Developing Network Monopoly Price Controls
Ofgem Workshop

19 February 2003

Workshop format

In the morning session, the following presentations were given:

- Ofgem – Martin Crouch & Cemil Altin – on developing network monopoly price controls and the 2005 DNO price control review
- Energywatch, Lesley Davies, on what consumers need from networks
- United Utilities, Paul Bircham, how should incentives be set?
- ScottishPower, Graham Morris & Dave Fort, on issues arising from distributed generation from a DNO's perspective
- Innogy – Phil Bowley – on issues arising from distributed generation from a distributed generator's perspective

In the afternoon, delegates separated into four discussion groups, each composed of a mix of participants, including consumers and their representatives, generators (including distributed generators) and their representatives, DNOs, academics, and Ofgem staff. The groups were asked to discuss a common set of questions (below), which covered three areas:

1. Incentives for efficiency
2. Developing incentives for outputs (quality of service)
3. DNOs and distributed generation

Each group was chaired by a member of Ofgem staff, and a separate representative from each group reported back on the key discussion points to all delegates at the workshop-wide summing up session. A high-level summary of the key discussion points is set out below—this summary does not represent Ofgem views or policy.

Reference documents

Delegates were given discussion material drawn largely from the following two documents, which set out Ofgem's thinking in these areas, (and to which the references in the discussion questions relate):

> "Developing Network Regulation: Open letter to the Chief Executives of Distribution Network Operators (DNOs) regarding Distributed Generation", January 2003
>
> "Developing network monopoly price controls: an update document" February 2003 (ref. 05/03)

Incentives for Efficiency - Key discussion points

***Discussion question 1*: How long should companies be allowed to retain efficiency savings for before they are passed back to consumers? Should this differ for opex and capex efficiencies? (February document - paragraphs 4.14 – 4.17)**

As opposed to choosing the retention period and evaluating its impact on the sharing of efficiency savings between companies and consumers, some suggested that the sharing factor, between companies and consumers, should be agreed and arrangements be based on that. Suggestions for determining the sharing factor included letting Ofgem determine it, starting from a 50:50 split between companies or consumers, or working from the present sharing factors, which vary over the duration of the price control. However, it was noted that the different degrees of risk aversion between companies and consumers should be considered.

In setting the period for which companies are allowed to retain efficiency savings, a number believed Ofgem should not replicate competitive market conditions, where most benefits typically only last for 2 to 3 years. Research & Development (R&D) could be incentivised separately in the price control, as in a competitive market R&D can lead to benefits that remain with the company for longer than the usual 2 to 3 years. One difficulty with such an incentive is producing price control proposals to reflect such detail.

***Discussion question 2*: What is the best way of overcoming the problems of the opex-capex trade-off? (February document - paragraphs 4.18 – 4.19)**

At the last distribution price control review (DPCR), some companies were perceived to be less efficient than others because of their capex and opex capitalisation policies, given the separate evaluation of operating expenditure (opex) and capital expenditure (capex). Those companies who chose a high capex/low opex mix are now not getting the same benefits as those who selected a low capex/high opex mix.

There was widespread support for the proposal for a rolling 5-year retention period for efficiency savings. Incentives to make opex and capex efficiency savings need to be more balanced now, particularly as opex savings have become harder to achieve. DNOs have been much more successful at beating opex targets than capex targets. Although, in general, capex targets have been beaten, there is a general feeling that this has more to do with forecasting errors than efficiency exploitation. In addition, DNOs have weaker balance sheets in the present economic environment than they had at the time of the last distribution price control review, so some see fewer opportunities for companies to invest.

For retention periods, some endorsed an approach which equalised the net present value of opex and capex efficiency savings. The extent to which it was equally easy to make opex savings as for capex was discussed, and some concluded that it was equally easy.

To address the distortion of incentives between opex and capex, total costs modelling is appealing but has several problems that need to be overcome:

- It raises measurement issues – e.g. capex cost drivers, period of time, and the relationship with the RAV
- Mergers and other problems in benchmarking

Therefore, total costs benchmarking should be viewed as one of many tools for the regulator to assess efficiency. There could also be a role for efficiency analysis with a more detailed assessment of efficiency savings and on-going monitoring of cost efficiencies. Another suggestion was to consider looking at changes in total costs.

