

**March 2000**

**Information and Incentives Project:  
defining output measures and incentive  
regimes for PES distribution businesses**

**Update**

## Executive summary

The background to the IIP is set out in the introduction. This letter is the second that Ofgem has published on the IIP and follows on from the December 1999 letter that set out the objectives and scope of the project. This document sets out Ofgem's further thinking on the issues that are likely to be relevant in defining output measures for PES distribution businesses, including the selection criteria. It reviews the output measures that are already collected by Ofgem and considers a possible revised set of output measures. It also highlights issues that are likely to be relevant for defining the framework for the output based incentive regime.

Interested parties including PESs and customer representatives broadly welcomed the objectives of the project and agreed that at least initially the scope of the project should apply to PES distribution businesses. Ofgem intends to proceed on this basis.

There was also support for the overall project structure with the emphasis on defining output measures and the information template this year and on specifying the framework for the incentive regime next year. Some minor changes have been made to the overall timetable. These are discussed in more detail in section 5.

Ofgem's initial thinking is that the number of output measures that are subject to financial incentives should be limited to a small number and that they should (paragraph 3.1):

- ◆ reflect what customers actually value;
- ◆ be attributable to PES distribution businesses; and
- ◆ be capable of objective measurement over time and across companies

Respondents suggested other selection criteria and it will be important to consider these in defining the output measures.

Ofgem's initial thinking on possible output measures that will be subject to financial incentives are that they should address (paragraph 3.13):

- ◆ the number of interruptions to supply that customers experience;
- ◆ the duration of those interruptions; and

- ◆ the response which customers receive when their supply is interrupted.

The price that customers pay could also be used as an output measure although it would not be subject to direct financial incentives (paragraph 3.19). It is for consideration what, if any, output measures are needed to reflect the values of other customers, particularly intensive users (paragraph 3.20). There may be a need for supporting output measures that are not subject to financial incentives, such as those on the condition of network assets (paragraph 3.25). Other issues of importance in defining output measures include the specification of adequate measurement systems and audit arrangements to ensure consistency and accuracy of data (paragraph 3.27).

A public workshop will be held on 4 May to discuss the issues raised by this document (Annex 2). A detailed timetable for the project is set out in section 5.

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# 1. Introduction

## *Background*

- 1.1 As part of the recent price control review of the Public Electricity Supply (PES) distribution businesses it was recognised that further work needed to be carried out to address some of the weaknesses associated with the existing framework of price regulation. This included a commitment to an ongoing programme of work – the Information and Incentives Project (IIP).
- 1.2 In December 1999 Ofgem sent an open letter to the Chief Executives of the PESs outlining the objectives and scope of the IIP.<sup>1</sup> This set out the objectives of the project, namely to:
- ◆ strengthen the incentives on PESs to deliver the agreed quality of output and to value better changes in the quality of output;
  - ◆ improve the incentives to achieve efficiency savings throughout the control period and in a way which minimises distortion between operating and capital expenditure; and
  - ◆ reduce regulatory uncertainty and risk by increasing openness and transparency between reviews as well as at the time of reviews.
- 1.3 To deliver these objectives Ofgem proposed breaking down the work into four workstreams:
- ◆ defining on a consistent basis the outputs of regulated businesses;
  - ◆ developing consistent output-based incentive regimes;
  - ◆ monitoring on a consistent basis delivery between price reviews; and
  - ◆ reviewing the incentives created by the regulatory framework, including cost efficiencies and the relationship between costs and outputs.

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<sup>1</sup> Letter to the Chief Executives of the PES Distribution Businesses, Information and Incentives Project – December 1999

- 1.4 Since December Ofgem has met with all the PESs individually to discuss the issues raised in the December 1999 letter. Meetings have also been held with other companies, such as Transco, National Grid Company (NGC) and British Gas Trading (BGT) and also with consumer representatives including a sub-group of the Chairmen of the Electricity Consumers' Committees (ECCs) the Major Energy Users' Council (MEUC) and the Energy Intensive Users Group (EIUG). Ofgem has also met with employee representatives for the electricity industry.
- 1.5 20 written responses were received to the December 1999 letter - from 12 PESs, 2 ECCs, the National Electricity Consumers' Council (NECC) and 5 others. A summary of the responses is in Annex 1.

