

**June 2000**

**Information and Incentives Project**

**Output measures and monitoring  
delivery between reviews**

**Initial proposals**

## Executive summary

The background to the Information and Incentives Project (IIP) is set out in the Introduction. The most recent paper on the IIP was published in March 2000, and was followed by a public workshop on 4 May 2000.

This paper follows up a number of the issues raised in the March paper and the May workshop. In particular, it proposes:

- ◆ the output measures to which direct financial incentives should apply, namely the number of interruptions; their duration; and customer satisfaction;
- ◆ a method for monitoring the medium-term performance of the distribution network;
- ◆ an audit regime in respect of output measures and medium-term performance based on a common auditor appointed by Ofgem; and
- ◆ improvements to the Quality of Supply Reports published by distribution businesses aimed at the content, consistency and transparency of those reports.

Ofgem has, through its technical advisers PB Power, conducted a survey of PESs' ability to measure the key outputs. The results of that survey form an important part of this document. They show deficiencies in the quality and consistency of measurement. This paper proposes measures to remedy these. Some of the improvements can be achieved quickly and with minimal cost. Others, particularly those which would provide more automatic, site-specific information, would take longer to implement and involve substantial cost.

This paper invites comments on all these issues by 4 August 2000.

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# 1. Introduction

## *Background*

- 1.1 The RPI-X form of price control has had a demonstrably beneficial effect for customers since the privatisation of electricity distribution. Costs have fallen, allowing prices to be reset at lower levels. Quality of service, for instance as measured in terms of the number and frequency of interruptions, has generally improved.
- 1.2 However, the implementation to date of the RPI-X form of control has raised some issues of importance for the future. These include:
- ◆ the balance between cost reduction and service improvement which, at today's level of costs, represents a real trade-off facing distribution businesses and customers; and
  - ◆ the balance between beating the regulator's targets and beating the performance of other distribution businesses. The emphasis on the former has led to the development of a form of regulatory game, particularly around the time of price reviews, distorting behaviour and increasing uncertainty.
- 1.3 It follows that it is a fundamental objective of the IIP to be part of a system under which:
- ◆ companies' relative performance matters sufficiently to give them a continual spur to improvement; and
  - ◆ quality of supply is properly valued and incentivised.
- 1.4 Both of these entail a better definition of 'quality of service' more closely tied to customers' needs; better information about companies' performance in those respects; and better understanding of cost drivers for each company, to allow a better comparison of their relative performances.
- 1.5 For these reasons, this year's work has been primarily aimed at defining quality of service and examining the capability of present systems to deliver the

required information about performance. In addition work on costs is being carried out as part of the review of regulatory accounts. The work on the incentives themselves, and the values attached to them, can only sensibly be done once the preliminary work has been carried out and hence will be the main focus of the work from the end of 2000 onwards.

### **March 2000 update document**

- 1.6 In March 2000 Ofgem published an update document which set out its thoughts on defining output measures and the incentive regime. This indicated that there were three categories to be considered in defining output measures: first, output measures subject to direct financial incentives; second, output measures used to support the incentive regime – such as those covering medium term performance of the network and the price that customers pay; and third, those that are not part of the incentive regime and where other methods may be more appropriate for improving performance, such as the provision of new connections, environmental issues and safety.
- 1.7 Ofgem's initial thinking was that the number of output measures that should be subject to direct financial incentives should be kept to a small number and that they should:
- ◆ reflect what customers actually value;
  - ◆ be attributable to PES distribution businesses; and
  - ◆ be capable of objective measurement both over time and across companies.
- 1.8 The document indicated that the output measures to be subject to direct financial incentives should reflect:
- ◆ the number of interruptions to supply that a customer experiences;
  - ◆ the duration of those interruptions; and
  - ◆ the response which customers receive when their supply is interrupted.

- 1.9 26 responses were received to the March document – from 12 PESs (covering the 14 distribution businesses), 4 ECCs, the National Electricity Consumers' Council (NECC) and 9 others. A summary of responses is in appendix 1.

### **Public workshop**

- 1.10 Ofgem held a public workshop on 4 May 2000. The purpose of the workshop was to provide a forum in which to discuss a number of key issues emerging from the IIP with a wide audience. Interested parties including PES distribution businesses, PES and non-PES supply businesses, gas and electricity transportation companies, customer representatives – of both domestic and intensive users, representatives from the other regulators, academics and various consultancy firms attended the workshop. A detailed summary of the plenary session was published at the beginning of June and is also available on Ofgem's website ([www.ofgem.gov.uk](http://www.ofgem.gov.uk)).

### ***Progress to date***

- 1.11 An important part of the work this year is a review of the information that Ofgem already collects from distribution businesses, including Licence Condition 9 statements (on network performance) as specified by the existing Public Electricity Suppliers licence and data on Guaranteed and Overall Standards of Performance. The review has considered the consistency and accuracy of information provided by the measurement systems used by distribution businesses for collating data.
- 1.12 In December 1999 Ofgem indicated that it would review the quality of supply reports that companies publish on an annual basis. These reports contain information on a company's quality of supply performance and its investment plans for its network. Ofgem has undertaken a review of the reports and has written to the Chairmen of the Electricity Consumers' Committees (ECCs) to seek their views on the form and content of the reports. While some companies produce quite good reports Ofgem considers that improvements can still be made to the form, structure and content of the reports. This is discussed in more detail in chapter 5.

## **The use of consultants**

- 1.13 PB Power was appointed in April 2000 to assist Ofgem in its review of distribution businesses' existing measurement systems for output measures – the work programme for PB Power is set out in appendix 3. PB Power has visited each distribution business separately and has submitted a draft report to Ofgem. Its initial findings are discussed in more detail in chapter 3. Each company has been given the opportunity to comment on the section of the report that relates to its measurement systems. Ofgem intends to publish a version of the final reports in due course by placing them in our library and on the Ofgem website. The reports should be available in July 2000.

## ***Regulatory impact assessment***

- 1.14 The March document explained that distribution prices account for a significant proportion of final bills and that the quality of service is important to all types of customers, including supply businesses. The price and quality of distribution services may also have a bearing on competition in supply.
- 1.15 Ofgem has published its intention to review existing arrangements with the aim of strengthening the incentives on distributors to act efficiently in delivering a good quality of service, while reducing the risk of regulatory uncertainty associated with the present price control review process.
- 1.16 The distribution companies need to know as soon as possible how these considerations are likely to affect the conduct of the next distribution price control review (due to be carried out in 2004 to take effect from April 2005) as well as the application of the strengthened incentives in respect of existing quality of supply targets already announced as taking effect from April 2002.
- 1.17 Ofgem judges that this project is the most effective way of resolving these issues and is likely to have an impact on the industry, its customers and users, which is materially beneficial. It is consistent with the existing duties of the Director General, to promote competition, protect customers' interests and to ensure that companies can finance their licensed activities, and with those proposed by the Utilities Bill.

1.18 The March document indicated that the direct costs of the IIP to Ofgem were estimated at £1 million (including a provision of £0.5 million for consultants) and that the direct costs to industry are small compared to total distribution business revenues. The indirect costs to the industry will vary depending in particular on the progress of the companies in implementing improvements to management and information systems. Ofgem has set out a number of proposals in this document for harmonising the measurement systems of the distribution businesses. The total cost to the industry of a number of these proposals is likely to be very small, particularly those relating to short term improvements. Some of the longer term proposals are likely to cost more, for example, linking information on customers to the physical distribution network. Before producing final proposals Ofgem will consider whether the benefits of improved accuracy outweigh the costs associated with achieving this.

***Purpose and structure of this document***

1.19 This document sets out:

- ◆ initial proposals for output measures for distribution businesses (chapter 2);
- ◆ a review of distribution businesses' existing measurement systems for output measures and, in the light of this review, initial proposals on the improvements that should be made to measurement systems - in the short, medium and long term (chapter 3);
- ◆ a review of why and how information is presently collected (chapter 4);
- ◆ an information framework for monitoring delivery between price control reviews – including the scope of an information template and arrangements relating to the audit of that information (chapter 5);
- ◆ a review of the annual quality of supply reports published by distribution businesses and, in the light of this review, initial proposals on revising the structure, form and content of the reports (chapter 5);
- ◆ initial consideration of the issues likely to be relevant in considering the changes to the Guaranteed and Overall Standards of Performance

proposed as part of the final proposals of the recent distribution price control review (chapter 6); and

- ◆ details of the next steps and overall timetable (chapter 7).

***Responding to this document***

- 1.20 Views on any of the issues raised by this document, but particularly those outlined at the end of each chapter, are welcome from all parties by 4 August. They should be sent to:

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- 1.21 Responses will be published by placing them in Ofgem's library. A copy of this document is also available on Ofgem's website [www.ofgem.gov.uk](http://www.ofgem.gov.uk) If there are any questions on the issues raised by this document they should, in the first instance, be directed to Cemil Altin.

## 2. Output measures

### *Introduction*

- 2.1 The March document set out Ofgem's initial thinking on defining output measures for distribution businesses and identified a number of issues for consideration, including:
- ◆ the selection criteria for defining output measures and thinking on possible output measures;
  - ◆ whether issues with regard to safety, provision of new connections and the environment should be excluded from the scope of the IIP;
  - ◆ whether there is a need for industry wide incentives on issues such as responding to storm damage and sharing of best practice;
  - ◆ whether there is a need for financial incentives in respect of the delivery of information;
  - ◆ the requirements of measurement systems to collect information on output measures; and
  - ◆ the practicality and desirability of collecting output measures at a sub-distribution business level to facilitate comparisons between companies.
- 2.2 Respondents to the March document commented on these and a number of other issues. This chapter sets out Ofgem's further thinking in the light of these comments and the views expressed at the public workshop in May and other relevant issues.

### *The regulatory framework and the IIP*

- 2.3 The March document explained that the IIP takes place against the background of existing regulation with regards to price and quality and that it would be important to be clear about the relationship of the IIP with the:
- ◆ existing price control regime (RPI-X);

- ◆ existing Overall and Guaranteed Standards of Performance;
- ◆ new powers for the regulator under the Utilities Bill;
- ◆ new powers for the regulator under the Competition Act;
- ◆ the review of regulatory accounts; and
- ◆ New Electricity Trading Arrangements (NETA).

2.4 One objective of the IIP is to strengthen the incentives with respect to delivering the quality of output as agreed under the distribution price control final proposals.<sup>1</sup> Ofgem is committed to this objective. As explained below, there are significant differences in the way in which companies presently interpret and apply the definitions (as specified by the National Fault and Interruptions Reporting Scheme) underlying some of the output measures that are reported to Ofgem, such as the number and duration of interruptions.

