



**Aquila Networks plc**  
Toll End Road  
Tipton  
West Midlands  
DY4 0HH

Telephone 0121 530 7572  
Fax 0121 530 7573  
andy.phelps@aquila-networks.co.uk  
aquila-networks.co.uk

19 November 2003

Nienke Hendriks  
Senior Price Control Review Manager  
Office of Gas and Electricity Markets  
9 Millbank  
London  
SW1P 3GE

Our ref: AKP/SE

Dear Nienke,

Electricity Distribution Price Control Review (DPCR) Update

I am writing to provide Aquila's views in respect of:

- Ofgem's Electricity Distribution Price Control Review Update, October 2003
- Expectations of Electricity DNOs and WTP for Improvements in Service Stage 1 Quantitative Research Findings by Accent, and
- Background to work on assessing efficiency for the 2005 Distribution Price Control Review by CEPA.

As requested, we have provided a detailed response on the issues raised within each of the publications. However, we recognise that they cover only selected topics and that it will be the December paper that will address in a more comprehensive way the key regulatory issues for the Review.

In order to inform your deliberations ahead of the publication of this paper I would like to highlight three issues which Aquila believes are key to the outcome of the Review. They can be summarised as follows:

- How regulation should be adapted to accommodate the unprecedented level of uncertainty facing the UK energy market, and DNOs' operations in particular
- Satisfying customer requirements for an improved level of service
- The future level and funding of investment

## **Future Risks and Uncertainty**

The next price review period will be characterised by an unprecedented level of uncertainty for DNOs. This will be manifested both in the increase in the outputs required of them e.g. in facilitating the achievement of the Government's environmental objectives, particularly in respect of distributed generation, and in the increased emphasis upon incentives and penalties to ensure the delivery of these outputs. In addition, DNOs could also be subject to a number of new risks including:

- extra costs from, for example, the introduction of Lane Rentals, the new ESQCR, more stringent environmental targets, pension costs, skill shortages etc
- possible stranded costs arising from separating metering from the main price control and supporting distributed generation (including RPZs and the IFI)
- inherent risks of delivering a more substantial investment programme
- Ofgem's behaviour in discharging its duties, for example the recent financial penalties (GS and IIP) imposed upon Aquila, and other companies' arising from the October 2002 storms.

Ofgem acknowledged in its August 2002 Consultation paper that 'where appropriate and practicable, Ofgem will seek to put in place mechanisms that allow companies (and consequently the price control) to respond to changing circumstances.' This was endorsed by the work subsequently undertaken by Frontier Economics.

It will be important therefore for Ofgem to commit in its forthcoming paper to the introduction of such formal mechanisms, such as those employed within the water industry, to accommodate this uncertainty and ensure that the risks faced by a DNO are commensurate with its weighted average cost of capital.

## **Customers' Service Requirements**

If we look forward into the next Review period, there needs to be a recognition that we are no longer in an era where cost reductions and asset sweating are the means to achieve better value for money for customers. Operating costs are almost certain to rise as further efficiencies are more difficult to make and the businesses seek to increase their resources to support ever-increasing investment programmes.

In addition, Ofgem's customer survey is pointing towards improved levels of service for both domestic and business customers. Ofgem must acknowledge that the reality of the market is that, even within a commercial framework based upon the concept of the supplier hub, a DNO's customers are the end customers who are supplied with electricity through its network, and not simply the electricity suppliers with whom they have a commercial relationship. As such it will be the DNOs who will be expected to fulfil these customers' rising expectations for improved service and this will require extra money (both capex and opex) to be spent upon them.

## **Funding Higher Investment**

A fundamental part of securing a higher level of service to customers is to increase spending on the networks, whether to improve their resilience under storm conditions or to ensure their integrity into the longer term. Rapid advances in asset management systems now enable more accurate risk assessments to be made about their performance than in the past and they point unequivocally to the need for a significant increase in investment to upgrade existing and replace older assets. Extra capex to satisfy increasingly onerous legislative requirements, improve service levels and support the Government's environmental objectives will also need to be forthcoming.

Such an increase in spending will put enormous pressure on resources, not only physical, in terms of the extra equipment and skilled labour required, but also financial, in terms of the ability to attract sufficient funds from the financial sector to support these developments. This will increase the emphasis on the need to satisfactorily remunerate companies which invest in the sector. It should also encourage Ofgem to ensure that the financial criteria used in the final settlement will properly reflect the DNOs' true risks as they enter this new high investment environment. This suggests credit ratings comfortably within the investment grade envelope and significantly above the current minimum levels of BBB- / Baa3.

We look forward to these and the other important issues for the Review being addressed in your forthcoming consultation paper. If, in the meantime, you have any questions on this submission do not hesitate to get in touch.

Yours sincerely

Andy Phelps  
Regulation Director

## Summary of response

Please find below a summary of Aquila's comments on the specific issues raised in the three papers. More detailed comments are attached.