***Justification and regulatory impact of the IIP***

- 1.6 Distribution prices account for a significant proportion of final bills (about 30 per cent in the case of a typical domestic bill). The quality of service in distribution is important for industrial, commercial and domestic customers alike. Price and quality of service may have a bearing on competition and appear to be matters of interest to suppliers.
- 1.7 Ofgem has published its intention to review arrangements with the aim of strengthening incentives on distributors to act efficiently in delivering a good quality of service, while reducing the risk of regulatory uncertainty associated with the present review process.
- 1.8 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 in 2004), 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.
- 1.9 Ofgem judges that the 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.
- 1.10 Total distribution prices in 2004/5 are expected to be approximately £2.6 billion (in 2000 prices). It is the purpose of the project to evaluate the additional

benefits of the quality of service enhancements which might be gained. The direct costs of the IIP up to April 2002 are estimated at £1 million (including a provision of £0.5 million for consultants). The direct costs on the industry are small – the project requires little resource and, so far as Ofgem is aware, no company is using consultants. The indirect costs on the industry will depend on the progress of the project and on the state of the companies management and information systems. The costs of aligning these are not likely to be material in the context of the issues and sums involved.

### ***Issues for Consideration***

1.11 Views of all respondents are welcome on any issues raised by this document but particularly on:

#### **Output measures**

- ◆ the selection criteria for defining output measures – paragraph 3.12
- ◆ Ofgem's initial thinking on possible output measures– paragraph 3.13;
- ◆ what if any output measures are needed to reflect the values of other customers particularly intensive users – paragraph 3.20;
- ◆ whether issues with regard to safety, provision of new connections and the environment should be excluded from the scope of the IIP – paragraph 3.25;
- ◆ whether there is a need for industry wide incentives on issues such as responding to storm damage and sharing of best practice – paragraph 3.25;
- ◆ whether there is a need for financial incentives in respect of the delivery of information – paragraph 3.25;
- ◆ the requirements for measurement systems to collect information on output measures – paragraph 3.27;
- ◆ the scope and role of audit arrangements – paragraph 3.29; and

- ◆ the practicality and desirability of collecting output measures at a sub-PES level to improve the comparability of companies – paragraph 4.4.

### **Incentive regimes**

1.12 Issues concerning the framework for the output-based incentive regime will be largely taken forward next year. Nonetheless, it would still be useful to receive the views of respondents on the following issues:

- ◆ the prioritisation of the output measures and the amount of revenue that should be put at risk to each individual output measure – paragraph 4.12;
- ◆ the appropriate treatment of performance under severe weather within the incentive regime – paragraph 4.14; and
- ◆ the appropriate treatment for interruptions to supply caused by failures on the transmission network and other factors outside the control of PESs – paragraph 4.17.

### ***Responding to this document and the invitation to the public workshop***

1.13 Ofgem will be holding a public workshop on 4 May. Details of the workshop and an invitation are in Annex 2. Views on this document are welcome from all parties by 12 May. They should be sent to:

Cemil Altin  
Ofgem  
Stockley House  
130 Wilton Road  
London  
SW1V 1LQ

Email           cemil.altin@ofgem.gov.uk  
Fax               0207 9321675

1.14 Responses to the invitation to attend the public workshop should be returned by 11 April to allow sufficient time for the necessary arrangements to be put in place. Please complete the form in Annex 2 and return by post or fax to Cemil Altin at the above address.



- 1.15 In carrying out the IIP, Ofgem intends to consult widely. Responses to this document would be particularly welcome from consumer representatives, employee representatives and other interested parties. Ofgem recognises that the introduction of competition in the supply of electricity and the separation of businesses has led to a new relationship emerging between supply and distribution businesses. Responses would also be welcome from supply businesses, both PES and non-PES suppliers.
- 1.16 A copy of this document is also available on Ofgem's website ([www.ofgem.gov.uk](http://www.ofgem.gov.uk)).