2.5 In an incentive regime that is based on financial penalties and rewards it is important that the information underlying the incentive regime is accurate. It would not be appropriate for distribution businesses to gain because the information they submit to the regulator is not accurate. To the extent that common definitions are introduced this may mean that the targets for the quality of output agreed under the distribution price control final proposals may not correspond directly to targets to be set under the incentive regime. The December 1999 document indicated that...*"where particular targets for quality of supply have been established as part of this price control review, it is expected that broadly consistent targets will be reflected in [the IIP] incentive mechanisms"*. Ofgem does not consider that this amounts to a re-opener of the price control or a change in the agreed quality targets – rather, it is a means of transposing the existing targets into a common format using consistent definitions.

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<sup>1</sup> December 1999 "Review of Public Electricity Suppliers 1998 to 2000 – Distribution Price Control Review: Final Proposals"

- 2.6 Respondents to the March document generally agreed that it would be important to review the effectiveness and robustness of the incentive regime over the period April 2002 to April 2004, including the appropriate amount of revenue to be put at risk to the incentive regime. One respondent argued that this should be increased significantly at the next price control in 2005. As indicated in the March document any significant changes to the way in which price controls are reviewed and implemented will need to be considered very carefully. It is unlikely that any major changes will be made to the method of determining price control revenue at the time of the next price control review.
- 2.7 Respondents agreed that the focus of the Guaranteed and Overall Standards of Performance should be on protecting individual customers' interests with respect to the quality of service that they receive. The IIP is concerned with providing stronger overall incentives to distribution businesses on the quality of service that they deliver to customers. Some respondents expressed concern that distribution businesses could face "double financial jeopardy" for failing to meet targets under the incentive regime and the Standards of Performance. Ofgem considers that output measures that are subject to financial penalties and rewards under the incentive regime will relate to the quality of service delivered to customers as a whole. They will not focus on the appropriate level of service that is delivered to individual customers as this is best dealt with by the existing Guaranteed Standards.
- 2.8 Most respondents to the March document supported Ofgem's view that it will be important to consider carefully the relationship between financial penalties that could be imposed under the Utilities Bill and the output based incentive regime. Ofgem will be consulting on how and when it should use the powers set out in the Utilities Bill to impose financial penalties. Its initial view is that it may be appropriate to consider the nature and size of any penalty payments under the Utilities Bill is enacted in the light of any payments received or made under the IIP incentive regime and compensation payments made under Guaranteed Standards.
- 2.9 In addition respondents generally agreed that the Competition Act 1998 is not the most appropriate regulatory framework for dealing with issues likely to be associated with poor quality of service. Ofgem has recently published, in

conjunction with the Office of Fair Trading, guidelines on how Ofgem will use its powers under the new Competition Act.<sup>2</sup>

- 2.10 There was strong support for the review of regulatory accounts from respondents to the March document and attendees at the public workshop. Ofgem will publish a consultation paper on regulatory accounts in August 2000.
- 2.11 One respondent, although welcoming the intention to undertake a separate work programme on the relationship between NETA and the IIP, argued that it should be included within the IIP itself. It is important to consider the relationship of NETA with distribution businesses (and networks) more widely as there are a number of issues that need to be examined. For example, whether distribution businesses should bear directly the costs arising out of distribution constraints and failures, whether it is appropriate to introduce new standards and compensation payments to protect the interests of embedded generators, and the implications of NETA for the distribution price controls. As such, the work will be carried out as part of a separate project.
- 2.12 Ofgem will publish a consultation paper on the relationship between NETA and distribution businesses in June 2000. There is also a Department of Trade and Industry (DTI) and Ofgem working group that is considering the wider issues associated with the relationship between embedded generation and distribution network operation. This group is scheduled to produce recommendations in the autumn this year.

### ***Selection criteria for output measures***

- 2.13 The March document outlined the selection criteria that would be applied for defining output measures for distribution businesses, namely that they should:
- ◆ reflect what customers actually value;
  - ◆ be attributable to PES distribution businesses; and
  - ◆ be capable of objective measurement over time and across companies.

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<sup>2</sup> May 2000 "Competition Act 1998 – Application to the Energy Sectors, Formal Consultation Draft Document"

2.14 Respondents to the March document and attendees at the May public workshop generally agreed with the proposed selection criteria although a number of issues were raised. These are discussed in more detail below.

### **Reflect what customers value**

#### *Different types of customers*

2.15 A number of respondents to the March document and attendees at the public workshop suggested that it was important to distinguish between the different types of customers that are served by the distribution business. These appear to fall into four broad categories:

- ◆ end users – both domestic and business customers who are connected to the network at differing voltage levels;
- ◆ other distribution customers – such as those requiring new or reinforced connection to the network;
- ◆ other connected customers - such as operators of embedded generation plant; and
- ◆ supply businesses – as an intermediate customer of distribution businesses.

2.16 Each of these categories of customers will have different values and expectations of the level service that they expect from distribution businesses. There will also be differing values and expectations within each category.

2.17 In general, it appears that domestic end users are concerned about the number and duration of interruptions to their supply and the service that they receive from distribution businesses when their supply is interrupted. The relative weighting that domestic customers attach to these factors may be influenced by the area in which they live (in urban or rural areas) and their recent experiences (for example, whether they have been off supply and the service received under these circumstances).

2.18 In addition to the frequency and duration of interruptions to supply, some customers may also be concerned with very short interruptions to supply of less

than 60 seconds that for reporting purposes are not classified as an interruption. Business users in particular have expressed concern at the number of transient interruptions. They have also expressed concern about voltage depressions. In these instances the voltage level at which supply is received at a customers' premises temporarily falls, usually for less than one second, which can adversely impact the performance of voltage sensitive equipment.

- 2.19 Customers requiring a new or reinforced connection to the network, including operators of embedded generation plant, will be concerned with ensuring that the distribution business (or another provider of connection services) deals with the request in a timely way and that the connection that is provided is in accordance with the terms of the connection agreement. Customers and embedded generators will also be concerned with the possibility that constraints or failures on the distribution network may lead to an interruption in network availability.
- 2.20 Supply businesses are intermediate customers of the distribution businesses which, amongst other activities, pays distribution charges for the transport of electricity from the transmission network to end users' premises. These charges are governed by bilateral contractual agreements (use of system agreements). Supply businesses will be concerned with the service which their customers receive from the distribution businesses. Some have also said they require additional information to support the nature of the charges that are made by the distribution business.
- 2.21 It is clear that certain customers, particularly business users, are also concerned with transient interruptions to supply and voltage depressions. The relationship between extra high voltage (EHV) customers and distribution businesses is covered by bilateral connection and use of system agreements. These specify the service levels that a distribution business is expected to deliver to the customers. Including output measures on transient interruptions in the incentive regime could deter companies from investing in systems that would reduce the incidence of "normal" interruptions to supply.
- 2.22 Ofgem has specified that companies will be required to put in place measurement systems to monitor the number of transient interruptions from

April 2001. Ofgem intends to review the number of transient interruptions to supply on an annual basis. Where there are significant increases in transient interruptions to supply companies will be required to explain to Ofgem why this is the case. In the light of these considerations Ofgem would need to consider whether further action is needed.

2.23 In addition, Ofgem expects distribution businesses to provide certain services to customers that are particularly concerned with transient interruptions and voltage depressions, including:

- ◆ providing assistance with measuring transients and voltage depressions at a customer's premises;
- ◆ providing advice on the possible causes of the problems and remedies which can be implemented at reasonable cost by the customer; and
- ◆ taking firm action, as part of the existing electricity supply regulations (ESR), against other customers connected to the network that may be causing voltage depressions.

2.24 In most markets competitive pressure should provide the incentive on companies to deliver to their customers an appropriate quality of service at an acceptable price. Ofgem considers that similar considerations should apply in the provision of connection services. Most, but not all respondents to the March document agreed that the provision of new connections should be excluded from the IIP. Ofgem intends to publish a consultation paper in July 2000 which will set out its thinking on measures to reduce barriers of entry to, and promoting competition in, the provision of connection services.

2.25 One respondent to the March document suggested that it may be appropriate to consider supply businesses as the primary customers of the distribution businesses rather than end users or other connected customers. This was also a view expressed by some at the public workshop. It was argued that suppliers have an ongoing relationship with distribution businesses and that as such output measures should principally be supplier focused.

2.26 The Utilities Bill places a principal objective on Ofgem to protect the interests of consumers in carrying out its functions. Ofgem does not consider that in this

respect the supply business, as an intermediate customer of the distribution business, is the main focus of this objective. In addition it is not clear to Ofgem that suppliers, in a new market, are necessarily best able to represent the values which a wide range of different customers place on the outputs of a distribution business. Although suppliers may have an understanding of their customers and in this respect it would be useful to receive feedback on the values which customers place on different outputs.

- 2.27 As indicated above the relationship between supplier and distributors is covered by bilateral use of system agreements. These may specify the service levels that distribution businesses are expected to deliver in return for the payment of use of system charges. These agreements can be referred to the Director General for determination in the event of a dispute between the interested parties. Ofgem considers this the most appropriate means for suppliers to set out the outputs which they require the distribution business to deliver. The draft distribution standard licence conditions (as required by the Utilities Bill) also require distribution businesses to publish a statement outlining the method and principles underlying their charging. Ofgem will want to consider whether these statements provide the appropriate level of information to suppliers.
- 2.28 In defining output measures it is important to consider how the values and expectations of different types of customers will be met and whether the scope of the IIP should extend to all customers of the distribution business. On the basis of the issues discussed above Ofgem considers that the main focus of the IIP should be on domestic end users. They account for approximately 90 per cent of the total number of customers served by a distribution business and the most significant proportion of price control revenue which accounts for around 85 per cent of the total amount of revenue that a distribution business recovers for the use of the network.
- 2.29 Some respondents to the March document and attendees at the public workshop did not consider sufficient work had been done in understanding the values and expectations of domestic customers. Ofgem is intending to undertake further customer research to understand better what customers value from a distribution business as part of the work on defining the framework for the incentive

regimes. This work will be particularly important for informing the decision on the amount of revenue to be attached to each of the output measures.

### **Attributable to distribution businesses**

- 2.30 If distribution businesses are incentivised against a set of output measures it is important that they can be attributed to the distribution business and that in some part they are able to influence them. It would not be appropriate to expect a distribution business to be exposed to financial risk if it had no influence over the output measures upon which the incentive regime was based. Respondents to the March document and attendees at the public workshop generally agreed with this approach.
- 2.31 In response to the March document distribution businesses suggested a number of areas that should be excluded from the incentive regime because either they were not attributable to, or could not be influenced by, the distribution business. One distribution business suggested that the exclusions should follow those used with the existing Guaranteed Standards of Performance.
- 2.32 Ofgem considers that ultimately customers are concerned with whether they are on or off supply rather than the cause of the fault. In addition, Ofgem has already indicated that the IIP is concerned with providing stronger overall incentives to distribution businesses on the quality of service that they deliver to customers. Ofgem intends to collect information on output measures without any exclusions. Next year as part of the work on incentive regimes, it may be necessary to consider whether there are circumstances which warrant making adjustments to this base data.