### Form, structure and scope of the price controls

- Ofgem should adopt the Ofwat methodology for the rolling opex adjustment
- Incentives to invest in reducing technical losses should be aligned with incentives not to spend under rolling capex adjustment

### Quality of service and other outputs

- We note customers' high priority for reducing unplanned interruptions and we will be putting forward our investment strategy to meet these expectations
- Guaranteed Standards should only be tightened if linked to higher investment and operating costs to finance the inevitable increase in payments to customers
- Ofgem's approach to setting targets is sensible, but we expect inclusion of audited 2002/03 numbers within the derivation of the starting position
- IIP should not be expanded, and revenue exposure capped at a 2% maximum

### Distributed Generation (DG)

- Only controllable costs should be included in the proposed hybrid incentive
- If £/MW revenue driver does not cover costs of connecting DG, companies must have the option to re-open the price control
- Stranded costs should either be logged up, if immaterial, or else the option of a price control re-opener must again be available
- Principle of unavailability payments must be aligned with payments made to demand customers for not providing a minimum level of service

### Assessing Costs

- Future allowances should be set on the basis of average costs
- Potential for ongoing productivity improvements is limited
- We support the CEPA report that Ofgem should employ DEA to assess efficiency, with regression used to support the findings, and that the main cost drivers used should be units distributed and network length
- A number of cost measures should be used in the assessment to understand the overall picture, not only opex
- Quality should not be included in the assessment

### Treatment of pension costs

- The current pension scheme deficit has to be predominantly funded by the existing regulated business activities
- There should be total transparency over the funding of pensions, but in the absence of such clarity in DPCR 3, Ofgem should not make retrospective adjustments.

## 1 Form, structure and scope of the price controls

Ofgem has set out its proposals for the application of the rolling adjustments for opex and capex and the losses incentive. We provide our comments on these three issues below.

### 1.1 Rolling opex adjustment

The July paper, Distribution Price Control Review Initial Proposals, explained that incremental opex savings would be retained for a fixed period of 5 years regardless of when the saving is made in the period 1 April 2003 to 31 March 2005. This paper describes how the rolling mechanism would operate in practice.

We support the general approach of the rolling adjustment proposed. The use of underspends for off-setting overspends, and a commitment that the opex incentive will not be negative is welcomed. However there are a number of improvements that could be made by adopting the Ofwat approach i.e.

- In excluding 'atypical' and exceptional items and
- In the treatment of efficiencies achieved in the last year of a price control i.e. by retaining the benefits of incremental outperformance for an "additional" five years on top of the year in which the savings were made, thus avoiding the need for a retrospective adjustment

These changes also have the advantage of bringing consistency between Ofgem and Ofwat in the approach to this issue.

### 1.2 Rolling capex adjustment

We support the commitment to reward capex efficiency, by allowing Distribution Network Operators (DNOs) to recover the equivalent of depreciation and cost of capital allowances as if the capex had been incurred, for a fixed period of time. However this commitment is conditional on companies meeting their security and quality of supply obligations. It would therefore be helpful if Ofgem could give an early indication of the criteria to be used in making these assessments.

### 1.3 Distribution losses

In the paper, Ofgem reaffirms its view that a modified output based incentive mechanism is appropriate for losses, with a fixed benchmark based on the latest 10 year average applied over the DPCR 4 period.

We continue to believe that this is an improvement on the current existing arrangements, although we do have concerns that these proposals do not go far enough to encourage investment in the reduction of technical losses.

The June paper suggested that the fixed benchmark would be updated every five years. In this paper, it is suggested that the design of the scheme will be based on the treatment of incremental opex efficiencies, where benefits are retained for a fixed period. Whatever the design, it is important that the marginal benefit of reducing losses is equal to the marginal benefits attributed to capital efficiency.

Otherwise DNOs will not be incentivised to reduce technical losses, and instead will choose not to spend capex.

There are two further issues with the proposed scheme that we have chosen to comment on.

#### 1.3.1 Reliability of data

We have some concern over the use of settlement data for the 1998 – 2003 period, which was particularly volatile. In view of this we would urge Ofgem to either exclude or seek to normalise the data.

#### 1.3.2 Distributed generation

Distributed Generation (DG) may or may not reduce losses on the network, depending on where it is located. Given the uncertain nature of the forecasts for DG including their location, we reaffirm our position that DNOs should not be exposed to factors that are largely outside of their control, and hence believe the DG adjustment in its current form should remain.

## 2 Quality of service and other outputs

In the paper, Ofgem sets out the key findings of the consumer survey, and further thoughts in a number of areas including comparing quality of supply performance, rewarding frontier performance, network resilience and the scope of the output incentive scheme for the next price control period. We set out our comments on each of these issues below.