## 2. The regulatory framework

2.1 The Information and Incentives Project (IIP) takes place against the background of existing regulation with regards to price and quality. In particular it is important to be clear about the relation 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).

### *The existing price control regime*

2.2 The IIP will adjust price control revenues from April 2002, as signalled in the December 1999 final proposals on the distribution price control review. However, it is not in any other sense a re-opener of the price control. It does not seek to replace the existing price control regime or impose new targets for quality of supply. Rather, it is a means whereby some of the weaknesses that exist in how price controls are presently reviewed and implemented can be addressed. To limit the companies' exposure to risk between price reviews the financial impact of any additional mechanisms will be limited to 2 per cent of price control revenue in each year during the new price control period from April 2002 until the end of March 2005.

2.3 The next price control review is expected to be conducted during 2004. Hence the period between April 2002 and April 2004 will be important in providing two years of information on the effectiveness and robustness of the incentive regime introduced under the IIP. It will be an important part of the next distribution price control review to examine the operation of the incentive regime and consider whether 2 per cent remains a reasonable limit on the amount of price control revenue that should be put at risk to the incentive

regime. It will also be necessary to consider whether any changes need to be made to the incentive regime, such as the introduction of further output measures.

- 2.4 Some PESs have argued that ultimately, the incentive regime, not RPI-X should determine the majority of price control revenue. Any significant changes to how price controls are reviewed and implemented will need to be considered very carefully. It is unlikely that any major changes to the method of determining price control revenue will be made at the time of the next price control review in 2004.

### ***Issues from the recent distribution price review***

- 2.5 Feedback that Ofgem has had from PESs and other interested parties on the recent distribution price control review has raised a number of pertinent issues. Some of these will be addressed as part of the IIP, while others are part of the work Ofgem will be doing to improve the regulatory process. These are set out below:

- ◆ ***information asymmetry and poor quality information*** – Ofgem is concerned that there is an asymmetry between the information that companies have available to them and that which the regulator collects as part of the price control review process and on an ongoing basis. In particular, there is a concern about the degree of consistency and hence comparability of the historic information collected. During the recent distribution price control review a significant amount of time and resources were devoted to trying to achieve greater consistency in the information submitted by the companies. The infrequent collection of large amounts of information also creates a significant burden on the companies and Ofgem. In future Ofgem is keen to reduce these difficulties by collecting information of a higher quality on a more regular basis;
  
- ◆ ***emphasis on gaming or beating the regulator*** – price controls as they are presently reviewed and implemented mean that companies have stronger incentives to game with the regulator in terms of the information that is submitted particularly in respect of forecast information rather

than on outperforming peers. An important element of the IIP is to introduce an incentive regime that will allow for additional reward for outperforming peers. This ought to be at the expense of poorly performing companies rather than customers, thus replicating more closely the conditions of a competitive market; and

- ◆ ***uncertainty of outcome*** – price control reviews can lead to significant adjustments to companies' revenues that may increase the perception of risk for these companies. This is particularly the case if the outcome of the price control review is perceived as uncertain. Interested parties, including the companies themselves, customers, and providers of capital should be more readily able to see how companies are performing against the cost forecasts, both capital and operating costs, that underlie the price controls. This should allow them to predict with more accuracy future adjustments to companies' revenues. This should reduce the perception of risk for these companies, their risk profile and ultimately, in this respect at least, the cost of capital. Establishing more transparent systems helps meet this aim and is a primary focus of the IIP. Improving the monitoring of companies between reviews and making that information more widely available is another way of meeting the aim.