### **Capable of objective measurement**

- 2.33 The March document indicated that it was possible to assess performance against output measures in a number of ways, including a company's performance:
- ◆ against its own target in a particular year;
  - ◆ against its own track record;

- ◆ relative to other distribution businesses in a particular year; and
- ◆ relative to other distribution businesses over time.

2.34 The March document indicated that where possible Ofgem wants to increase the emphasis on outperforming peers as this more closely represents the conditions of a competitive market. A number of distribution businesses expressed concern at increasing the use of relative performance, stating that:

- ◆ the approach does not mirror a competitive market, where companies offering higher quality can charge higher prices to compensate for higher costs;
- ◆ it could lead to perverse incentives for companies to improve quality of service through higher expenditure which ultimately could lead to an increase in prices greater than the value customers place on the improvement in quality; and
- ◆ it is not possible to compare companies' performance on a robust basis and that the problem of normalisation would be removed if the incentive regime was based on individual performance.

2.35 Ofgem considers that the main objective of the output based incentive regime is to provide more balanced incentives between achieving efficiency savings and the quality of service delivered to customers. The trade-off between higher (lower) prices and higher (lower) quality involves two decisions that are taken at the time of the price control review. In effect a judgement is made on the new "value for money" line and where on the line each company is positioned. In coming to such judgements it is important to consider customer's willingness to pay for improvements to quality of service.

2.36 The IIP is not concerned with redefining the position of distribution businesses on the "value for money" line and does not, for example, seek to set revised allowances for operating and capital expenditure or higher quality of supply targets. Ofgem does not expect the incentive regime, on its own, to result in higher capital expenditure than had been allowed for at the price control. It

does expect the incentive regime to alter the way companies behave and to increase the emphasis they place on delivering the agreed outputs.

- 2.37 Ofgem recognises that it is not straightforward to compare companies' performance on output measures, particularly for those companies, such as London Electricity and Hydro-Electric, that have significantly different networks to most other distribution businesses. Even if Ofgem did not seek to introduce a system where companies were compared on their relative performance, it would still want to establish targets which were equally challenging for all distribution businesses. This suggests that some normalisation of starting points will be necessary whether companies are remunerated on their relative or absolute performance. In order to improve comparability Ofgem intends to collect information on output measures on a disaggregated basis. This is discussed in more detail below.

### ***Longer-term developments***

- 2.38 Some respondents to the March document and attendees at the public workshop suggested that in defining output measures and the incentive regime it would be important to consider longer-term developments that may impact on the distribution network. For example, it was suggested that changes in the amount of embedded generation directly connected to the distribution network could change the nature of incentives, the operation of and investment in the distribution network.
- 2.39 Ofgem recognises that the distribution networks will change over time. These may include changes in:
- ◆ the amount of embedded generation directly connected to the distribution network;
  - ◆ network design specifications or a requirement to underground a proportion of the network; and
  - ◆ the pattern and level of demand within and between distribution business authorised areas.

- 2.40 Guidance on environmental and social issues from the Secretary of State may also have an impact on the nature of incentives, the operation of and investment in the network. To a large extent these factors are outside the direct control of the distribution businesses. It is not straightforward to predict with accuracy the extent to which there will be changes and their influence on the network.
- 2.41 It will be appropriate to take account of changes in these areas and their impact on the incentive regime at the time of a price control review.

### ***Initial proposals on output measures***

- 2.42 The March document indicated that Ofgem's initial view was the number of output measures subject to financial incentives should be kept to a small number and that they should address:
- ◆ the number of interruptions to supply that individual customers experience;
  - ◆ the duration of those interruptions; and
  - ◆ the response which customers receive when their supply is interrupted.

### **Number of interruptions to supply**

- 2.43 It is clear from responses to the March document and from the May workshop that end user customers – domestic and business – are concerned about the number of interruptions to supply that they experience. Customer research undertaken by the distribution businesses would appear to support this. Customer representatives have also argued that the number of interruptions is of particular concern. The number of interruptions to supply are largely attributable to the distribution business (for example only around 2 per cent of interruptions in 1998/99 were caused by a failure on the transmission system). Each distribution business can also influence the number of interruptions occurring on its network. Ofgem proposes that the number of interruptions to supply should be an output measure that is subject to financial incentives.

## **Duration on interruptions to supply**

- 2.44 Respondents to the March document and attendees at the public workshop generally agreed that the duration of interruptions to supply should be an output measure that is subject to financial incentives. Ofgem proposes that the duration of interruptions to supply should be an output measure that is subject to financial incentives.

## **Defining the number and duration of interruptions**

- 2.45 In an incentive regime where there are financial penalties and rewards it will be important to ensure that output measures are measured on a consistent basis both across distribution businesses and over time.
- 2.46 PB Power, as part of their review of distribution business measurement systems, has identified a number of areas where there are differences across companies in the way in which the number of interruptions are defined, measured and collected. These can have a significant impact on the accuracy and consistency of the information that is provided to Ofgem. This is discussed in more detail in chapter 3. This was also an issue raised by many of the respondents to the March document and at the public workshop. To help improve the level of consistency Ofgem will use an industry working group to develop detailed definitions of the number and duration of interruptions to supply. The arrangements for the working group are discussed in more detail in chapter 7.

## **Customer satisfaction**

- 2.47 The March document explained that customer contact with the distribution business is fairly limited. It also indicated that customers are particularly concerned with the quality of response that they receive from the distribution business when they are off supply. In future distribution businesses are also expected to have contact with customers through an enquiry service they will be required to establish and operate on matters relating to security, availability and quality of service, as specified by Condition 7 of the draft standard distribution licence.
- 2.48 Measuring the quality of response that customers receive from a distribution business when they are off supply or at other times is not straightforward.

Targeted surveys may not provide statistically robust results. Relying solely on quantitative evidence such as the speed of telephone response to customers will not provide any indication of the quality of the information that is provided to customers. An alternative may be to review the telephone systems of each distribution business to ensure that they met certain criteria. However, Ofgem considers that this represents an unnecessary focus on inputs into delivering a service to customers rather than the output.

- 2.49 Ofgem's preference is to carry out an event driven telephone survey (i.e. a survey of those customers with recent experience of the distribution business). Ofgem intends to meet with survey companies to discuss the issues associated with such an approach including the cost and statistical robustness. In the event that a telephone survey is deemed impractical Ofgem proposes to measure customer satisfaction through a combination of output measures, for example speed of telephone response – both in normal and exceptional circumstances (including emergencies) - and the number of complaints received by the distribution business (both written and telephone).

#### **Price as an output measure**

- 2.50 The March document explained that price, in terms of distribution use of system (DUoS) charges paid, is an output which is clearly important to customers. It is also attributable to distribution businesses. The document explained that while price would not be subject to direct financial incentives it would help address the problem of comparing high quality, higher price companies with lower quality, lower price companies, both of whom be argued to offer value for money. A number of respondents to the March document expressed concern at using price as an output measure as it is a function of several factors that are not consistent across companies, including:

- ◆ differences in topography; and
- ◆ the inherited state of the network.

- 2.51 It was also pointed out that price is effectively determined by the price control review and that there a number of factors, which are effectively determined by

the regulator, that will influence its level, including the approach to setting the regulatory asset base (RAB) of the distribution business.

- 2.52 Ofgem does not intend to provide direct financial incentives on price in setting the incentive regime in 2002. While companies are free to reduce prices below the level assumed in setting price controls, subject to non-discrimination conditions and arrangements relating to the treatment of under recoveries, it would not be appropriate to change fundamentally the approach to RPI-X regulation. Further, the arguments outlined above have some merit and there are justifiable reasons why prices are different across distribution businesses. While over time it could be expected that there would be increasing convergence of prices, such that it may be possible to incentivise companies directly on the level of prices charged, this should not be expected in the medium term.
- 2.53 Ofgem still considers that it may possible to use price as an input into normalising the starting positions of distribution businesses when setting targets for output measures, although it will be necessary to understand the extent to which price differentials are a result of management action or other factors, which are largely outside the control of the distribution business.

#### **Disaggregated output measures**

- 2.54 One way of making distribution businesses more comparable would be to compare output measures at a geographically disaggregated level. This would allow the production of better comparators for companies that had previously appeared as outliers, such as London Electricity and Hydro-Electric. It will be necessary to define the nature of the disaggregation and make these as objective as possible and to ensure that outputs can be measured accurately at the agreed level of disaggregation. The most effective way of achieving this appears to be to classify the circuits within each distribution business according to a set of rules. One approach may be to classify circuits on the basis of the proportion of overhead line. For example, circuits in areas with:
- ◆ less than 5% overhead line are urban;
  - ◆ more than 80% overhead line are rural; and

- ◆ between 5-80% overhead line are mixed.

2.55 It may be possible to combine two measures into a matrix (see figure 2.1) and to classify circuits accordingly.

**Figure 2.1: Disaggregation matrix**

		0%	Percentage overhead line	100%
Network length per customer	Low	Urban		Semi - rural
	High	Semi-urban		Rural

2.56 Another approach would be to use a number of measures, (including in addition for example the number of customers connected to a transformer) in a “decision-tree” type analysis. This may provide a more accurate classification of circuits into three or four geographical categories that are easily understood by customers. To the extent that NaFIRS data is already collected on individual circuits it should be possible to compare companies’ performance at a disaggregated level by combining this information with a set of rules for classifying circuits.

***Scope of output measures***

2.57 In addition to the relatively narrow set of output measures set out above, there are a number of other areas that were identified for possible inclusion within the scope of the IIP.

## **Safety**

- 2.58 The March document explained that under the Electricity Act 1989 the Director General has specific duties relating to the safety of both the public and persons employed in the generation, transmission and supply of electricity (Electricity Act 1989, Part 1, Section 3). Responsibility for regulations that ensure electricity networks are engineered and operated safely rests with the Electricity Inspectorate. Respondents to the March document and attendees at the public workshop agreed that incentives on safety are thoroughly provided for by other mechanisms and that it should be outside the scope of the IIP. Ofgem will want to be satisfied that any changes resulting from the IIP will not have a detrimental impact on incentives towards safety.

