GAS DISTRIBUTION PRICE CONTROL REVIEW –

RESPONSE FROM THE FUEL POVERTY ADVISORY GROUP

This note briefly covers the overall level of charges and then discusses gas network extensions.

Overall Levels of Charges

As indicated in our response to the Third Consultation Document, we appreciate the challenges in setting the price control, but it is very important that there is a reasonable balance between the interests of customers, including low income customers, and those of the company and the City.

It is helpful that the Executive Summary highlights Ofgem's objective of protecting customers and this will need to be borne in mind in all decisions. It is helpful that Ofgem is beginning to make use of the information available through the comparison of the independently owned GDNs and it will be important that this is followed through in a robust way.

We would again underline that as a result of the One Year Gas Distribution Price Control, charges in 2007-2008 will be as much as 14.3% (nominal) and 11.5% (real) above the 2006-2007 levels. This is really troublesome and this high starting point of charges needs very much to be borne in mind in setting the 5 year control.

We would raise a number of related issues:

- **Cost of Capital**

  The Consultation Documents assumes a gearing of 62.5%. There is a clear risk here that there will be repetition of the situation where National Grid sold some of its LDZs and through this made gains for shareholders, which, at least in part, belonged to customers. We are attaching, as an Appendix, a note on the issue of sale of Utilities by Dieter Helm. We are not in a position to assess all the issues in detail, but the key theme is that Utilities have been sold at prices well above their RAB (as was the case with the LDZs) – because of mistakes by Regulators and an over generous WACC. We recognise that the issues may be more complex than Dieter Helm allows, that some of the tax issues have been dealt with, and that other Regulators as well as, and perhaps more than, Ofgem are involved here. Nevertheless, the note raises issues that merit a response from Ofgem. In the light of our concerns and of the considerations in this note, it is extremely important that the cost of capital should not be too generous.

- **The Level of Investment**

  The proposed level of investment seems very high. It appears that capital expenditure is increasing, although this is not clear and it really should be made clear whether the proposed capital expenditure in this 5 year period is higher than in the previous one. If it is rising, then it is not obvious why this should be the case. There are not, for example, special factors such as those related to household renewables in electricity. More explanation and more transparency on this will be important.

- **Replacement expenditure**

With replacement expenditure, it will be particularly important to ensure that programmes represent the most efficient option for customers and deliver value for money – given especially that 50% of such expenditure is treated as a current cost. In addition, it is not clear why 50% of such a large programme should be treated in this way. But if it is, then this presumably reduces risk for the companies.

- **Transparency**

  In general more effort could be made to secure transparency and accessibility for customer groups on these complex questions. There is a particular issue on the resubmission of bids by the GDNs. While there is logic in allowing resubmission, it will be difficult for consultees to respond quickly to revised bids/proposals and it will be important for GDNs and Ofgem to explain any changes really carefully.

The major increases in distribution charges are one of the reasons (although clearly not the only one) why gas prices to final customers have not fallen as much as expected in the wake of the Wholesale Gas price reductions. In the context of continuing high prices for customers, it is important that distribution charges should be kept as low as possible.

Gas Network Extensions

We again very much welcome Ofgem's positive approach on gas network extensions. As previously indicated a combination of Option 6 with 3 seems to us to be sensible.

As noted last time, we do not have the expertise to judge between the alternatives. We would look for a marked impact on gas network extensions to communities with a significant proportion of low income households, clearly at the lowest cost feasible. It is helpful that the activity will be focussed on low income customers and communities using an IMD rating. As far as we can judge the reaction from stakeholders is that this is reasonable. If stakeholders did think that the particular approach would be too stringent and would risk resulting in little activity, we would support criteria that are a little less tight and enable more communities to be reached, e.g. a lower IMD cut off. Subject to this we welcome the gas network extension proposals and are grateful for Ofgem's work on this.

June 2007.

Appendix

This note by Dieter Helm raises an important question and sets out views which merit consideration by Ofgem. FPAG does not have the expertise to assess all the points in detail but has been very concerned about the sale of assets a considerable way above RAV and about the implications of this. This is relevant to the Price Control.

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Commentary

12th June 2007

What is a utility worth?

Following the sale of Anglian Water, South East Water and Thames Water, and with Southern Water and Norweb now on the market, the value of utilities is being subject to the acid test of investors' pockets. In the first three cases, the answer is a very substantial premium to the regulated asset base (RAB)—over 20%—and in the last two cases, there has been speculation that investors might be willing to pay over 30%. The earlier Viridian sale fits in with this pattern. All of these deals have been in the face of rising real and nominal interest rates.