It was noted that opex and capex incentives cannot be considered in isolation from other existing or new incentives. For example, if there is a strong incentive to make capex savings, there must be a balancing incentive to meet quality of service for consumers. If the balance is not correct, companies are likely to expend more effort on pursuing those efficiencies that give the bigger reward, rather than the most economically efficient.

Similarly, the losses incentive will have an impact on optimal spend on low-loss transformers, but the capex incentive will encourage DNOs to purchase other types of transformer. There must be a balance between different incentives.

***Discussion question 3*: Ofgem has proposed allowing companies to retain efficiency savings for a fixed period of time regardless of when the saving is made. What issues does this raise for monitoring companies' performance and what arrangements should be put in place for dealing with capex over-and under-spends? (February document – paragraph 4.14 & Appendix 3)**

The way in which efficiency is defined and thus calculated is key. One suggestion that efficiency was any outperformance of regulatory targets, subject to achieving the necessary output level. In addition, any system would need to look at the way the cost of capital and depreciation were reflected.

The additional monitoring which may be required once a fixed retention period for capex efficiency is introduced should not lead to micro-management, but rigorous examination of under- or over-spend and the associated impact on efficiency, without onerous reporting requirements.

General discussion points

The NGC PCR involved NGC being presented with a 'menu' of price control proposals, and allowed it to choose whether it wanted to pursue a high-risk/higher-reward or low-risk/lower reward strategy. This could be an option for the forthcoming DCPR. A 'menu' of options would allow companies to select the price control that best fitted their risk preference. The difficulty of this would be the complexity in deriving a range of options for each company.

In relation to benchmarking, one of the key issues for the regulator in the next review will be the treatment of merged companies. The value of the merger benefit will be very difficult to assess. To the extent that many DNOs have now moved closer to the efficiency frontier, the regulator must consider whether there is a point at which benchmarking is no longer viable. At this point an average could be calculated and used instead.

The price control will be complicated by the fact that many DNOs have now diversified into other areas away from the core regulated business.

Developing Incentives for Outputs (Quality of Service) - Key discussion points

***Discussion Question 1*: What outputs are of importance to consumers? Do these vary across different 'types' of consumer? (February document – Appendix 4)**

Business consumers and domestic consumers do not necessarily want the same outputs from their DNOs. Security of supply and quality of service are important for both, but other aspects have different levels of importance to different types of consumer e.g. business consumers are keen to have transparency in connection charges. Similarly, business consumers are better able to quantify the effect that supply interruption has than domestic consumers.

In addition, rural consumers are have more security of supply concerns than urban consumers, who tend to suffer fewer outages. The need to eradicate short interruptions for domestic and business consumers could also be evaluated by a survey.

To the extent that business consumers as a group pay more to DNOs in total than domestic consumers, and this should be considered when designing incentives. There will need to be a trade off between domestic and business consumers in designing incentives, but this will be for Ofgem, energywatch and consumer groups to decide upon, not DNOs.

An I&C consumer suggested that I&C consumers would be prepared to pay more for better Quality of Supply or improved compensation. In addition, more disaggregated information on the impact on business of failures would be more valuable than the present statistics (CIs, CMLs), which do not distinguish between an interruptions to domestic and business consumers.

***Discussion question 2:* What issues need to be considered in assessing consumers' preferences? (February document - Appendix 4, paragraph 4.5)**

The difficulty of providing differentiated services to consumers on such networks means that market research is necessary to understand the views of different consumer groups, especially rural and larger consumers. One difficulty in assessing how much consumers were willing to pay was that even an individual consumer's opinion might change over time.

An important consideration will be the issue of how much extra consumers are prepared to pay for services relevant to themselves, and how much extra they would be willing to pay for the betterment of all UK consumers as a whole. Increasing the service level for some consumers may need to be funded by other consumers, and there is a question as to the appropriateness of such 'benefits transfer' and the presence of altruism in this way. For example, although the cost of interruptions for I&C consumers may be greater, this may be better reduced through insurance or commercial contracts. One DNO considered calibration of incentive payments for DNOs by using surveys was inappropriate, as the issues around worst served consumers cannot be addressed until the necessity of cross-subsidy is accepted.