## **Environmental issues**

- 2.59 The March document explained that there already exists, within the distribution business price control, a financial incentive to reduce electrical losses, although it also pointed out that higher losses could be an indication that network assets are being more efficiently operated. Most respondents to the March document and attendees at the public workshop agreed that losses should be excluded from the IIP. On this basis Ofgem proposes not to include losses within the IIP.
- 2.60 Under the Utilities Bill the Secretary of State has responsibility for providing guidance to the Director General with regards to the environment. To the extent that the guidance from the Secretary of State impacts upon the nature of incentives, the operation of and investment in the network this may need to be taken into account in future developments to the incentive regime.

## **Medium term performance of network assets**

- 2.61 The March document explained that it is important to establish an appropriate balance between short and medium term performance of the network. Ofgem is concerned that distribution businesses may be able to achieve short term improvements in performance on output measures by reducing the level of repairs and maintenance that they undertake on network assets. Ofgem is further concerned that at the time of the next price control review distribution businesses may submit larger capital expenditure requirements because of

possible degradation in the condition of network assets due to a suspension in repairs and maintenance and replacement of network assets. Ofgem's initial view was that it would be appropriate to monitor the medium term performance of network assets in some way, but not to incentivise directly changes between price control reviews.

- 2.62 Respondents to the March document and attendees at the public workshop generally agreed that it would be appropriate to monitor medium term performance of network assets in some way. Many of the distribution businesses argued that the most appropriate way to monitoring medium term performance would be to introduce some form of accreditation scheme for their asset management policies. This is considered further in chapter 3.

### **The delivery of information**

- 2.63 The March document explained that distribution businesses may be unable or unwilling to provide the information that will be required to operate the incentive regime. In light the of this it indicated that it may be appropriate to place explicit financial incentives on companies to provide information or to rely instead on the penalties that can be imposed (once the Utilities Bill is enacted) for a breach of a licence condition. All respondents to the March document argued that it would not be appropriate to introduce financial incentives for the provision of information.
- 2.64 Ofgem considers that the most appropriate approach to ensuring the delivery of information is to rely on the penalties that can be imposed, following the enactment of the Utilities Bill, for a breach of a licence condition. If Ofgem subsequently finds that it cannot take appropriate action it might consider whether alternative measures such as those outlined in the December 1999 final proposals for the distribution price controls, are necessary to provide incentives to deliver accurate information.

### **Industry wide incentives**

- 2.65 The March document explained that there may be concerns that introducing stronger incentives on distribution businesses to outperform peers could lead to perverse incentives in some areas, such as:

- ◆ responding in a co-ordinated way to storm damage; and
- ◆ the sharing of best practice.

2.66 The document explained that perverse incentives in these areas could impact adversely on all customers although it was not clear how incentives on the industry could be introduced through the IIP. Some respondents to the March document and attendees at the public workshop also highlighted concerns that an incentive regime based on relative performance could lead to the creation of perverse incentives, particularly for responding in a co-ordinated way to storm damage.

2.67 Ofgem considers that further work needs to be done in this very important area, particularly on whether robust commercial multilateral arrangements could be introduced or whether there is a need for a national strategy. An alternative approach might be to put in place explicit arrangements for monitoring a company's response to storm damage.

2.68 There was less concern about the risk of creating perverse incentives for sharing best practice. Indeed it was suggested that:

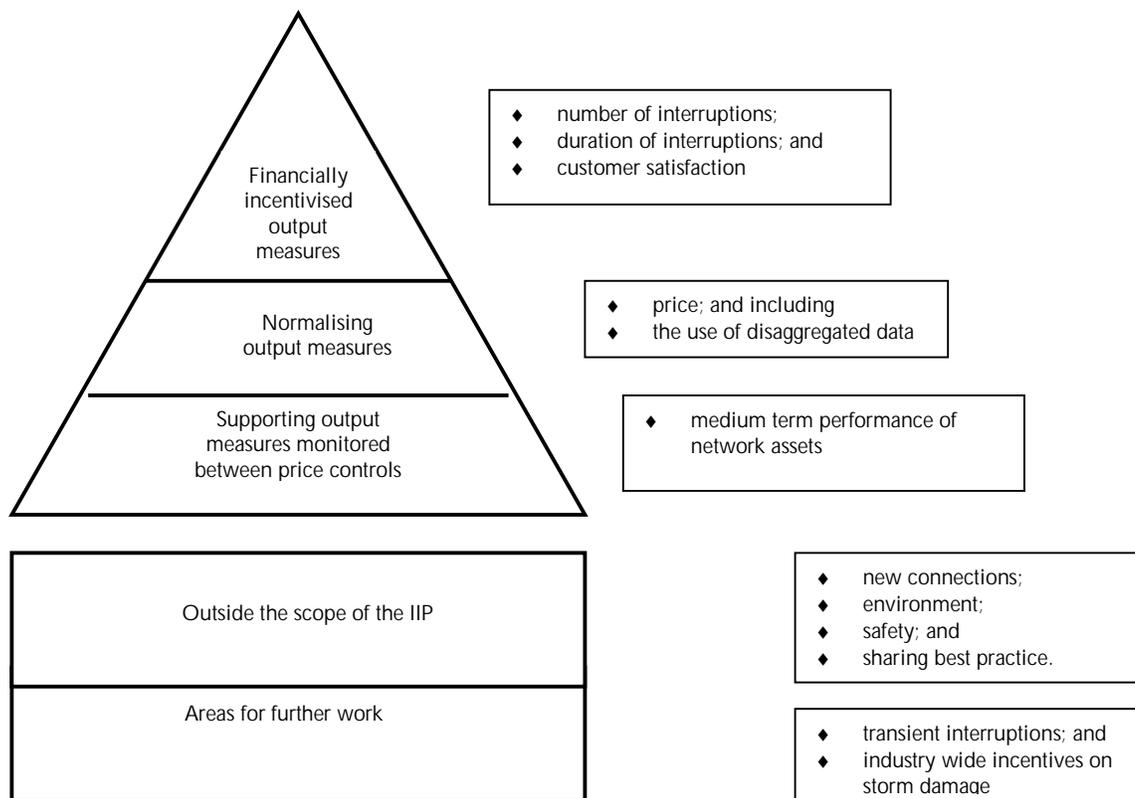
- ◆ increased emphasis on outperforming peers would provide strong incentives on companies to improve best practice and that placing any requirements on companies to share best practice may reduce the speed of innovation;
- ◆ the economic value of best practice would be revealed under a competitive environment and that an economic price would be charged for the sharing of information; and
- ◆ suppliers to the industry have a vested interest in ensuring that all distribution businesses are aware of any technical innovations.

2.69 In the light of these factors Ofgem considers that there is no need for additional incentives relating to the sharing of best practice.

## Summary

2.70 The results of this analysis on outputs is summarised in figure 2.2 below. First, there a small number of output measures that are subject to direct financial incentives. Second, there are output measures which are used to determine the starting points for the output measures in the incentive regime, such as price. Third, there are output measures that are used to support the incentive regime, such as those covering the medium term performance of network assets, but which are not subject to financial incentives between price control reviews. Finally, there are issues which following consultation Ofgem has placed outside the scope of the IIP, such as the provision of new connections, environmental issues, safety and the sharing of best practice. As discussed above further work will be undertaken on issues relating to industry wide incentives on responding in a co-ordinated way to storm damage and on transient interruptions.

Figure 2.2: Output measures and the incentive regime



### ***Issues for consideration***

2.71 Consultees are invited to comment on this chapter and in particular on:

- ◆ the output measures proposed in paragraphs 2.42 to 2.49
- ◆ the different approaches to disaggregation in paragraphs 2.54 to 2.56;  
and
- ◆ the issues associated with responding in a co-ordinated way to storm damage in paragraphs 2.65 to 2.67.

### 3. Measurement systems within distribution businesses

#### *Introduction*

- 3.1 PB Power was appointed as technical consultants in April to assist Ofgem in its review of distribution businesses' existing measurement systems for output measures. As part of this work PB Power drew up an initial questionnaire to gain a better understanding of the systems and processes that distribution businesses use for collating output measures. PB Power also visited each distribution business in order to clarify issues arising out of the questionnaire, to review the Information Systems (IS) and measurement systems that companies have in place and are implementing to collate information and to undertake a "walk-through" (or system audit) of fault management and reporting systems for both low voltage (LV) and high voltage (HV) faults. It recently submitted a draft report to Ofgem outlining their initial findings. These are highlighted below. As discussed above Ofgem intends to publish a version of the final report in July. The work programme drawn up by Ofgem for PB Power is in appendix 2.

#### *Fault management and performance reporting*

- 3.2 A schematic representation of the fault management and reporting systems of a typical distribution business is shown in figure 3.1. The arrows between the boxes depict the flow of information between different parts of the fault management and reporting system. The systems and information flow may be manual or automatic and the processes that are employed may take place at more than one location. A dashed arrow indicates areas where the information may not be accurate or consistent across companies. The degree of inaccuracy will differ depending on the nature of the information and the company. This leads to inaccurate and inconsistent reporting of output measures to Ofgem in the network performance (or Condition 9) statement as shown on the diagram. The Condition 9 statement contains information on network performance such as the number and duration of interruptions to supply. This is discussed in more detail below.