### 2.1 Consumer survey

We welcome the publication of the results of the first phase of the consumer survey and continue to support the research study commissioned by Ofgem to inform which aspects of service are valued by customers, the relative priorities placed on different outputs and customers' willingness to pay for improvements.

The second phase of the survey in 2004 should be based on 'choice experiments', which will help avoid prompting a customer to go down a particular direction when seeking to understand their 'stated preference'.

#### 2.1.1 Existing scope of incentive scheme

Ofgem has inferred from this first stage of the survey that "the existing scope of the quality of service incentive scheme is broadly appropriate".

However, our condition monitoring has identified the need for higher replacement levels of assets to maintain current reliability levels, otherwise service levels will deteriorate. We will therefore be putting forward in our forecast BPQ the case for higher investment to deliver greater convergence in performance between rural and urban customers, and so welcome the fact that customers appear willing to pay a little extra for such an improvement. It must be recognised that higher investment will result in an increase in planned interruptions, and we believe the impact of this should be excluded from the Information and Incentives Project (IIP) targets.

#### 2.1.2 Unplanned interruptions lasting more than 3 minutes

From the survey, both domestic and business customers place high on their list of priorities the reduction in the number of unplanned interruptions lasting 3 minutes or more. We acknowledge this, and welcome the opportunity in the forecast BPQ to put forward a comprehensive strategy designed to satisfy these expectations. This will require further investment, and so merits further investigation in the second phase of the survey to ascertain how much customers are willing to pay for marginal reductions in unplanned interruptions. Future targets should then equate to where the marginal benefits received by customers in reducing unplanned interruptions and the marginal costs of delivering this benefit within the Aquila area are aligned.

#### 2.1.3 Short interruptions

The survey highlights business concerns in respect of short interruptions lasting less than 3 minutes in duration. Given that the vast majority of customers do not

raise this as an important issue, we would not support financial incentives targeted at reducing the number of short interruptions. Our view is that improving the reliability of the network through higher investment targeted at the replacement of key assets will deliver greater benefits to both domestic and business customers. If some business customers want a higher level of security, this could be achieved through the connection charge.

#### 2.1.4 Guaranteed Standards

The survey attempts to garner views on the Guaranteed Standards, both in regard to the trigger for payments and their magnitude. Guaranteed Standards are designed to recognise when service levels fall below an acceptable minimum standard. However, they are not designed, as stated in the Electricity Act 1989 (as amended), to provide for consequential loss. We would therefore not support the views of business who demand significant increases in the value of the payment.

Domestic and business customers appear to support a reduction in the time period before GS2 is triggered. Similarly they believe that the number of interruptions should be reduced in the case of the multiple interruptions standard, GS2a, before compensation is paid out. If Ofgem is considering such a tightening, higher investment will be required as well as an additional cost allowance for the inevitable GS payments that will result.

#### 2.1.5 Automatic payments

The survey highlighted that only about 10% of consumers are aware of Guaranteed and Overall Standards of Performance (GOSPs). Whilst most domestic and business customers believed that payments for not providing a minimum level of service should be automatic, we would argue that the costs of implementing phase connectivity continue to be prohibitive. However, it may be possible for companies to be more pro-active in informing customers of their entitlement to claim that at present, although of course, as recognised in the 'Interim Storms Compensation Arrangements', some allowance for the costs involved will be appropriate.

#### 2.1.6 Priority customers

An interesting outcome of the first phase of the survey is the demand from domestic customers to provide a priority communication line for vulnerable customers, and from business, to establish a direct line to DNOs. Each measure is designed to provide more accurate information to customers, and in the case of business, regular updates leading up to full restoration.

In principle, we would support such an initiative. However if there are a large number of customers to whom enhanced service levels are provided, this will impose substantial costs, in respect of both staff and information systems, and by inference, is not a priority service.

We look forward to working with Ofgem to implement a system that meets the needs of the people who are the most vulnerable and electricity dependent. This



principle can also be applied to the business customers who most require additional information such as regular updates, although it is important that the service is targeted for certain customers for it to be effective. Any additional costs efficiently incurred from providing an enhanced level of service should nevertheless be added to our cost base.

## 2.2 Comparing quality of supply performance

Quality of supply performance in terms of customer interruptions (CIs) and customer minutes lost (CMLs) varies significantly between the DNOs. We agree with Ofgem that a significant part of this variation is due to differences in the inherent characteristics of their networks or to the way in which they have been designed over previous decades.

To make realistic comparisons between DNOs on quality of supply requires a model that captures all of the variables that explain performance variation. This would represent a 'normalisation' of performance data. Ofgem has made a start by adopting a four stage simplistic disaggregation process. We are supportive of this approach in general for informing target setting for 2010 and 2020. The glidepaths suggested in the paper of moving 40% of the way towards the 2020 target for 2010 appear pragmatic.