All this M&A activity raises rather profound questions about utility regulation, questions which the Competition Commission is currently wrestling with in the BAA periodic review case. For, in theory, the valuation should be very straightforward: utilities should have a market value equal to the RAB if the cost of capital has been set correctly, plus a bit for possible outperformance on OPEX and CAPEX over the period (before that value is returned to customers at the end of the period).

Given that it is highly unlikely (indeed implausible) that the value of these unanticipated efficiency gains could be worth 20% of the RAB, one obvious conclusion is that the regulators simply got the cost of capital wrong at periodic reviews—indeed, in some cases, badly wrong. To see why this conclusion does indeed have merit—but a rather complex one—it is first necessary to sort out some of the fundamentals about utilities, their costs of capital and the role of pension and infrastructure funds. Another conclusion—that investors have got it wrong—has plausibility too, but even if there has been 'irrational exuberance' in the markets, it is unlikely to explain all the premia to the RABs.

What do investors find attractive about utilities

Utilities have certain properties which mark them out from the rest of the equity market. In their pure form, they are networks, which are public goods and natural monopolies, and which are essential for economic activity on any significant scale. That means that the demand is inelastic, and hence costs can be passed through on the basis of their market power, which needs to be curbed through regulation. But they are also capital-intensive, and their fixed costs are long-term and often sunk (in the technical sense at least), and therefore investors require some form of long-term contract from customers to ensure that they get their money back. This contract typically takes the form of a regulator with duties to ensure that they can finance their functions (and historically this guarantee has come through some form of rate of return regulation, and in the British case, rate of return regulation with a lag – which is what RPI – X in fact is).

For an investor, this sort of activity, properly regulated, provides stable dividends and inflation protection (implicitly or explicitly), since demand is predictable and costs can be passed through. The risk is largely regulatory and political: regulators assign equity risk, and politicians provide the legal context.

Where does the equity risk lie?

Equity risk never goes away: someone has to bear this residual risk. In pure rate of return regulation, the equity risk lies with customers. Owners can pass through all the costs. And since there is no equity risk in the utility itself, there is no need for equity capital. In nationalised industries, the equity risk lies between government and customers, depending on how far costs are passed through. In price cap regulation with a duty to finance functions (the British system), the equity risk is shared between customers and shareholders. If the duty to finance functions means that the RAB is protected (in effect guaranteed) then customers bear the lion share of the equity risk, with shareholders exposed only to the risk that the OPEX and CAPEX within the period might turn out to be higher than anticipated, plus if the cost of capital is fixed ex ante too for the period, the risk that the cost of debt and the cost of equity within the period turn out to be higher than anticipated.

Why has there been a dash-for-debt and an influx of infrastructure funds?

The above arguments point to a capital structure which follows the regulatory allocation of equity risk. In theory, the RAB should be debt-financed, and the CAPEX and OPEX range of outcomes should be equity-financed. And the implication is that the companies were all privatised with an inefficient capital structure (ie, with very little gearing—or, in the water case, with cash injections). Put another way, customers have been paying for equity risk to the shareholders, when it is they that bear most of it (ie, in respect of the RABs).

On this view, the infrastructure funds have been exploiting a market inefficiency by initiating a dash-for-debt, and in the process lowering the overall cost of capital. They have, in effect, taken the companies away from their (inefficient) equity owners and transferred them to debt owners, largely the pension funds, who place greatest value on long-term stable and predictable cash flows in the form of interest payments. This transfer has had an added rationale in that the utilities' RABs provide an inflation hedge too, and, given the shortage of indexed-linked gilts (and the return of the threat of inflation), this adds a further value to pension funds who are particularly vulnerable to inflation in respect of their longer-term obligations to their investors.

The infrastructure funds are therefore, on this view, providing a simple service of creating capital structure efficiency. They are the financial intermediary, making returns from the transfer of ownership and the provision of debt finance.

Though there is much in this view, it is, however, too simplistic. This transfer is unlikely, in itself, to justify the valuation premia over the RABs of the scale witnessed in the utilities sector. And even if it did, it would be extraordinary if regulators could not see this too: if the market is revealing the efficient capital structure, it is because the market is reacting to the regulators' assignment of equity risk, and hence, at least in theory, the market value ought to be equal to the RAB after the optimal capital structure has been attained—because the regulator should be providing only sufficient monies to ensure the efficient financing of functions. Indeed, were this view to be correct, the main candidates
to explain the current premia would be either extraordinary failure by regulators, or extraordinary irrational exuberance by investors. Both, as we shall see, have some

plausibility, but again they are only partial explanations. Amongst the other candidates are tax, the split cost of capital, and interest rate movements.