## **Fault management**

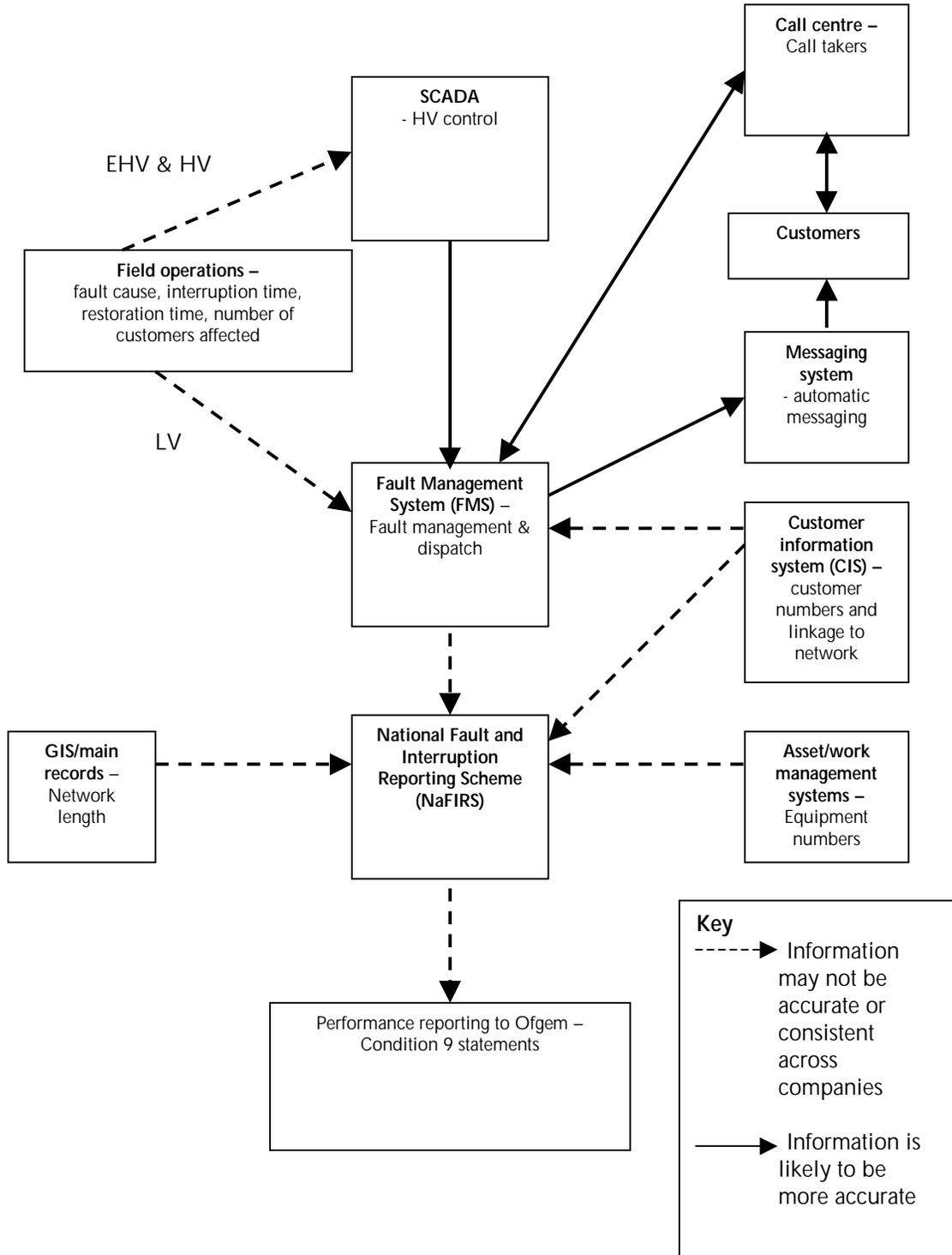
- 3.3 A fault or incident can occur at different voltage levels (or points) on the distribution network. Faults that occur at higher voltages – extra high voltage (EHV) and on part of the HV systems - tend to be automatically detected in the main network control centre through the use of Supervisory Control And Data Acquisition (SCADA) systems. The SCADA system identifies the affected circuit but it does not provide information on the nature and cause of the fault or its precise location. The response of the distribution business to the fault will largely depend on the view of the control engineer as to the nature and cause of the fault. For example, if it is considered that the fault has not been caused by damage to the network (e.g. temporary faults which do not require the dispatch of an engineer to repair the fault) then the control engineer may try to restore supply immediately by remote control via the SCADA system. Alternatively, if the fault has been caused by damage to the network the network control centre will pass the information to the Fault Management System (FMS) which will organise for an engineer to be dispatched. The FMS will also provide information to the distribution business call centre regarding the fault and its general location so that customers who are affected and which call in can be informed of the situation and what is being done to repair the fault.
- 3.4 The process of managing LV faults is very similar to that explained above. However, some HV and most LV faults are not immediately reported or automatically detected by the control centre. A distribution business becomes aware of most LV faults when a customer informs it that supply has been interrupted.

## **Performance reporting**

- 3.5 Once supply to customers has been restored, information on its duration and the number of customers affected and the cause of the fault, amongst other things, need to be collated. Most companies use the National Fault and Interruption Reporting Scheme (NaFIRS) to collate its fault reports and provide detailed analysis of fault information. The information that Ofgem collects as part of the Condition 9 statements are compiled from the NaFIRS data. Figure 3.1 shows that this requires the collation of information from a number of different sources

or elements of the fault management and measurement systems of the distribution business. It is clear from PB Power’s review of these systems that this information is not accurate (although the extent of inaccuracy differs across companies) or consistent across companies.

**Figure 3.1: Fault management and performance reporting**



### *Initial findings on performance reporting*

3.6 PB Power recognise the improvements that some companies have made in relation to performance reporting. Although their initial findings suggest that there still remains significant inconsistency and inaccuracy. This tends to arise from three main sources. In addition, the level of accuracy in reporting reduces at lower voltage levels:

- ◆ the information systems (IS) and processes that companies use to collate information on faults – for example, the linkage between different software programmes and the process for collating information from site engineers (who repair the faults and provide information on the number of customers interrupted and restoration times);
- ◆ inconsistency in the way in which the definitions set out in NaFIRS are applied and interpreted, (for example differences in how a restoration of supply is defined). These underpin information that is submitted to Ofgem on the number and duration of interruptions to supply; and
- ◆ the extent to which customer information is linked to the physical network so that, in the event of an interruption, they can identify which customers are off supply and for how long. This is known as connectivity. Most companies link customer information to the network below a certain level (usually the LV/HV substation but for some companies even higher up the network). This means that when a fault occurs the company may need to estimate how many customers have been interrupted and for how long.

3.7 In addition to these three sources of inaccuracy and inconsistency it also appears that:

- ◆ there is limited formal audit or scrutiny of output measures; and
- ◆ there is limited documentation in some distribution businesses of the processes that staff must follow for collating information on output measures.

3.8 Table 3.1 shows PB Power’s initial estimates of the possible magnitude of potential inaccuracy in the reporting of output measures to Ofgem that stem from the three areas identified above. It should be noted that the level of inaccuracy differs across distribution businesses and may not be cumulative.

**Table 3.1: Inaccuracy in reporting output measures**

<b>Area</b>	<b>Potential percentage inaccuracy</b>
Information Systems (IS), including: ◆ Linkage between IS and NaFIRS; ◆ Information from site engineers	5 % – 10 %
Inconsistencies in NAFIRS reporting, including: ◆ Interpretation of definitions; ◆ Application of definitions;	5 % – 15 %
Lack of customer to network connectivity	5 % – 15 %

***Initial proposals for improving performance reporting***

3.9 In the light of these findings Ofgem’s initial thoughts on proposals to improve the accuracy and consistency of information can be categorised as follows:

- ◆ short term improvements (by April 2001):
  - introducing consistent definitions for the application of the NaFIRS scheme, for example on the definition of an interruption to supply and the restoration of supply; and
  - introducing written procedures for the collation of output measures and better internal audit/checking procedures.
  
- ◆ medium term improvements (by April 2002):
  - introducing connectivity to the outgoing LV circuit from the HV/LV transformer; and
  - introducing improved and more integrated information systems, for example reducing the amount of human involvement in transposing data from fault report to reports that are submitted to Ofgem (Condition 9 statement).

- ◆ longer term improvements (April 2005 and beyond):
  - consideration of introducing full connectivity of customers to the network right down to the lowest level, i.e. single LV phase. This would provide very accurate information and facilitate accurate automatic payments on Guaranteed Standard (GS) 2.

3.10 PB Power has estimated that the costs to the industry as a whole of the short term improvements are likely to be less than £0.5 million in total. The medium term improvements will vary significantly across companies depending on the nature of their existing systems and the resources already committed to their development. PB Power has estimated the cost of connecting information on customers to the LV outgoing circuit for those companies who do not do it at present to be in the order of £0.3 million. The cost of improving network and fault management systems will obviously vary on a case by case basis depending on companies' progress in implementing improvements in this area. Consideration of full connectivity will take place at the time of the next price control review in 2004.

### ***Monitoring medium term performance***

- 3.11 PB Power also reviewed the approach that distribution businesses take towards monitoring the medium term performance of network assets. They found that the approach towards asset management is developing and that in general companies appear to be prioritising investment on a range of factors, such as output focused indicators (for example fault rates), and condition based analysis. Some also use decision making tools to assess individual schemes or programmes of work. The use of age profiling is usually only carried out as a backstop to the decision making process – it does not appear to be the prime driver of investment strategy.
- 3.12 Some of the distribution businesses have suggested that accreditation of asset management systems would be an appropriate basis for the regulator to monitor the medium term performance of their assets. Ofgem's initial view is that such an approach on its own is unlikely to provide sufficient comfort that the medium term performance in assets is maintained. In particular if an accreditation scheme is approved, it would be necessary to be clear about what the scheme is

meant to deliver, i.e. the outputs of the scheme. Under these circumstances it seems preferable to focus on the outputs in the first instance rather than a combination of output and inputs setting out how the company should operate. Having an asset management system is only the first stage in the process of effectively maintaining and renewing distribution assets to deliver a particular level of performance in the medium term. A possible response would be to build on the idea of an accreditation scheme by placing a requirement on the companies to explain on a regular basis how they intend to observe the results of the system and how they will apply them in carrying out their business. Finally, Ofgem is concerned that accreditation, by focusing on approval of how a company should operate, may not reflect or promote developments in best practice.

3.13 Ofgem's preferred approach is to develop a set of output measures or indicators based on an analysis of faults by asset type and to monitor trends in the performance of assets over time. It may also be desirable to develop indicators which have within them a predictive quality i.e. that are able to indicate the possibility of a decline in future performance. In developing a set of indicators Ofgem will need to give further thought to the triggers for regulatory review or action. With these types of measures it is likely that the trend in performance over time will be more important than the trend in performance between companies. It will be important to compare the actual trend with what companies had expected and to understand reasons for variances. It may also be the case that a combination of indicators trending in the same direction is more of a concern to the regulator than a single indicator moving by a larger amount. Finally Ofgem will want to consider what the nature of any regulatory action might be in the event that performance against the indicators does raise regulatory concerns.

3.14 Further work will be carried out over the course of the summer with PB Power to develop a set of indicators along these lines. In the first instance Ofgem intends to build on NaFIRS as a basis for developing these measures.

### ***Measuring transient interruptions***

- 3.15 PB Power also reviewed the progress that distribution businesses had made in meeting the commitment made under the distribution price control to measure transient interruptions to supply. It appears that most companies have introduced some form of measurement systems for transient interruptions although the extent to which companies will be able to measure transients accurately from April 2001 differs significantly across companies. Two companies have no firm plans to introduce measurement systems for transient interruptions. Ofgem intends to write to these companies to seek an explanation as to why they have not taken explicit action to meet this commitment. Ofgem considers that the installation of measurement systems for transient interruptions was part of the final proposals for the distribution price controls, which all companies accepted.
- 3.16 PB Power has recommended that the definition of a transient interruption should be broadened to cover all interruptions up to three minutes duration (rather than one minute as is the case now). This would bring the definition in line with that used in European regulations. Ofgem recognises that increasing the threshold for the definition of transients may also provide incentives on companies to invest in more sophisticated automated devices that could show up as a reduction in the number of interruptions to supply. At present a definition of one minute does not have this affect because some of these automated devices take more than one minute to operate. It will be important to consider how this would impact on the proposal to use the number of interruptions to supply as an output measure under the incentive regime.