### ***Existing Overall and Guaranteed Standards of Performance***

- 2.6 A major purpose of the additional incentive regime introduced under the IIP is to strengthen the financial incentives on PES distribution businesses with regards to the quality of service that they deliver to customers as a whole. The existing Overall and Guaranteed Standards of Performance are designed to protect individual customers' interests with respect to the quality of service that they receive and provide for payments in instances where the service is not of an appropriate quality. Ofgem regards the existing Overall and Guaranteed Standards of Performance as an important protection for individual customers, as well as customers collectively, and anticipate that these will remain an important part of the regulatory framework. Ofgem's initial view is that the payments made as part of the IIP should not result in changes to the amount that, collectively or individually, customers ultimately pay but should result in

efficient companies earning a higher rate of return and in less efficient companies earning a lower rate of return. This is consistent with the approach taken in the recent distribution price control review.

### ***The Utilities Bill and the Competition Act 1998***

- 2.7 The Utilities Bill will (subject to enactment), and the Competition Act 1998 does, permit the imposition of penalties on gas and electricity companies. PESs have argued that they could face fines under the new legislation for poor quality of service that had already been penalised under the output based incentive regime.
- 2.8 The Utilities Bill, as presently drafted, will provide the Director General with powers to impose penalties on licence holders in circumstances where they are in breach of licence conditions and certain other requirements including requirements relating to specified standards of performance. It will be important to consider carefully the relationship between the existing standards of performance and the output based incentive regime.
- 2.9 Ofgem does not consider that the Competition Act 1998 is the most appropriate regulatory framework for dealing with issues likely to be associated with poor quality of service. It would not normally expect to use the Competition Act as a means for taking action against companies delivering a poor quality of service.

### ***The review of regulatory accounts***

- 2.10 PESs are required at present to submit annual and interim regulatory accounts. Significant improvements could be made to the regulatory accounts in order to make them more useful. In particular, Ofgem will seek to improve the level of consistency in the information submitted by companies; the degree of transparency in the regulatory accounts; and the usefulness of the information that is made publicly available. It will also be appropriate to review the possible linkage between the regulatory accounts and price controls.
- 2.11 Ofgem expects to publish a first consultation paper on regulatory accounts in summer 2000. Ofgem is also leading the inter-regulator review of regulatory accounts, which was set out in the utility regulators' statement of joint working.

## ***NETA***

- 2.12 Some PESs argued that aspects of NETA will impact on the behaviour of and incentives towards PES distribution businesses and the costs that they will incur. The December 1999 consultation paper on National Grid Company (NGC) System Operator Incentives<sup>2</sup> indicated that it would be consistent with reforms both to the energy regime proposed for NETA and the new transmission access regime for the costs of distribution failures and constraints to be borne by distribution businesses. One PES suggested that there should be a separate workstream under the IIP to specifically consider the relationship between NETA and IIP. Ofgem considers that these issues should be taken forward as part of a separate work programme.

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<sup>2</sup> NGC System Operator Incentives, Transmission Access and Losses Under NETA, A Consultation Document – December 1999

### 3. Output measures

3.1 Ofgem's initial thinking is that there should be a relatively small number of output measures that should be subject to direct financial incentives and that these should be measures that are actually valued by customers. There is a trade-off between transparency and the number of output measures that are part of the incentive regime. This is particularly the case if output measures are collected at a sub-PES level, for example distinguishing between urban and rural areas. Disaggregation of output measures leads to a large number of data points which improves the quality of any comparison but could make the incentive regime unduly complex to administer and raises additional concerns about the auditability of data. A review of output measures already collected by Ofgem is in Annex 3.

#### *Selection criteria for output measures*

3.2 The December 1999 letter explained that in order for output measures to be useful in the context of the incentive regime they would need to meet certain criteria. Ofgem's initial thoughts on appropriate selection criteria were 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.

#### *What customers value*

3.3 Most respondents to the December 1999 letter agreed that it was important that any output measures were representative of what customers actually value. For example, for companies operating their business, the number of network faults per km of overhead line is an important output measure but it does not measure directly what customers value. In this respect customers are ultimately concerned with the number and duration of interruptions to their supply.