Is tax a good explanation?

The tax treatment of debt is different from equity: interest is tax-deductible; dividends are not. Therefore, the optimal structure is distorted (as the original Modigliani–Miller theory on optimal capital structures showed). Hence, the dash-for-debt is a tax-efficient strategy.

Tax, however, will not do as a sufficient justification for the RAB premia in the market: it only plays a role in increasing the valuation above the RAB if the regulator assumes a different capital structure when setting the price limits—if tax is not a symmetrical cost-pass-through item. In other words, tax explains part of the premia only if regulators let it. If actual gearing is used as the basis for the tax pass-through then the tax effect is to the benefit of the customers. And since the customers take the risk of the RAB if the financing functions duty assigns equity risk in this way, it is hard to argue that customers should not get the benefit of the discrimination in the tax system between debt and equity.

Is the use of the WACC—and the split cost of capital—a good explanation?

A more convincing argument, but again one that ultimately rests on regulatory failure, is that the capital markets are exploiting the fact that the regulators set an average cost of capital, weighted on a notional rather than an actual gearing assumption (the WACC). If the RAB is close to (equity) riskless (and hence debt finance is appropriate) then investors are getting a higher return than they need on the RAB. But they are also getting a lower return than they need on the equity risk they face. They make an abnormal return on the RAB, and an abnormal loss on the OPEX and CAPEX. As long as the abnormal return on the RAB (the difference between the cost of debt and the WACC) is greater than the abnormal loss on the OPEX and CAPEX business risks (the difference between the cost of equity and the WACC), the market value will exceed the RAB.

The split cost of capital argument as set out above provides a factual explanation of some of what has been going on, but, as with the tax argument, it relies on regulatory failure—the failure to set a split cost of capital at periodic reviews. The regulator could use the marginal cost of capital for each of the activities: the cost of debt for the RAB, and the cost of equity for the OPEX and CAPEX within the period.

Such a split would indeed reflect the structure of the businesses: the RAB is essentially a financing activity, whilst the day-to-day business is a commercial one. Indeed, this is precisely the model that has emerged in the Welsh Water case, and is now proposed for Norweb. Infrastructure funds and pension funds take on the RAB and CAPEX finance, whilst operating companies run the business.

How important are fixed-period assumptions about interest rates?

A third candidate for the market premia is the difference between assumed interest rates at period reviews, and out-turns. For much of the post-privatisation period, this factor has been positive and significant from an investors' perspective. Since 1990, interest rates have turned out more benignly than assumed by regulators at periodic reviews right through until 2005. Indeed, between 2000 and 2005, the reaction of monetary authorities to the stock market crash of 2000 was to set interest rates at—

by historical standards—extraordinary low levels, close to (or even, in some cases, below) zero in real terms.

But since 2005, interest rates have begun the gradual climb back to long-run levels. With the rise in nominal rates has come a gradual edging back towards the long-run trend rate of around 2%. By June 2007, real rates had climbed from less than around 0.4% in 2005 to roughly 1.4%. The trend remains upwards and the yield curve has ceased to be inverted. Current market valuations of utilities therefore cannot be explained by expected interest rates. Indeed, the premia to RAB increased as real interest rates rose, whereas, on this argument, the utilities might actually be trading at a discount to RABs.

What is the common theme?

Of these three possible explanations of the market valuations—tax, average cost of capital and interest rates—there is one common theme: regulatory failure. Regulators have allowed the tax benefit to be captured by investors; and they have allowed the arbitrage over the WACC and the interest rate benefit in the first 15 years of privatisation to go investors too, rather than customers. Put another way, it has been rational for investors to bet on repeated regulatory failures at periodic reviews to enable abnormal profits, and these have been reflected in the valuations of utilities at significant premia to RABs.

It is here that a confusion comes in: incentive-based regulation is supposed to lead to above-normal profits. There would be little point in providing the incentives unless companies had the potential to out-perform. Market valuations should in general be above the RABs. The reason why such returns are in the customers' interests is that the result is superior efficiency, which at periodic reviews is returned to customers through lower prices. As a result, the trend line of prices should be lower than it would otherwise have been.