A consumer group representative referred to a survey carried out of Transco consumers. The sample included consumers who had been off supply as well as consumers who

had not been off supply. It also included a rural/urban split of consumers. The survey revealed that people were generally not prepared to pay more for an improvement in quality of supply, and that they tended to internalise costs, for example by buying a torch to keep by the fuse box, hospitals buying back-up generators, etc.

A suggestion was made for a different design of survey to answer the following questions: a) how much would you pay for your own quality of service to improve; b) how much would you pay for the quality of service of other consumers to improve; and c) how much should other consumers pay for your quality of service to improve?

Discussion Question 3: **How should we determine compensation levels for consumers where quality of service does not meet the specified level? Should the compensation level vary across different 'types' of consumers? (February document – paragraph 5.8 – 5.9)**

Giving consumers good information about the cause and likely duration of supply failure is perceived to be as important as resolving the failure, and Ofgem should consider what incentives would be appropriate for investment in information systems to allow this level of service.

One suggested to the Guaranteed Standards of Performance (GSOP) payments to consumers that was suggested was for suppliers to run insurance schemes for consumers willing to pay an extra charge on the understanding that they would be compensated if they went off supply, in all circumstances.

Discussion Question 4: **Should consumers receive compensation even when an event is exceptional/weather is severe? What issues would this raise? (paragraphs 5.12 – 5.14 of February document).**

The present system of exemptions needs to be improved, as it does not appear provide strong enough incentives for rapid restoration and ensuring network reliability. The GSOP payments similarly do not provide strong incentives. This is particularly apparent when you compare the performances of DNOs. In considering a change, it is key to understand the impact on risk, costs, and incentives, including the role of insurance, and the need to move to an ex ante not ex post system of determination. A number of DNOs argued that insurance against weather events was no longer available to them, and that consumers themselves were better placed to insure against this risk.

It is unlikely that any network will withstand weather conditions all of the time, and interruptions to a degree are inevitable, particularly where continued bad weather may prevent repairs. Because of this, it may be inappropriate to require DNOs to pay compensation in all circumstances. It is important to consider whether consumers are willing to pay more in order to strengthen networks sufficiently to cope with all weather conditions.

At the time of supply interruption, DNOs spend large amounts on dealing with the problems as quickly and efficiently as possible. This spend is increased by compensation payments. In addition, DNOs spend a great deal of effort in fielding calls from consumers about compensation. If consumers were more aware of the Guaranteed Standards scheme, the number of calls could be reduced and the DNO's effort could be concentrated on restoration of supply.

DNOs and Distributed Generation – Key discussion points

Discussion question 1: **How can distributed generators help DNOs to run and operate their networks more efficiently?**

Distributed generators could do a great deal to help DNOs run their networks like a smaller version of the transmission grid. Some distributed generators supported the introduction of a longer price control period.

Discussion question 2: **What can DNOs do for distributed generators to assist them in connecting to the distribution network?** This question was not discussed in detail.

Discussion question 3: **What incentives should be provided to DNOs for:**

a) **efficient reinforcement of the network (pages 14 –17 of January open letter)**
b) **efficient operation of the network (pages 18 –20 of January open letter)**

In the UK the focus is on incentivising DNOs to attract distributed generation (DG) investment, and careful consideration should be given to whether this is the best method. For example, in the Netherlands, where DG has had successful penetration, generators are subsidised to build their plant and DNOs' costs are recovered normally. Changing the current deep connection charging regime to a shallower regime would make DG investment more attractive.

Some believed Ofgem should carefully consider whether most DGs are likely to locate in certain DNO areas e.g. renewables in Scotland and Wales, and should therefore work with the DTI to consider whether incentives and policies should be concentrated on certain DNOs, given the potential for renewable DG to concentrate in certain areas. In addition, the regulator must think carefully about the capex companies will incur as a result of the investment.

DG technology and development delivers many benefits but also new problems. One particular risk to consider is that of stranded assets – if a distributed generator fails, or building work is not completed, the investment in the system may be wasted. Another problem could be if DG failure leads to an impact on the system. In the extreme, this could result in Utilities Act 2000 fines for DNOs. Therefore, the rate of return should reflect, separately from tariff policy, the risks borne by the distributors in the event that distributed generators should fail.