3.4 It is for consideration what, if any, output measures may be required to reflect what larger electricity users value. Larger electricity users may have different

expectations and values to smaller customers. For example, some intensive users may be concerned with very short interruptions to supply of less than 60 seconds ("transient interruptions") that for reporting purposes are not classified as an interruption. These very short interruptions to supply can impact adversely on production processes and the operation of machinery. In the December 1999 final proposals document for the distribution price control review it was indicated that PESs will be required to have in place the necessary facilities to count and report on transient interruptions by April 2001 and that they will be required to report on their progress in establishing these systems. Intensive users have also expressed concern at the number of voltage depressions that are experienced. In these instances the voltage level at which supply is received at a customer's premises temporarily falls, usually for less than one second which can adversely impact the performance of sensitive equipment.

***Attributable to the distribution business***

- 3.5 The scope of the IIP and the incentive regime is primarily targeted at PES distribution businesses. If companies are financially incentivised against a set of output measures it is important that they can be attributed to the distribution business and that in some part PESs are able to influence them. It would not be appropriate to expect a PES to be exposed to financial risk if it had no influence over the output measures upon which the incentive regime was based. For example, it might not be appropriate for PESs to be financially penalised for interruptions to supply caused by a failure on the transmission network.

***Capable of objective measurement over time and across companies***

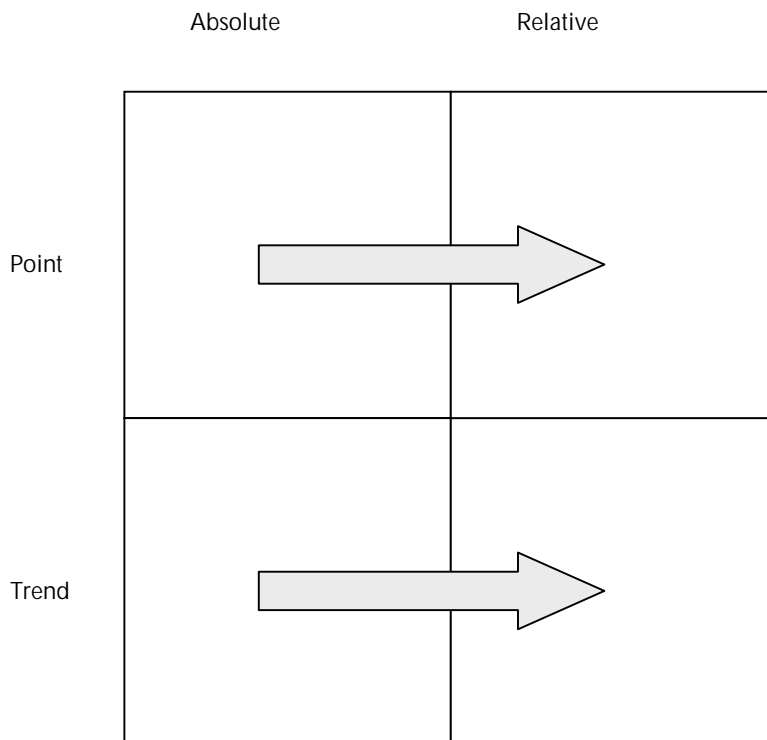
- 3.6 It is possible to assess performance against output measures in a number of ways, including:
- ◆ a company's performance against its own target in a particular year;
  - ◆ a company's performance against its own track record;
  - ◆ a company's performance relative to other distribution businesses in a particular year; and



- ◆ a company's performance relative to other distribution businesses over time.

3.7 This suggests that there is some form of performance matrix as set out in Figure 3.1 below. At present companies tend to be assessed against their absolute position or their own performance over time. For reasons discussed below, the IIP will consider the extent to which companies can be rewarded more on their relative performance, i.e. a shift from the left to the right of the diagram.

**Figure 3.1: The performance matrix**



3.8 Where possible Ofgem wants to increase the emphasis on outperforming peers. This more closely represents the conditions of a competitive market. In order to make comparisons about PEs's relative performance it is important that the output measures can be objectively measured both over time and across companies. It would not be appropriate for example for PEs to gain simply because of changes to measurement systems or definitions of outputs. The weighting between points and trends also requires further consideration: measurement of trends allows unusual events to be more easily accommodated within the incentive regime (as Ofgem believes to be appropriate); measurement of points may result in a quicker reaction to the actual or potential deterioration

of certain key measures. It will be necessary to find an appropriate balance between these approaches.