The performance data underlying the benchmarks that help to inform target setting is currently being audited. It is important that when a determination on this issue has been made, our starting point and 2010 target is adjusted accordingly.

In the customer survey, consumers expect interruptions to supply when there is severe weather or other exceptional events. We expect our ongoing performance to be adjusted for these factors in assessing performance against glidepath targets.

We are concerned however, that due to 'normal' variations in weather, DNOs are at risk of not meeting these spot targets. As the Frontier Economics report (Balancing Incentives March 2003) stated, actual performance will depend on many random factors, and so "we might expect much of this 'noise' to be smoothed out of the data on which any incentive mechanism might work". We agree with this statement and believe a way of addressing this issue is to base performance in any one year on an historical average, including the out-turn year concerned. An alternative approach put forward by Frontier Economics, which also deserves consideration is to select an upper and lower bound to accommodate the annual variability in performance.

## 2.3 Rewarding frontier performance

In the IIP final proposals (December 2001), Ofgem implied that frontier performance would be rewarded with targets that were less demanding in terms of future improvement than for companies further from the frontier.

As we have argued above, we do not accept that the disaggregation model captures all variables for robustly normalising performance, albeit we recognise it is useful for target setting. Therefore, the benchmarks put forward by Ofgem are

not an appropriate basis for identifying and hence rewarding frontier performance. Instead we propose that frontier performance should be based on a DNOs own rate of improvement.

## 2.4 Network resilience

Ofgem state that network resilience has two elements:

- ability of a network to withstand an exceptional event;
- ability of companies to respond to that event

Whilst we broadly accept this definition, we believe the interest of customers is best protected by addressing the underlying cause i.e. the resilience of the network, although we acknowledge that speed of response and restoration is an important part of the overall strategy.

DNOs are already incentivised to respond to an exceptional event. The 'Interim Storms Compensation Arrangements' are by their very nature an incentive to restore supplies quickly as the proportion of costs which are passed through declines with time. If these arrangements are developed for the next price control, the only incentive required is on the ability of a network to withstand an exceptional event.

We support additional allowances for improving the reliability of supply. However, introducing an incentive on for example faults per km is problematic. There will be difficulty in setting appropriate targets given the likely time lag between investment and improved performance. One way forward is to provide an allowance on condition that certain types of assets are replaced e.g. small section conductors. Companies would still have strong incentives to procure the replacement of key assets as efficiently as possible via the rolling capex mechanism.

## 2.5 Scope of the output incentive scheme for the next price control period

The forum that should help inform whether the current quality of supply incentives be expanded beyond CIs, CMLs, speed and quality of telephone response is through the second stage of the customer survey. This should also apply to any possible changes to Guaranteed and Overall Standards of Performance (GOSPs). If there is to be an increase in the number of financially incentivised output measures, these must have the same reporting accuracy of data as governed by the existing Reporting and Instructions Guidance (RIGs) i.e. 95% confidence. Any new outputs will also need to be appropriately funded to provide opportunities for DNOs to deliver the performance targets. However, from a point of principle, the more outputs included in the basket of incentives, the more trade-offs that will be made, which may result in perverse outcomes.

Our preferred approach is to have a simple regime as we currently operate under, with the same exposure to revenue of 2%. However if Ofgem continues to employ the approach to force majeure that it is proposing for the October 2002 storms, we would firmly argue for a reduction in exposure unless the higher risk imposed on companies is factored into the cost of capital calculation or the setting of the service targets themselves (see section 2.2).

### 3 Distributed Generation

Ofgem has published a summary of the Distributed Generation Business Plan Questionnaire (DG – BPQ). Our initial views are that there is a significant variation in capacity growth and connection costs, with many DNOs applying large bandwidths for the future. This is due to the significant uncertainty regarding the prospects for DG. Such uncertainty needs to be recognised in the proposals for dealing with this area.

#### 3.1 Incentive framework for distributed generation

In the July document, Ofgem proposed a hybrid mechanism for incentivising efficient capital expenditure associated with the connection of DG. DNOs would be able to pass through a proportion of these costs (less than 100%) with a supplementary £/MW driver based on capacity connected, designed in total to deliver a premium rate of return.

With the possible introduction of a DG incentive, our greatest concern is that the range of costs likely to be present is too great, and our ability to influence them limited. For example the connection of a generator to one part of the system may only result in limited costs. However if the same generator were to connect where there was a fault level issue, then the cost could easily escalate, which suggests that a generic or multiple revenue driver, even if set at a generous level, may still result in the DNO incurring significant costs.