### ***Issues for consideration***

- 3.17 Consultees are invited to comment on this chapter and in particular on:
- ◆ PB Power's initial findings and the short, medium and long term proposals for improvements in measurement systems set out in paragraphs 3.6 to 3.10;

- ◆ the proposal to develop a set of output measures as a basis for monitoring medium term performance set out in paragraphs 3.11 to 3.14; and
- ◆ the proposal for measuring transient interruptions to supply set out in paragraphs 3.15 to 3.16.

## 4. Review of the information gathering process

### *Why information is collected*

4.1 In considering the future information and audit requirements that will be placed on distribution businesses it is useful to outline the reasons why information is collected from companies. These can be broken down into three main areas:

- ◆ information that is required to set and enforce price controls – in terms of the price charged, costs incurred and the quality of service delivered;
- ◆ information that is required to monitor performance between price controls and to identify areas that may require regulatory action; and
- ◆ information that will be required to operate the output based incentive regime.

4.2 The information that is presently collected from distribution businesses is submitted in a number of different forms, including:

- ◆ business plan questionnaires (as part of the price control review process);
- ◆ price control statements provided under Condition 3 of the PES licence (Schedule 6 in Scotland);
- ◆ regulatory accounts;
- ◆ information on performance against Guaranteed and Overall Standards of Performance;
- ◆ network performance statements provided under Condition 9 statements of the PES licence (Condition 7 in Scotland); and
- ◆ quality of supply reports.

4.3 Ofgem has reviewed the process by which information is presently collected from distribution businesses and also the approach taken by other regulators to collecting information.

## ***How information is collected***

### **Business plan questionnaires**

- 4.4 During a price control review a significant amount of information is collected from companies relating to a wide range of areas, including:
- ◆ detailed historic and forecast accounting statements such as profit and loss accounts, balance sheets and cash flow statements, and supporting schedules that request more detailed information on costs (on both operating and capital expenditure);
  - ◆ forecasts of the number of customers supplied and units distributed at different voltage levels; and
  - ◆ activity based information such as the number of different asset types that are subject to maintenance in a particular year.
- 4.5 The information is collected in the form of a business plan questionnaire that is issued to the companies which are typically given around 2-3 months to provide the information. There is no explicit audit of the business plan questionnaires by the companies although some of the accounting information will be derived from regulatory and statutory accounts which are subject to an independent audit.

### **Price control statements**

- 4.6 In order to monitor the compliance of the distribution businesses against the revenue assumptions underlying price controls Ofgem collects a range of price control information in the form of an annual return or statement under Condition 3 of the existing PES licence (or Schedule 6 of the Scottish PES licence). Distribution businesses complete a standard template. This includes information relating to the amount of:
- ◆ price control and excluded revenue recovered from charges made by the distribution business;
  - ◆ regulated and unregulated units distributed; and

- ◆ electrical losses.

4.7 This information is subject to an independent audit by company appointed auditors.

### **Regulatory accounts**

4.8 Regulatory accounts are submitted to the Director General on an annual basis, in addition to providing an interim summary profit and loss account. They are submitted by licence holders in respect of their licensed activities and include accounting statements such as profit and loss accounts, balance sheets, statements of total recognised gains and losses, cash flow statements and associated notes. These are subject to an independent audit by company appointed auditors. A high level version of the regulatory accounts is published whilst a more detailed version is provided to the Director General in confidence. Companies are also required to produce statutory accounts in accordance with company law.

### **Information on Guaranteed and Overall Standards of Performance (GOSPs)**

4.9 Distribution businesses submit data on their compliance with the GOSPs on a quarterly basis. The standards of performance were introduced to protect customers' interests with respect to the quality of service that is provided by distribution businesses. The GOSPs cover a wide range of areas. In 1995 Offer provided detailed guidance to companies on best practice in reporting under the standards. Further, the guidance requires that all companies commission an annual independent audit. In order to comply with this distribution businesses have installed measurement systems to record and report their performance. Ofgem publishes information on companies' performance against the GOSPs annually in the Report on Customer Services. The Utilities Bill as presently drafted specifies that the new Consumer Council will be responsible for publishing information relating to GOSPs.

### **Condition 9 statements**

4.10 Since privatisation, some network performance measures have been reported to Ofgem as a requirement of PES licences. These reports are known as Condition 9 statements. Ofgem publishes an annual summary of the companies'

statements in the Distribution and Transmission System (DATS) Performance Report. The information that is submitted under the Condition 9 statement is a subset of that collected under NaFIRS which was introduced by the Electricity Council in 1964. The scheme provides information on general network performance and the performance of certain asset types. Ofgem does not have direct access to all the data that is collected under NaFIRS and it is not subject to an explicit audit. The main areas where information is provided to Ofgem are:

- ◆ security – defined as the number of interruptions to supply per 100 customers;
- ◆ availability – defined as the number of minutes lost per customer;
- ◆ 3 hour restoration rate – the percentage of interruptions to supply restored within a 3 hour period of the fault occurring;
- ◆ 24 hour restoration rate – the percentage of interruptions to supply restored within a 24 hour period of the fault occurring; and
- ◆ overall network reliability – defined as the number of faults per 100 km of the network (both overhead line and underground cable).

### **Quality of supply reports**

4.11 At the time of the distribution price control review in 1995, Offer introduced a requirement on distribution businesses to report annually on the quality of supply that they deliver to customers, although this is not subject to a licence condition. Distribution businesses are responsible for publishing the reports although Ofgem reviews them against the criteria set down in the Director General's Paper on Quality of Supply - October 1995. The reports contain a wide range of quantitative and qualitative information, including:

- ◆ key quality of supply measures such as the amount of Customer Minutes Lost (CMLs); and
- ◆ details of local investment projects to improve quality of supply.

## Summary

- 4.12 The different forms in which information is collected from distribution businesses are submitted as separate documents. There is not a single overarching document that provides for the collection of all the information that is submitted by distribution businesses. There are also different reporting cycles for some of the information. The extent to which the information is subject to audit and the nature of that audit also differ. Ofgem's initial views on a monitoring framework in the light of this review are outlined in the next chapter.

## 5. A monitoring framework

### *Objectives of the monitoring framework*

- 5.1 Ofgem is concerned that the present arrangements for collecting information from distribution businesses:
- ◆ place undue emphasis on collecting a large amount of information at the time of a price control review;
  - ◆ do not produce information that is consistent across companies and over time;
  - ◆ lack appropriate arrangements for audit or scrutiny in some cases; and
  - ◆ do not facilitate the transparent monitoring of a company's performance against the assumptions underlying price controls.
- 5.2 As a result of these concerns Ofgem wants to improve the information which it receives and which forms the basis for large number of decisions important to the customers it protects and the companies it regulates. There are two broad approaches towards achieving this - starting afresh or building on the information that is already collected. Ofgem favours the latter because it considers it will be less of a burden to the companies who have systems in place to produce the information and for those who use the information in its present form.
- 5.3 This means that the monitoring framework will build on a number of different strands considered in the rest of this chapter or elsewhere in this document, namely:
- ◆ the review of regulatory accounts;
  - ◆ the review of quality of supply reports;
  - ◆ output measures under the IIP incentive regime;
  - ◆ supporting output measures under IIP;

- ◆ Condition 9 information; and
  - ◆ the review of Guaranteed and Overall Standards of Performance.
- 5.4 In addition companies will continue to provide price control statements on an annual basis.
- 5.5 Ofgem is keen that in collecting this information, through a series of separate arrangements, the linkages between the information are not lost. For example, in assessing the performance of a company against its price control settlement, its ability to meet the quality of supply targets as well as the efficiency targets for costs is a particularly important linkage.
- 5.6 In addition Ofgem will be looking to maintain and, where appropriate introduce, consistency in terms of reporting cycle, definitions applied, the reporting of disaggregated information and audit arrangements.
- 5.7 It would also be helpful for increasing transparency and therefore reducing the perception of risk in distribution businesses if it was possible to monitor on an ongoing basis a company's performance against the key underlying assumptions of the price control, namely:
- ◆ operating costs;
  - ◆ capital expenditure; and
  - ◆ quality of supply.
- 5.8 Ofgem recognises that it is not straightforward to make direct comparisons of the achieved performance of companies in these areas against the assumptions underlying the price control, particularly on operating costs and capital expenditure. One reason for this is that in setting the distribution price control a number of within range adjustments were made to price control revenue - such as that for failing to meet targets for quality of supply – after the allowed costs had been estimated. In effect this means that it would be difficult to establish and monitor the link between the allowed level of revenue and actual costs (both operating and capital). This issue is of sufficient importance to warrant

further analysis and Ofgem will want to consider as part of the work on regulatory accounts how best this information can be presented.

- 5.9 It is Ofgem's intention to review the information which it receives from companies on an annual basis. As a result of the IIP new information will be available to compare the relative performance of companies. Ofgem would expect to produce an annual report on the incentive regimes when they are in place. The form and content will need to be considered as part of next year's work.

#### **Review of regulatory accounts**

- 5.10 Some of the issues outlined above will be considered as part of the work that is being undertaken to review the regulatory accounts. Ofgem expects to publish a consultation paper on regulatory accounts in August 2000. This will identify areas for improvement particularly in respect of the consistency and usefulness of the information that is submitted by the companies. It will also consider the present guidance that companies follow on cost allocation. Ofgem is in the process of recruiting consultants to assist in this area. Issues that the consultants will be expected to consider include creating a set of regulatory accounting guidelines that will be consistent across distribution businesses and that will facilitate a better comparison of the regulatory accounts against the price controls. Areas of particular concern will include the allocation of overheads, the treatment of internal recharges and capitalisation policies.

#### **Review of quality of supply reports**

- 5.11 In the December 1999 final proposals for the distribution price control review Ofgem committed to a review of the quality of supply reports that are published by the distribution businesses on an annual basis. The review has covered the structure, form and content of the reports. There have been two main strands to this work. First, an internal review which has identified areas of best practice across the distribution businesses. Second, a letter was sent to the Chairmen of the Electricity Consumers' Councils (ECCs) to seek their views.
- 5.12 Quality of supply reports provide useful information to customers and their representatives (particularly the ECCs) on the quality of supply delivered by

distribution businesses in their authorised area. For example, information on worst served customers and projects that companies have introduced to improve the quality of supply to these customers. They do not appear to be extensively used to compare companies' performance but the ECCs have indicated that they find the process surrounding the compilation and review of the report a useful means of scrutinising the companies' performance. However, the reports tend not to be widely read by most customers mainly because of their detailed and technical nature.