Discussion question 4: **Should DNOs be allowed to invest in anticipation of demand for the use of their network (e.g. connection of distributed generation)? What issues would this raise?**

Because of concerns that some of the anticipated developments may never materialise, some considered there should be no significant investment in networks to facilitate DG until proposals are more advanced, particularly in respect of domestic CHP. Others considered it important that DNOs are incentivised to facilitate increases in DG rather than simply reacting to connection requests.

In particular, some believed that some forward investment by DNOs was necessary in order to 'prime the pump', as otherwise the first party to connect bears much of the costs (even with a shallower charging regime). In addition, a process for apportioning

the risk associated with forward investment was necessary, and DNOs might be the default choice to hold such risk.

One form of forward investment discussed was implementing Power Zones, and it was noted that each DNO would have to do their own capacity planning, in the absence of a centralised planning agency, as exists in water (the Environment Agency).

General discussion points:
A greater awareness of the additional costs of increased penetration of DG should be promoted, in order to inform the public policy debate.

As outlined in Phil Bowley's presentation, spare capacity at present on the networks could be used, and such capacity would need to be ring-fenced in order to demonstrate and reward efficiency in connecting and utilising DG.

It was noted that shallower charging would mean that the bulk of costs would be recovered through use of system charges.

Attendees to 19 February 2003 Ofgem workshop on Developing Network Monopoly Price Controls and the 2005 DNO Price Control review

Anthony	White	Anthony White Consulting
Jonathan	Ashcroft	Aquila Networks
Brian	Tilley	Aquila Networks
Andy	Limbrick	Association of Electricity Producers
Roddy	Monroe	British Gas Trading
Brian	Sequeria	British Gas Trading
Vin	Chau	Centre for Competition & Regulation, University of East Anglia
Catherine	Mitchell	Centre for Management Under Regulation, Warwick Business School, University of Warwick
Ian	Bartle	Centre for the Study of Regulated Industries, School of Management, University of Bath
Ian	Dobson	Chartered Institute of Purchasing & Supply
John	Cubbin	City University (Industrial Organisation and Regulation Group)
Graham	Meeks	Combined Heat & Power Association
Arthur	Probert	Consultant
Paul	Eveleigh	East Midlands Electricity Distribution
Pauline	Green	East Midlands Electricity Distribution
Bob	Morris	Electricity Association
Daniel	Norton	Energy Information Centre
Lesley	Davies	Energywatch
Sebastian	Eyre	Energywatch
Yukitake	Hayashi	Eurus Energy UK Ltd
Motoyasu	Sakamoto	Eurus Energy UK Ltd
Brian	Jones	Friends of the Lake District
Stephen	Andrews	ILEX Energy Consulting
Peter	Williams	ILEX Energy Consulting
Phil	Bowley	Innogy
Zoe	Keeton	Innogy
Stephen	Morris	LogicaCMG
Tom	Weyman-Jones	Loughborough University
Anton	Garcia	National Economic Research Associates
Graham	Shuttleworth	National Economic Research Associates
Stuart	Boyle	National Grid Transco
Tim	Tutton	National Grid Transco
John	France	Northern Electric

Attendees to 19 February 2003 Ofgem workshop on Developing Network Monopoly Price Controls and the 2005 DNO Price Control review (continued)

Jean-Marc	Simon	PA Consulting
Andrew	Strachan	PA Consulting
Richard	Hill	Powergen
Garth	Blundell	ScottishPower
Dave	Fort	ScottishPower
Dan	Fine	Seeboard Power Networks
Jim	Tame	Seeboard Power Networks
Graham	Morris	SP Manweb plc
Ralph	Turvey	The Regulation Initiative, London Business School
Paul	Bircham	United Utilities
Mike	Boxall	United Utilities
Bob	Spears	Utility Consumers Consortium
Nigel	Turvey	WPD
Bob	Westlake	WPD
Kirsty	McHugh	YEDL
Cemil	Altin	Ofgem
Toby	Brown	Ofgem
Arthur	Cooke	Ofgem
Gary	Craig	Ofgem
Gail	Crick	Ofgem
Martin	Crouch	Ofgem
Gareth	Evans	Ofgem
Michael	Groth	Ofgem
Carl	Hetherington	Ofgem
Adrianne	Monroe	Ofgem
Yemi	Olutola	Ofgem
Peter	Rice	Ofgem
James	Richardson	Ofgem
John	Scott	Ofgem
Min	Zhu	Ofgem