The present deep connection charge policy has provided an effective price signal against connection in expensive areas. The current Ofgem proposals weaken the price signal and so makes more likely the connection where expensive reinforcement is required. We do not consider the incentive mechanism in this respect to be efficient

The incentive could actually work against quality of supply. For example where fault levels are potentially excessive, an alternative to uprating switchgear would be to operate the bars split as opposed to running the transformers in parallel, and introduce a sequence scheme. This would have the effect of introducing short interruptions for certain faults, which whilst not affecting IIP requirements, is a deterioration in customer service. Whilst this option should not be ruled out, and indeed may be appropriate in some cases, the decision on whether to implement it should not be distorted by an inappropriate driver.

We have given further thought to your proposals. Where DNOs have little or no control over costs, an incentive framework is inappropriate, and instead these costs should be passed through. Consistent with this principle, given that fault level is the most significant and uncertain cost driver, this should be excluded from the incentive, and instead be given full pass through treatment. The hybrid mechanism could then be applied to the remainder of costs. Consistent with this principle, an alternative approach is to say that only secondary assets should be governed by the hybrid arrangements. The costs of primary assets would be fully recovered because these contracts are typically put 'out to tender', and hence the market price should represent the efficient cost incurred.

However if either of these proposals are not supported by Ofgem, then we would argue that this should become a 'notified item', allowing a DNO to apply for an interim determination mid-way through a price control. This would provide some protection for DNOs where the costs of connecting a generator are significantly in excess of the £/MW driver.

### 3.1.1 Proportion of pass through

Ofgem request views on the proportion of costs that should be passed through to customers. Leaving aside the points made above regarding costs that are not controllable, the principle must be that the smaller the proportion of costs recoverable through pass through, the larger the £/MW incentive will have to be to reflect the additional risk placed on DNOs. Our view is that in a low risk business, the proportion of costs passed through should be near to 100%. Given the uncertainty of connection costs, a generic incentive rate would not be appropriate, but the issue over the number of bands necessary to reduce risk requires further work.

### 3.1.2 Cost stranding

We are concerned that the 'hybrid mechanism' does not allow for the recovery of costs via the £/MW driver if a generator takes the commercial decision to disconnect. There is therefore a need for protection from this eventuality i.e. stranded costs logged up for the next review unless they breach a materiality threshold, in which case the price control would be re-opened.

### 3.1.3 Unavailability payments

Ofgem has proposed the introduction of a £/MW per hour rebate to generators for network availability in standard connection terms as a means of incentivising the provision of network access on an on-going basis. Incentives must not distort availability between generator and demand type customers from a point of principle. Any recognition of unavailability should be set commensurate with payments provided for not providing minimum levels of service to demand customers via Guaranteed Standards. As the Electricity Act gives DNOs the ability to exclude consequential loss, this principle should be reflected in any 'ongoing access' incentive.

### 3.1.4 Application of arrangements to demand customers

Ofgem is consulting on whether similar arrangements should be applied to demand customers. DNOs have more experience and control of costs associated with reinforcement in response to load growth. Therefore it is appropriate to have a fixed allowance with an adjustment (revenue driver) to reflect the volume of connections. This should also be the longer term aim for DG, but only when there is greater certainty, knowledge and controllability. Until then, it is necessary to have a separate basket for generation and demand type investment.

## 3.2 Registered Power Zones (RPZs) and Innovation Funding Incentive (IFI)

In the July consultation, Ofgem proposed new incentives to encourage innovation, particularly to respond to the challenges associated with the connection of DG.

### 3.2.1 Category C of the IFI funding incentive

This is designed for projects which enhance technical understanding. Ofgem argue that such projects would not be rewarded initially, but once the application is proven, a premium pass through rate would be allowed in line with the most innovative projects classed under the scheme.

We recognise that the opportunity to recover expenditure in innovative projects under the IFI will lead to greater interest from DNOs. However any uncertainty over the level of funding based on an ex-post test of the project's success will lead to DNOs being less willing to become involved. We also firmly believe that such arrangements ignore the fact that the majority of innovative projects may fail against their initial objectives but still provide a useful source of information to the industry. As such all projects should be rewarded with a minimum 100% recovery of costs to generate activity in this area. Once more information is available from 'learning by doing', a smaller percentage of cost recovery may be more appropriate.

### 3.2.2 RPZs

Ofgem is seeking to encourage high quality innovation through RPZs. We support this position, but disagree that having a limited number of power zones can provide this. By providing a funding incentive that rewards all innovative projects, we believe that DNOs will be able to safely explore innovative ideas which, successful or not, will lead to an enhanced understanding of network development and facilitate the connection of more distributed generation. This enhanced understanding will benefit the industry and provide DNOs the opportunity to develop their networks in order to meet the needs of both demand and generation customers.

We envisage that RPZs will develop both from DNO proposals and customer-led projects. It would be impossible to list every likely scenario which would lead to an RPZ being created as the combination of the various key elements of a proposal e.g. location, demand-generation balance, current network constraints etc may result in the RPZ being considered. However, we do see an opportunity for RPZs being employed to help create 'self sufficient' energy communities of either commercial/industrial parks, domestic customers or any combination of them. Such communities will require innovative network arrangements and will also serve as testing grounds for the interaction between distributed generation and demand customers.