***Other selection criteria***

3.9 In response to the December 1999 letter some respondents suggested a number of other selection criteria, including that they should:

- ◆ be flexible to changes in the role of the distribution business;
- ◆ be simple and easily understood;
- ◆ not inhibit innovation;
- ◆ reflect the service received by customers rather than the performance of the network;
- ◆ be capable of being produced in time for the introduction of the incentive regime and at a reasonable cost;
- ◆ encourage logical investment in the network to improve the level of service; and
- ◆ not focus on inputs.

3.10 The incentive regime needs to retain flexibility so that further changes can be made, such as the introduction of further output measures or an increased use of comparative performance as the information submitted becomes more consistent across PESs. It will be important however that the definitions of the output measures are agreed in advance of their implementation. Ofgem is concerned that if changes to the definition of output measures are permitted it could lead to PESs having an incentive to alter definitions to improve performance. It would not be appropriate for PESs to gain where there has been no actual improvement in performance.

3.11 Ofgem agrees that output measures should be simple and easily understood particularly by customers. It is not Ofgem's intention that the output measures inhibit innovation either by being focused on inputs or by prescribing the approach that management should take to improve performance. It is for

management, not the regulator, to make these decisions. In this respect it will also be important to consider the interaction between output measures as this may impact on companies' investment plans.

- 3.12 An important area of work will be to assess the changes that will be required to measurement systems so that the revised output measures can be measured on a consistent basis across PESs. If this requires system changes the consultants will be asked to identify the costs involved and the lead times required to implement those changes. If output measures are not consistent across PESs it will be necessary to consider whether the incentive regime should, at least initially, be more weighted towards individual rather than relative performance.

### ***Initial thinking on key output measures***

- 3.13 Ofgem's initial view, in light of discussion since December, is that output measures subject to financial incentives 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.
- 3.14 As discussed above intensive users are also interested in transient interruptions to supply and transient voltage depressions. Output measures on transient interruptions and voltage depressions are discussed in more detail below.

### ***The number of customer interruptions***

- 3.15 It is clear that customers are concerned about the number of interruptions to supply that they experience. Customer research undertaken by PESs and Ofgem would appear to support this and customer representatives have argued that the number of interruptions is of particular concern. The number of interruptions to supply are largely attributable to the distribution business and the companies are able to influence their occurrence. It would also appear that the number of interruptions meets many of the other criteria identified by respondents to the

December 1999 letter, such as simplicity, comprehensibility and customer focus.

- 3.16 It is not clear to what extent the number of interruptions to supply is presently being measured on a consistent basis. Some PESs have introduced more sophisticated measurement systems that have led to an increase in the number of customers that are identified as being affected by an interruption. These PESs argued that this could be attributed to better measurement rather than worse performance. It is likely to be important to introduce systems that will enable the number of interruptions to be measured consistently in the future.

### ***The duration of customer interruptions***

- 3.17 Similar considerations are relevant when considering the duration of interruptions. While it is clear that they are relevant to customers and are attributable to distribution businesses there remain concerns that at present they are not consistently measured across PESs or over time.

### ***Customer satisfaction***

- 3.18 Customer contact with the distribution businesses is fairly limited. In general customers only want to contact their distribution business when they are off supply. They then want to know that the PES is aware that they are off supply, that action is being taken to restore supply, that they are provided with an accurate estimate of when supply will be restored and possibly an update if circumstances change. There are a number of ways in which the quality of responses that customers receive can be measured. It may be possible, by carrying out targeted customer surveys, to assess PESs' performance in these areas. Alternatively, if it is difficult to measure this in a statistically robust manner, a broader less targeted survey of customer satisfaction could be appropriate.