5.13 In the light of the comments of the ECC Chairmen Ofgem considers that it would not be appropriate to insist on rigid consistency in the form, structure and content of the quality of supply reports as this may reduce the usefulness that the ECCs derive from being involved in the compilation of the reports. Ofgem does intend to be more prescriptive in the guidelines that distribution businesses must follow in producing the reports and the minimum requirements that the reports should meet. To a large extent these are in line with the guidance that the Director General provided to distribution businesses in 1995 although it is clear from the internal review that many companies do not presently adequately meet these requirements. Ofgem intends to write to each company individually to affirm good practice and to identify where improvements need to be made. These letters will also be sent to the respective Chairmen of the local ECC and their successor bodies.

5.14 There are also a number of generic improvements that Ofgem expects the companies to implement. Together with the company specific points these will replace the Director General's guidance of 1995. Ofgem intends to review each company's reports on an annual basis to ensure that they meet the requirements. Ofgem considers that general improvements to the quality of supply reports should be made in the following areas:

- ◆ consistency – companies present information in different ways which make it difficult to compare companies' performance. For example, the extent and nature of disaggregated reporting differs significantly. Ofgem intends that a common way of disaggregating information should be used, and where appropriate this should also be in line with that which is proposed for output measures;

- ◆ provision of information – the level of detail and usefulness of the information that companies provide in the reports differs. Ofgem considers that improvements could be made including, a summary of the impact of operating and capital expenditure schemes on quality of supply and efforts to make the reports more relevant to non-domestic customers; and
- ◆ transparency – the reports tend to be very technical and not very easy to follow. Improvements that could be made include providing a glossary of technical terms used and the use of appendices for detailed data.

### **Additional information**

5.15 The information which has been described above is information which Ofgem needs for the purpose of monitoring company performance between price control reviews. Additional information is collected through the business plan questionnaires at a price control review. It is for consideration whether Ofgem should collect some of this information on an ongoing basis. In practice the companies will already collect a lot of this information on their activities (for example the amount of overhead line and underground cable maintained or replaced) for the purposes of running their businesses. It should not be an additional burden to report to the regulator on an annual basis and it would to some extent reduce the amount of information collected (and hence resources required) at a price review.

### ***Audit, publication and implementation***

#### **Audit and scrutiny**

- 5.16 Ofgem considers that the nature of audit that is introduced could have a number of forms and could differ depending on the nature of information. For example, it may be appropriate to have different arrangements relating to financial information (as in the regulatory accounts) or output information (as under the IIP incentive regime).
- 5.17 It will be important that Ofgem lays down more precise guidelines for the definition and collection information. This applies to all the information that

Ofgem collects from distribution businesses not just that relating to the IIP incentive regime.

- 5.18 Ofgem has considered two broad models for the audit of the information that is collected as part of the incentive regimes. Under one model the company employs reporters who owe a duty of care to the regulator. In addition, the regulator sets out the rules for the appointment of the reporters for each company and has the power to insist that a reporter be changed. The reporters are broadly responsible for auditing the processes used by the companies to collate information that is reported to the regulator.
- 5.19 Under the second model the regulator appoints and employs the auditors (or reporters). Rather than looking at individual companies, the auditors could look at measurement issues across all the companies, so for example, auditors would be appointed to audit the output measures included in the incentive regime, for monitoring medium term performance of network assets and the measurement of customer satisfaction. Each set of auditors would be responsible for reporting on all of the distribution businesses. Ofgem does not expect that the cost of this approach would be materially higher than the alternative approach but there may be differences of who, in the first instance, meets the cost of the audit arrangements.
- 5.20 Ofgem is concerned that the information that is provided by distribution businesses is consistent. This is of particular importance in a system where financial penalties and rewards will be directly linked to the information that is submitted by the companies. Distribution businesses should be as concerned with ensuring consistency, particularly if performance is assessed on a relative basis.
- 5.21 As a matter of priority the level of consistency must be improved. Ofgem considers that this would be best achieved by using the second model outlined above. By having each set of auditors responsible for auditing a particular issue across all the distribution businesses it should lead quickly to an increase in consistency. Although this framework for audit may be perceived as more intrusive Ofgem considers that any perception in this respect is outweighed by the need to achieve consistency in the information that is collected. Over time

as consistency is achieved it may be appropriate to review the audit arrangements and to move, for example, towards an industry based approach or a model similar to the role of reporters described above.

### **Publication**

- 5.22 There is a general move across the regulators to increase the level of transparency in the regulatory process. Ofgem has taken important steps over the last year in this respect – both in the context of the distribution price control review and regulatory policy more generally. This process has included, for example, making available more information underlying the conclusions of the price controls than in any previous price control review. Ofgem is committed to this approach and will seek to make available information that will increase the level of transparency provided that where there are genuine issues of commercial confidentiality, these are given appropriate consideration. Ofgem’s initial view on confidentiality is that all the information that is collected as part of the information template could potentially be published in some form. Distribution businesses are network monopolies with no competitors in the provision of their core services and, as such, issues of commercial confidentiality are less likely to be a concern. Ofgem will have regard to the relevant sections of the Utilities Bill relating to the publication of information in considering what information should be placed in the public domain.

### **Implementation**

- 5.23 It will be important to consider the way in which the information described above will be gathered. It will be necessary to consider whether the proposed licence conditions (which Ofgem is consulting on as part of the draft standard distribution licence - particularly Condition 28) provide Ofgem with sufficient powers to collect the information in a prescribed form and subject it to particular audit arrangements. It may be necessary to introduce modifications to Condition 28 or introduce an additional licence condition.
- 5.24 From time to time, Ofgem may wish to change the form in which the information. Use of Condition 28 of the draft standard distribution licence would allow Ofgem to require companies to provide information for the purpose of discharging its duties as specified by the Utilities Bill. In practice

Ofgem would expect to review the scope and form of the information which it receives from distribution businesses as part of the monitoring framework in the autumn of each year and to write to the companies about any changes at that time. Ofgem recognises that any significant changes to the scope or form of the information it requests from the companies could not only increase the regulatory burden but also the perception of regulatory risk. It is Ofgem's intention to change the scope and form of the information it requests as infrequently as possible, consistent with it carrying out its duties as specified by the Utilities Bill once it is enacted.

### ***Issues for consideration***

- 5.25 Consultees are invited to comment on this chapter and in particular on:
- ◆ whether additional information should be collected for use at the price control on an ongoing basis, as set out in paragraph 5.15;
  - ◆ Ofgem's proposal that in the first instance it appoints auditors to review the information used as part of the incentive regimes, as set out in paragraphs 5.16 to 5.21; and
  - ◆ issues associated with implementation and publication set out in paragraphs 5.22 to 5.24.

## 6. Changes to Guaranteed and Overall Standards of Performance

### *Introduction*

- 6.1 The December 1999 final proposals for the distribution price control included a number of commitments relating to Guaranteed and Overall Standards of Performance (GOSPs). These were as follows:
- ◆ automatic payments under GS2 – this will require companies to make an automatic penalty payment to a customer if supply is not restored within an 18 hour period following an interruption to supply, from April 2002;
  - ◆ multiple interruption Overall Standard (OS)– a new Overall Standard covering the maximum number of interruptions experienced by customers such that from April 2002, of the order of 99 per cent of customers should not be subject to more than a specified number of interruptions;
  - ◆ multiple interruptions Guaranteed Standard (GS) – a new Guaranteed Standard which will also apply from April 2002 with customers suffering more than a specified number of interruptions being entitled to a penalty payment; and
  - ◆ telephone response standard – a new Overall Standard covering substantive telephone response times, such that 90 per cent of calls are answered within 15 seconds in normal circumstances and 80 per cent of calls are answered within 30 seconds in exceptional circumstances.
- 6.2 There was a commitment on companies to introduce measurement systems to monitor transient interruptions to supply from April 2001. This is discussed in more detail in chapter 3. There was also a commitment to review the operation of OS1a – which specifies the percentage of interruptions that should be restored within 3 hours of a fault occurring.
- 6.3 Ofgem intends to undertake a wider review of the GOSPs scheme in the light of the legal separation of distribution and supply activities and increasing

competition particularly in supply but also in metering activities. This review will consider, for example, the allocation of existing standards between different activities and the requirements for standards of performance in competitive markets. Ofgem intends to publish to a consultation paper on the review of the GOSPs scheme towards the end of this summer.

### ***Price control commitments***

- 6.4 Set out below are some of the issues that might be relevant for taking forward the commitments made as part of the distribution price control identified above.

### **Overall and Guaranteed Standard on multiple interruptions**

- 6.5 It will be necessary to introduce a consistent definition of an interruption to supply as there appears to be significant variation across companies in the way in which an interruption to supply is presently defined. This work is being taken forward as part of the IIP. The period of time over which a company's performance will be assessed needs to be considered. For example, should it be a financial year or a rolling 12 month period from when the first interruption to supply is experienced. Ofgem will want to consider whether there should be differential targets on the maximum number of interruptions for the OS and GS. It will also be necessary to consider whether there should be differential targets between and within companies to reflect differences in geography and network design or differences in expectations between urban and rural customers.
- 6.6 It will be necessary to consider whether there should be any exclusions such that an interruption would not be counted towards the prescribed number of maximum interruptions. It will also be necessary to consider whether customers should receive payments on the GS at the end of the reporting year or immediately following a breach in the maximum number of interruptions.

### **Automatic payments under GS2**

- 6.7 It will be necessary to consider whether companies will be able to identify which customers have been off supply for more than 18 hours. Concerns in this area will be mitigated if companies introduce connectivity models as outlined in chapter 3. Further, consideration will need to be given to the appropriate

mechanism for the distribution business to make compensation payments to customers.

### **Overall Standard on substantive telephone response**

- 6.8 It will be necessary to consider how a substantive telephone response should be defined. In this respect it may be appropriate to consider the information that customers require when they contact the distribution business. It will be important to consider whether the targets that are set should cover average performance across all telephony systems or whether there should be a separate arrangements for operator based (or emergency) calls. Once the standard is defined it will be necessary to consider how a company's performance should be monitored. For example, should the regulator specify the requirements that telephone systems should meet or monitor in some way the information that is provided to customers when they contact the distribution business.

### ***Issues for consideration***

- 6.9 Ofgem intends to take these issues forward as part of its wider review of the GOSPs scheme although it recognises that there are significant links in the definition of the commitments and the IIP, particularly between the output measures that will be subject to direct financial incentives and the OS on multiple interruptions and the telephone response standards. Consultees are still invited to comment on this chapter and in particular on the issues outlined above.