## 4 Assessing Costs

We welcome the publication of the CEPA report commissioned by Ofgem, which was designed to review the approach to benchmarking costs in DPCR 3 and consider alternative techniques and methodologies going forward. Our comments below consider both the type of costs or inputs that should be benchmarked and the top-down techniques to help inform comparative performance.

### 4.1 Use of benchmarking in the final cost assessment

We believe that benchmarking should be used to inform the debate for setting future allowances. The Frontier Economics paper on 'Balanced Incentives' concluded that the most powerful incentives for DNOs to operate under are if future allowances are set in the basis of average costs. We support this and urge Ofgem to confirm this approach in the second consultation paper in December 2003.

Average cost benchmarking is a proxy for how competitive markets function, with the most efficient earning above average returns, and conversely, poorly performing companies accrue below average returns. DNOs will respond to the higher incentive power of the mechanism created by the prospect of earning higher than average rates of return by undertaking incremental efficiency initiatives. The short term benefit received by shareholders is required in order to make the higher one-off investments to deliver further and sustainable efficiencies more viable. Consequently we believe this approach is consistent with Ofgem's primary objective to protect the interests of customers as the average will be driven further southwards by the industry at the next price control review than it would otherwise be.

Ofgem are employing CEPA to conduct a total productivity study. We support this piece of work, but believe that care must be taken in interpreting the results. In particular, it is important that future productivity projections are not unduly affected by historic performance, which is biased due to the privatisation effect of inherited inefficient companies. We believe that these inherited inefficiencies have been largely removed from the business as a result of the RPI – X framework over the last decade. Future potential productivity trends in our view are more aligned with the general UK economy.

### 4.2 Which techniques should Ofgem use?

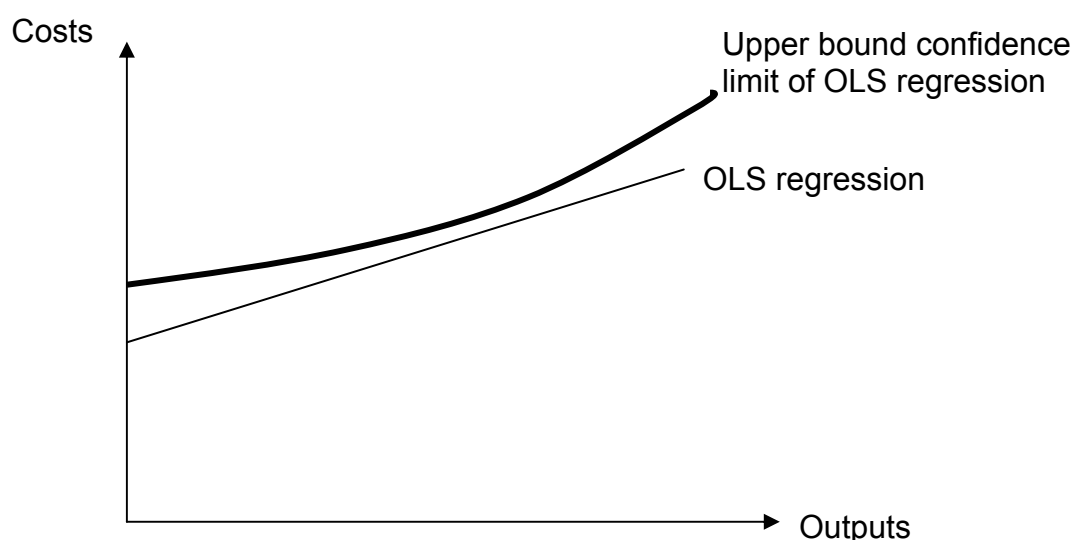
The CEPA report reviews the methodology employed at the last distribution price control review, and suggests a number of modifications. We endorse their conclusion that Data Envelopment Analysis (DEA) is a "valuable benchmarking tool" and should be supported by regression analysis. DEA in particular is more robust at handling a small data set than regressions, which will be an important factor when assessing cost efficiency at company group level. These models should be based on the inclusion of all observations.

DEA and regression analysis should be applied to setting future allowances on the basis of average costs. As the regression represents average costs, this negates the need for constructing a COLS frontier. Under DEA, each DNO could

be compared to the average efficiency of the industry. Its costs could then be scaled accordingly so that forward looking costs are projected on the basis of average efficiency.

We propose a third technique that captures the benefits of Stochastic Frontier Analysis whilst not having to rely on a panel data set for robustness. Confidence intervals (limits) could be applied to the OLS regression. These confidence limits, based on the prediction of costs can be simply produced by standard statistical packages. The greater the degree of confidence required for interpolating average cost, the wider the confidence band will be. Given that benchmarking models are less robust with a small sample size, this is addressed in our proposal by increasing the size of the confidence interval. The same effect will also occur for regression models that have a “poor fit” due to insufficient explanatory variables being included.