So far, so good. But these efficiency incentives should be related to endogenous factors—areas within the control of managers. But the issues discussed above are not about the normal running of the businesses (the OPEX and CAPEX), but rather about finance. Tax is exogenous: it is not through the efforts of managers that the government discriminates between debt interest and equity dividends. It is also not through the efforts of managers that regulators set an average cost of capital, above the marginal cost of debt and below the marginal cost of equity. And finally, managers do not have any role or influence over the Monetary Policy Committee of the Bank of England in setting interest rates.

Will regulators carry on making mistakes?

The design of good regulation—and the targeting of incentives—requires regulators to sort out exogenous from endogenous factors. In the finance area, companies are themselves groping towards contracting out this function. The split between the ownership of the RAB and the organisation of OPEX and CAPEX has already made considerable headway. In Welsh Water's case, it is explicit. In some of the local gas distribution cases, pension funds have come in directly, and it is proposed by United Utilities to follow a somewhat similar pattern for Norweb.

The regulatory corollary of this model is to ring-fence the RAB further in financial terms. The first step is to make clear that the financing functions duty actually requires the regulators to honour the RAB. This is already implicit, but by making it explicit, the residual risk would be removed. It is sometimes argued that this is a step

too far, because the RAB guarantee depends upon the utility fulfilling its obligation to carry out the functions—that the RAB is, in effect, the collateral. But this muddles two components behind the licence and the special administrator. If a licensee fails to perform then the special administrator can be called in. The special administrator continues to receive the income from customers under the RPI – X formula, but the operator loses out. That operator has the equity risks and the equity losses. In the assets/operator split model which some companies have adopted, the risk is transferred to the operator by a contract to run the services. If the contractor fails, the asset company can pursue it through the enforcement of the contract. If the contractor goes bankrupt, there is a loss to be
accounted for, and it may be thought that this comes back to the RAB owner (the licensee)—hence, there is equity risk in the RAB. But this is too simple: why would a licensee owner of the RAB put itself in this potentially exposed position? Reflecting this general problem of credibility assigning equity risk through contracts across many industries, the RAB owner should seek guarantees, bonds or other further protections—the most obvious of which is to contract with a company that is big enough relative to this contract not to go bust in the event of failure. For example, Welsh Water has contracted to United Utilities, which passes both the 'size' criteria, and has the added benefit to Welsh Water of having its reputation at stake. No sensible RAB owner would want to put itself in this position of exposure to bankruptcy by the contractor.

Though it may be difficult to eliminate all equity risk without a formal adoption of rate of return regulation, in effect for the RAB the system is almost there already. Clarifying the regulators' commitment to passing through the costs of the RAB merely confirms the de facto reality. And it follows that, given that the equity risk is largely eliminated by this regulatory assignment of risk, the RAB should be debt-financed. That is what the infrastructure funds have in effect concluded. The question for regulators is: why should shareholders get a WACC-based cost of capital which exceeds the cost of debt on the RAB? It is hard to think of any convincing reason why they should.

But when we turn to the operating business—the OPEX and CAPEX side—the equity risk is very real and significant, and the cost of bearing this risk ought to be the equity cost of capital. The WACC obviously does not provide this, but regulators should provide this to correctly price the risk and hence incentivise the companies.

Why interest?

The obvious question is that: if the WACC is below the marginal cost of equity, why then do companies actually carry out these functions? In particular, why do they not cut back on CAPEX? There are three possible answers. The first is that regulators have (mistakenly) set the WACC at so high a level that it is actually above the cost of equity. This may well have been the case in the 1990s, particularly from 1990 to 95. It is, however, hardly likely to be the case now with real post-tax WACCs set at 4–6%.

The second answer is that the companies are required by their licences to carry out the CAPEX—ie, in accepting a price cap, the companies at the same time accept their liability in respect of the functions. This is clearly correct: in effect, they are taking on CAPEX which they will not be properly rewarded for in return for a return they do not need on the RAB—it is a cross-subsidy. It is not, however, a well-designed set of incentives: the companies may well seek to minimise the CAPEX—or at least CAPEX which takes time to mature into the RAB—and regulators will as a result need to be cautious about aggressively going after perceived inefficiencies and

cost over-runs in CAPEX projects. Ultimately this model has the regulators, and not the companies, deciding the CAPEX programme and enforcing it.

The third answer is that investors might think that the regulator will continue to be very generous in the returns offered on the RAB (by sticking to the WACC), and that the difference between the WACC and the marginal cost of debt is likely to be so great that CAPEX is itself an investment project to gain future abnormal RAB returns. CAPEX is then viewed from a company and investor perspective as potential RAB.