## 7. Next steps

### *Consultation and communication*

- 7.1 The March document raised the possibility of using working groups structured around the key issues being considered as part of the IIP. Ofgem still considers that working groups have a role to play in bringing a detailed technical understanding to specific issues. The main issue where Ofgem will be looking for advice is likely to be in the consistent definition of output measures for distribution businesses – particularly the definition of the hierarchy of constituent items that input into the calculation of the number and duration of interruptions to supply such as the definition of a customer, an interruption to supply, and restoration of supply. Ofgem will write to the distribution business separately to invite them to contribute to such a working group.
- 7.2 Ofgem intends to offer distribution businesses an opportunity to meet on an individual basis prior to the publication of final proposals on output measures and monitoring delivery between reviews in September 2000. These meetings will be held at the beginning of September and are intended to provide distribution businesses with the chance to discuss any issues that they perceive as important before Ofgem publishes its final proposals.

### *The overall timetable*

7.3 Set below is a table which summarises Ofgem's further thinking on the timing of the consultation papers, industry meetings, working group meetings and public workshops.

<b>Workstream</b>	<b>Timing</b>
<b>Defining output measures &amp; monitoring delivery between reviews</b>	
Possible working group meetings	July, August and September 2000
Distribution business meetings	First week of September 2000
Final proposals	End of September 2000
Implementation starts	April 2001
<b>Developing incentive regimes</b>	
Initial thoughts	December 2000
Initial proposals	March 2001
Possible public workshop	April 2001
Possible distribution business meetings	June 2001
Possible working group meetings	July, August and September 2001
Final proposals	September 2001
Implementation starts	April 2002

### *Next Steps*

7.4 Final proposals on output measures and monitoring delivery between reviews will be published in September. Between now and September there are a number of areas for further work including drawing up the:

- ◆ detailed definitions of output measures;
- ◆ scope of a survey on customer satisfaction;
- ◆ definitions of outputs for monitoring medium term performance; and
- ◆ detailed arrangements for the audit process.

7.5 As part of the overall review of the GOSPs scheme it will also be necessary to consider the development of the commitments that were made with respect to Guaranteed and Overall Standards of Performance at the time of the last distribution price control review.

## Appendix 1 Summary of responses to March document

- 1.1 26 responses were received to the March update document on defining output measures and incentive regimes – 12 PESs (covering the 14 distribution businesses), 4 ECCs, the National Electricity Consumers' Council (NECC) and 9 others.

### **IIP and the regulatory framework**

- 1.2 It was generally agreed that it would be important to review the effectiveness and robustness of the incentive regime over the period April 2002 to April 2004, including whether 2 per cent remains an appropriate amount of revenue to be put at risk to the incentive regime. One argued that this should be increased significantly at the time of the next price control review.
- 1.3 It was generally agreed that the focus of the IIP should be on providing stronger overall incentives on companies with respect to the quality of service they deliver to all customers. Some concerns were expressed that distribution businesses could face "multiple financial jeopardy" for failing to meet targets under the IIP, breaching Guaranteed Standards of Performance and potential penalty payments under the Utilities Bill once it is enacted. It was agreed that the Competition Act is not the most appropriate regulatory instrument for dealing with issues associated with poor quality of service.
- 1.4 There was strong support for the review of regulatory accounts.
- 1.5 Most agreed that a separate project should be undertaken to examine the relationship between NETA and the IIP although one respondent argued that the project should be carried out as part of IIP.

### **Output measures**

- 1.6 Most agreed in principle with the proposed selection criteria. Some suggested that it is not easy to define what customers' value and that it was not clear that sufficient work had been undertaken in this area. It was argued that it is important to distinguish between different customers of the distribution business. Some suggested that it may be necessary to undertake further customer research

on the expectations and values that customers place on the outputs of the distribution business.

- 1.7 One argued that suppliers were the primary customers of distribution businesses and that output measures should be defined in a way that reflected this. Another suggested that there should be specific output measures relating to customers which require a new or reinforced connection to the network including operators of embedded generation.
- 1.8 It was agreed that output measures should be attributable to distribution businesses and that they should be able to influence them in some way. Many suggested that interruptions to supply caused by failures on the transmission system should be excluded for the purpose of assessing companies' performance under the incentive regime. One suggested that exclusions under IIP should reflect those used for the relevant Guaranteed Standards of Performance.
- 1.9 Some expressed concern at comparing companies' performance on output measures. It was suggested that the approach does not mirror a competitive market; it could lead to higher prices to customers greater than the value they place on improvements to quality of service; and it is not possible to compare companies' performance on a robust basis. Others supported the use of comparative performance arguing that it would provide strong incentives to improve quality of service.
- 1.10 Some suggested that it is important to consider the longer term development of the network in defining output measures, particularly in relation to the possibility of increased embedded generation and other wider social and environmental issues.
- 1.11 Most supported the proposed output measures. Most argued that it was important that consistent definitions for the number and duration of interruptions should be introduced. Some suggested that survey evidence should not be used to assess customer satisfaction and that more objective measures should be used while others supported their use. There was little support for the inclusion of output measures relating to transient interruptions to supply and transient voltage depressions, although one argued strongly that they should be included. A number of concerns were expressed at using price as an output measure. It

was argued that it is a function of a number of factors that are outside the control of distribution businesses such as the topography within a distribution authorised area, the inherited state of the network and regulatory policy with respect to the valuation of the regulatory asset base. One strongly argued that it should be subject to direct financial incentives as price is under the influence of distribution businesses while another supported its use primarily as a means of normalising targets on output measures.

### **Scope of the IIP and incentive regimes**

- 1.12 There was broad support for excluding issues relating to safety, the environment and the provision of connection services from the IIP, although a small number suggested that it may be appropriate either to include output measures relating to the environment such as the amount of electrical losses. Most suggested that issues relating to industry wide incentives on sharing of best practice did not need special consideration as there were a number of factors that meant that this should not be a particular concern. A small number suggested that this was not the case and that additional incentives should be provided to companies to share best practice. Concerns were expressed that in an incentive regime based on comparative performance there may be perverse incentives on companies with respect to the way in which they respond in a co-ordinated way to storm damage. There was little support for additional incentives on companies to provide information to the regulator as it was considered that penalties that could be imposed for a breach in a licence condition once the Utilities Bill was enacted would provide sufficient incentives on companies.
- 1.13 Strong support was expressed for the use of an accreditation scheme for the asset management policies of distribution businesses as a means of providing reassurance to the regulator with regards to the medium term performance of the network. Some others suggested that medium term performance should be monitored with asset performance indicators. There was some support for the use of disaggregated data on output measures to enable a better comparison of companies' performance although some suggested that it would be difficult to derive consistent definitions, complex to understand and costly to implement. Concern was expressed that improvements in measurement systems would need to be balanced carefully with the additional costs associated with making the

improvements. There was support for the use of independent external auditors for information used under the incentive regime as this would improve consistency. Others suggested that any audit regime should not be too intrusive; burdensome on the companies; or costly to implement. Some supported the audit arrangements used by other regulators particularly Ofwat.

- 1.14 Most suggested that it was difficult to decide on the amount of revenue that should be attached to each of the output measures within the incentive regime. It was suggested that further work needed to be done in this area - particularly in assessing what customers' value - including the use of a customer survey. Some suggested that the amount of revenue attached to an output measure should not be greater than the value that customers place on it. There was a strong view expressed by some that interruptions caused by incidences of severe weather should be excluded from the incentive regime although many agreed that customers are primarily concerned with whether they are on or off supply not the cause of the interruption. Others suggested that it may be appropriate to have different arrangements under severe weather while others argued that companies' performance should be included under all circumstances.

## **Appendix 2 List of respondents to March document**

### **Distribution Businesses**

TXU Europe Distribution  
East Midlands Electricity  
London Electricity  
GPU Power UK  
Northern Electric and Gas Distribution  
NORWEB Distribution  
SEEBOARD  
Infralec  
Western Power Distribution  
Yorkshire Electricity  
Scottish Power  
Scottish and Southern

### **ECCs and other consumer representatives**

Midlands ECC  
North East ECC  
South Wales ECC  
South West ECC  
Major Energy Users' Council  
National Electricity Consumers Council

### **Others**

British Energy  
British Gas Trading  
BG Transco  
Dr Catherine Mitchell  
Econnect  
Gas Transportation Company  
IMR Solutions  
WS Atkins

## Appendix 3 Work programme for PB Power

### IIP commitments

3.1 The consultants are being asked to carry out a detailed review of distribution businesses existing measurement systems for collating a range of output measures. The output measures which the consultants are required to investigate are:

- ◆ number of outages;
- ◆ the duration of outages;
- ◆ and therefore Customer Minutes Lost (CMLs)
- ◆ customer satisfaction;
- ◆ voltage depressions; and
- ◆ transient interruptions.

3.2 The consultants will need to:

- ◆ show how each PES presently defines and measures output measures and whether there have been any changes to definition that has led to changes in the level of the outputs reported to Ofgem. The consultants will also need to identify any material changes that have been made by PESs to the measurement systems and the impact that this has had with respect to the accuracy/automation/auditability of output measures.
- ◆ assess the degree of accuracy/automation/auditability of the system that is used to collect the information. For example, the consultants will be expected to identify the detail to which the companies have mapped individual customers' premises on to the distribution network – for example at single-phase low voltage levels.
- ◆ identify the extent to which companies presently collect information on output measures at a sub-PES level, for example on different asset types

such as overhead line and underground cable or between different areas such as urban/rural/sparse.

- ◆ develop proposals for common, auditable systems for measuring each output measure, taking into account PESs existing systems and the likely changes to systems which are expected to be made during the next two years;
- ◆ provide an initial assessment of the cost and lead times associated with the implementation of revised measurement systems;
- ◆ provide an assessment of how companies monitor the medium term performance of the network and the approach to asset management. The consultants will also need to consider what would constitute appropriate measures for monitoring the medium term performance of the network.

#### **Price Control Review Commitments**

3.3 The final proposals for the distribution price control review made reference to a number of specific tasks, some of which are reflected in the points above. For the sake of completeness, Ofgem would like the consultants to explicitly address the following points:

- ◆ review PESs' progress on implementing the necessary systems to measure transient interruptions and whether other companies will have systems operational by April 2001;
- ◆ review PESs' progress on installing systems such that their telephone systems are capable of answering 90 per cent of calls within 15 seconds in normal circumstances and 80 per cent of calls within 30 seconds in exceptional circumstances; and
- ◆ review PESs' progress on installing systems such that they are able to make penalty payments automatically to customers for failure to meet GS 2.