An illustration of the impact of confidence intervals is shown below. The OLS regression is shifted up to reflect the predictiveness of the model.



**Figure 1 Confidence limits applied to a standard regression**

#### 4.3 Should international or panel data be used in the analysis?

Panel data would improve the robustness of the regression analysis. However we are not convinced that there is sufficient accurate data for applying such modelling techniques at this review, although believe it should become part of future regulatory review for comparing costs.

The use of international data is one way of increasing the sample size used in the analysis. However we would argue that given the difficulties involved in normalising domestic cost data, it would be impossible to achieve this for international data in the timescales envisaged for this price control.

#### 4.4 Inputs to be used

At the last review, there was an emphasis on controllable operating cost benchmarking for assessing efficiency. For the next review, we favour an approach, which provides balanced incentives between operating and capital costs. However the problem that remains is defining an appropriate measure of total costs. We examine a number of possible options below.

##### 4.4.1 Total controllable costs

Defining costs as annual operating and capital expenditure is simple to calculate, but does not reflect the long lived nature of assets on the network with a statutory life of 40 years. Current capital expenditure will in part be driven by both the operating environment and past investment on the network both before and after privatisation. Investment is also more likely to fluctuate on an annual basis compared with operating costs. Therefore relying on total controllable costs based on one year's data is very misleading. On the other hand, a large panel data set would be required in order to capture many of these factors under this definition of cost. We would therefore not support efficiency being measured on a total controllable cost basis.

##### 4.4.2 Controllable operating costs plus average capex

If controllable capital expenditure is averaged over a period of time, this will help to smooth the effect of annual volatility of the data. However it does not address the fundamental problems highlighted above. For example a newer network will require the replacement of fewer assets than an older network, and hence average capex over for example a five year period will not reflect this reality. Therefore whilst this is an improvement over total controllable costs, we would have concerns if used for informing comparative efficiency.

##### 4.4.3 Controllable operating costs plus capitalised faults

In DPCR 3, there was an inconsistency in the way fault expenditure was treated by PKF. We believe that more balanced incentives could be achieved by adding capitalised fault expenditure to operating costs. However Ofgem must acknowledge that fault expenditure is driven by the inherent and inherited characteristics of individual companies' networks and interpret their results accordingly.

##### 4.4.4 Controllable operating costs plus depreciation and return on an asset base

This is our favoured approach for defining total costs, as the asset base should reflect the underlying levels of investment in long lived assets. One possible approach for deriving the capital stock from which depreciation and a return on capital would be derived is to use the Regulatory Asset Value (RAV).

In conclusion, we would recommend the use of the following definition of costs in the price control review for conducting top-down modelling.

- Controllable operating costs



- Controllable operating costs plus capitalised faults
- Controllable operating costs plus depreciation and return on a RAV

#### 4.5 Adjustments required to enable comparisons between DNOs

Any benchmarking analysis which is undertaken must take into account inherent and inherited network factors that determine some of the cost variations between DNOs, but are not in the direct control of management. Whilst we would support a more robust cost driver analysis to improve the specification of the modelling, an alternative option is to make cost adjustments for specific factors.

##### 4.5.1 Operating environment

Aquila's operating environment, and therefore network is in our view different to other companies. We serve a substantially higher proportion of industrial customers than most companies, which dictates the network assets employed on the network. The increased level of network equipment and complexity on the HV network generates a proportionately higher amount of inspection, maintenance and fault restoration and repair activity. Birmingham is of commercial importance to the regional economy, and has particularly high electrical security standards. Consequently investment and network management costs are higher in this environment. We also have an extensive overhead line network, which serves around one million customers, and which imposes considerable upward cost pressures on the business. The Midlands region is also recognised as having some of the most congested road networks, particularly the M6/M5 and M42 intersections, which inevitably leads to additional journey times and upward cost pressures.

##### 4.5.2 Treatment of mergers

Ofgem should ensure that policy decisions do not discriminate in favour of merged companies over sole licence distributors such as Aquila. It is therefore important that the analysis recognises that costs will be influenced by the synergies achieved by merger transactions, which are applicable to both operating and capital costs.

Ofgem proposes to compare costs based on individual licence entities and merged groups. We support this principle, but believe that DEA will produce more robust results compared to regression techniques due to the small sample size envisaged. In addition, we believe that making specific cost adjustments for synergies in order to create a more level playing field between the individual licence companies could strengthen the analysis.

