57]

50 Furthermore, the bids to purchase the DNs were based on the assumption that the price control would be extended to 2008, and not further. Thus, changing the end-date for the price review is likely to harm the regulator's credibility and may affect incentives for the capital market to operate in the future, making it unlikely Ofgem would wish to proceed with such a change.

(paragraphs 45 – 50 above are considered by the NAO in Part 4 paragraph 4.5).

57 Ofgem (2004), *Gas Distribution Price Controls*, letter from Andrew Walker, para 7.