How can financial regulation be improved?

A split cost of capital approach by regulators would maintain the incentives to invest (the higher marginal cost of equity) without the need for abnormal returns through the WACC on debt. The companies would be able to finance their functions, and, crucially, customers would not have to pay the very large premia on the RAB. The benefits of absorbing the equity risk in respect of the RAB would accrue to those who bear this risk—the customers.

There remain the tax and interest rate exogenous elements. In the case of tax, using actual gearing to compute the tax effect would be an obvious step, and one which is already being implicitly used in the case of National Grid. This could even be ex post: after all, tax payments are calculated ex post for companies generally. There could be an annual tagged adjustment to the price formula, based upon actual interest deducted. Indeed, it is extremely hard to think of a reason not to do this. And from the companies' perspective, it would also protect them from adverse changes in the tax regime within periods—including windfall taxes, changes in the tax treatment of investment, and property taxes.

Finally, on interest rate changes, it is easy to see why investors have wanted to take this risk in the past—it has been a one-way and very profitable bet. It might, however, be coming to an end: regulators might in future underestimate rather than overestimate. An obvious solution is to index the cost of debt to market rates, and this could be done either in real time, or ex post when the annual price increase decision comes around. A spectrum of approaches lies between the current very crude five-year ex ante approach and daily adjustments, and pragmatism offers several intermediary positions.

There are three possible objections. First, some argue that company treasury functions are undermined, but it is hard to believe that individual utility treasurers are better than the market (and, if they were, they would be very rich indeed). Second, there is embedded debt. This, however, could be sterilised. Third, given that the companies have benefited in the past, consumer interests argue that they should not have the benefit of protection when the interest rates rise. This last objection has considerable merit, but only at the margin. Suppose that interest rates doubled in a short period of time (as they have halved in the past). This may be unlikely, but it is important to think through the consequences. Some companies might find themselves very exposed—and may then turn to the regulator for price increases to protect them—arguing that this is a function that has to be financed. Would a regulator let them go bust? Given the implications across the whole utility sector—the systemic risk—there must be doubt about a regulator's resolve in such circumstances.

There are then three key reforms which would both ensure that the companies could finance their functions, and at the same time do so at lower cost to customers: the

split cost of capital; a symmetric tax pass-through; and indexed market-based costs of debt.

So are the RAB premia justified in current valuations?

There are, it has been argued here, very good reasons why investors are valuing utilities well above the RABs. All ultimately rely on the mistakes regulators have made, in particular in setting a WACC, assuming notional gearing for tax purposes, and fixing the cost of debt for five-year periods. These three factors have—together with the scope for OPEX and CAPEX outperformance—led to abnormal profits. The regulators have failed for almost two decades to sort out these financial issues, and the result has been to make what should be stable, dull and predictable investments into highly attractive and high-return activities. The financial markets have been extremely efficient in exploiting regulatory failure, and the new breed of infrastructure funds have as a result transformed

the gearing and company structures, enforcing the split between assets and operations by following the logic of the differences between the marginal and average costs of capital.

But will the party go on, or will regulators eventually get their acts together? Banking on continued regulatory failure has a sound history—there is not much evidence so far that regulators have improved in these areas, except at the margin. There has been some progress on tax, but not yet on the cost of debt or the split cost of capital. Indeed, regulators have gone out of their way to rule out the main change—utilising a split cost of capital.

Yet there are straws in the wind which investors may well want to heed. Not only have regulators toyed with indexing the cost of debt, but the gearing assumptions have been creeping up. At the next round of periodic reviews, the regulators' assumed gearing could be much higher—especially if, by then, most if not all have actually adopted highly geared structures (as they may well have done). If regulators assumed 80% gearing (or even higher), passed through the tax and indexed the cost of debt, the ratio of the RAB to the market value might look a lot closer to one. And at this point, the incentive to invest in CAPEX would be much weaker: there would be no point in investing with a view to gaining abnormal returns on the eventual incorporation in the RAB because that return would have been significantly reduced through the gearing assumption. For the companies, and their investors, there would be no compensation through a higher cost of equity. Put simply, a formal split cost of capital might be significantly more attractive than the current drift towards pushing up the gearing assumption with a WACC.

Of course, there is one final rationale for the current valuation: investors might just be suffering from irrational exuberance. The history of financial markets suggests that they often do. But, tempting though that explanation might be, so much is now known about utilities and their regulation, that it might be rather foolhardy to rely upon it to explain most—or even much—of the premia.