#### 4.6 Which cost drivers should be included?

The CEPA report considers a number of potential cost drivers, including scale as captured by units, network length and customer numbers; topography and climate; customer mix; losses; and quality. We support the broad conclusions of the report, which are:

- Customer numbers should not be included as an output as it is closely correlated with units distributed in particular. Customers also drive fewer costs, particularly when metering is taken out of the equation.
- Quality should not be included in the benchmark exercise and instead be separately incentivised through the Information and Incentive Project (IIP) and Guaranteed and Overall Standards of Performance (GOSPs). Furthermore it is not possible to normalise the data with any degree of accuracy to merit incorporation.

#### 4.6.1 How should the weighting of cost drivers be determined?

At the last review, 50% weighting was attached to customer numbers with the remainder shared equally between units distributed and network length. We do not support the artificial fixing of the weighting of cost drivers for the forthcoming review. Instead we advocate the use of multiple regression techniques, and multiple outputs in the case of DEA.

#### 4.6.2 If using DEA what combination of inputs and outputs should be used?

We would support the use of an input-orientated DEA model for the review, with costs treated as the sole input. The outputs should therefore be the drivers of cost.

## **5 Treatment of Pension Costs**

As all parties realise, the issue of funding pension costs is of paramount importance for this price control settlement. Many of the issues raised within the initial consultation paper, and now expanded upon within this update paper are common across all of the DNOs. Aquila has assisted in the preparation of three joint DNO papers that were submitted to Ofgem on 11 November 2003, and is fully supportive of the comments within those papers.

The papers cover the three main issues that concern Aquila and the other DNOs and comprise:

- Under/Over payment of contributions in prior periods
- Apportionment of future company pension fund contributions to the distributor
- Use of Pension fund surpluses to fund redundancies

The key messages, which are elaborated upon in the papers are:

### 5.1 Under/Over payment of contributions in prior periods

Ofgem stated in the June paper on 'developing network monopoly price controls' that increases or decreases in the future costs of providing accrued benefits resulting from under or over funding in prior periods will need to be considered on a case by case basis. Whilst we accept the guidelines for subsequent price controls, it is inappropriate to apply it retrospectively to a price control period where there is no certainty over the extent to which pension costs were allowed within the operating cost allowance at the last price control. We therefore welcome Ofgem's acknowledgement of this point and hope that it is addressed in the detailed methodology statement in December 2003.

### 5.2 Apportionment of future company pension fund contributions to the distributor

Ofgem intends to apportion pension costs between regulated and non-regulated business, and intends to bring forward detailed proposals in the second consultation paper in December 2003. We argue that the current definition of Distribution cannot be used to determine the split of past liabilities between it and other activities. Prior to October 2001, there was no clear distinction between distribution and other activities carried out by the principal employer of the pension scheme. Such distinction was subsequently clarified under the Transfer Scheme arrangement of the Utilities Act (2000). The vast majority of activities undertaken pre-Transfer Scheme were regulated. To the extent that the deficit has arisen through past underfunding (as can only be seen with hindsight) by the customers of the then regulated businesses, it is reasonable that the additional funding required to eliminate the deficit should be borne by the remaining regulated entity and funded by its customers.

### 5.3 Use of Pension fund surpluses to fund redundancies

In the paper, Ofgem does not support the use of pension fund surpluses to finance redundancies. It is argued that DNOs are expected to take into account the non-recurring costs associated with achieving recurring savings, and hence

companies should have taken into account the early retirement deficiency costs which would result.

There are at least three fundamental objections to Ofgem's' approach:

- Customers have, and will continue to, benefit considerably from companies' out-performance of their operating cost targets. Such out-performance has only been made possible through the proper use of scheme surpluses to fund severance programmes
- The extent to which any allowance was made for restructuring/redundancy costs in DPCR3 is unclear and in any event immaterial. Customers have therefore not paid twice for the savings made
- It implies retrospection, and as Ofgem acknowledge, it is not appropriate to make retrospective adjustments to price controls

#### 5.4 Sale of supply business to npower

In addition to the comments contained in the collective response, we would also like to reiterate our position concerning the treatment of pension liabilities when we sold the supply business to npower. At the time of the sale, there was no scheme deficit, nor was there any perceived risk that there would ever be one. In common with most, if not all, Mergers and Acquisition activity, where only a portion of the business is being sold, the pension obligations of past employees of the part of the business being sold (even if it could be determined with any accuracy) would remain with the incumbent business. It is only the pension obligations of existing employees that would be taken into account in determining the disposal terms and proceeds. To the extent that there is a deficit relating to these employees, these will clearly need to be funded by their existing employer.

#### 5.5 Period over which the pension deficit should be recovered

Ofgem have also invited views on the period over which pension scheme deficits should be funded through additional contributions. In line with sound actuarial custom and practice, we believe that this should not exceed the average remaining service life of the active membership.

We look forward to further discussion on this subject and to the publication of the detailed methodology statement in December, which we trust will provide greater clarity into the treatment of pensions costs during DPCR4 and certainty over the longer term funding.