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

- 3.19 Price, in terms of the level of distribution use of system charges paid, is an output which is clearly important to customers. It is also attributable to distribution businesses. In setting price controls Ofgem considers what

efficiency savings have been made by companies and what is achievable in the future. The price controls are the basis upon which companies set distribution use of system charges. Ofgem does not intend to provide direct financial incentives with regards to price under the incentive regime. Nonetheless, including price as a measure would help address the problem of comparing higher quality, higher price companies with lower quality, lower price companies, both of whom could be argued to offer value for money. It would also help in determining the targets for output measures.

### ***Output measures for intensive users***

- 3.20 The outputs which customers value are not the same for all customers. For instance, intensive users can be more sensitive to transient interruptions and voltage depressions. They may also have different values as to the weighting that should be attached to each output measure and price itself. There is a concern that setting output measures on the number of transient interruptions may create perverse incentives with regard to other possible output measures, such as the number and duration of interruptions because PESs use auto-reclose protection schemes which, while reducing the number of longer interruptions, lead to a higher number of transient interruptions.
- 3.21 There are two main causes of voltage depressions, a fault close to the customer's connection point and a customer elsewhere on the network operating equipment outside the terms of their connection agreement. Under the latter circumstance there are provisions under the existing Electricity Supply Regulations which can require those customers causing interference to cease doing so or suffer disconnection.
- 3.22 Supply businesses are an intermediate customer of the distribution business and may have different values to end users. It is for consideration whether there are supplier focused output measures which should be included within the scope of the IIP and if so, how these are different from the customer focused measures considered above.
- 3.23 In summary, Table 3.1 provides an indicative assessment of four possible output measures against the selection criteria identified above. Further consideration will need to be given to output measures for intensive users and suppliers.

**Table 3.1: Assessment of possible output measures against the key selection criteria**

Possible output measures	SELECTION CRITERIA		
	What customers value	Capable of objective measurement over time and across companies	Attributable to the distribution business
Number of interruptions	YES	Probably, but not at present	YES
Duration of interruption	YES	Probably, but not at present	YES
Customer satisfaction	YES	Needs defining	Probably
Price	YES	YES	YES

3.24 Ofgem welcomes views on the criteria for selecting output measures and the advantages and disadvantages of the measures set out in this section.

***The scope of the output measures***

3.25 In addition to the relatively narrow set of output measures set out above, there are a number of other areas which it may or may not be appropriate to include within the scope of the IIP. These include:

- ◆ **safety** – The Electricity Act 1989 specifies that the Director General has a general duty to, *...protect the public from dangers arising from the generation, transmission and supply of electricity,...* and a duty to, *...secure the establishment and maintenance of machinery for promoting the health and safety of persons employed in the generation, transmission, or supply of electricity...* (Part 1, Section 3). These duties will be enhanced by the Utility Bill. In setting price controls the Director General has regard to these duties. Responsibility for regulation to ensure that electricity networks are engineered and operated safely rests with the Electricity Inspectorate. Ofgem will want to consider whether there are any reasons to suggest that the existing legislative framework and the incentives which this creates on the PESs needs reinforcing through the IIP. Ofgem’s initial view is that incentives on safety are thoroughly provided for by other mechanisms and are therefore outside the scope of the IIP;

- ◆ ***provision of new connections*** – Ofgem is due to publish a consultation paper shortly that will outline measures to reduce barriers to entry in the provision of new connections. On this basis it does not seem appropriate to introduce additional financial incentives on PESs for the provision of connections as part of the IIP;
- ◆ ***environmental issues*** – For example, the present distribution price control provides a direct financial incentive on PESs to reduce the amount of electrical losses on their networks, although higher losses could be an indication that network assets are being more efficiently operated. It is not clear whether additional incentives to reduce losses are required and if so, whether these should be introduced through the IIP;
- ◆ ***medium term performance of network assets*** – It is important that there is an appropriate balance between performance and stewardship of the network assets. Ofgem is concerned that PESs may be able to achieve short term improvements in performance 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 PESs 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 does not consider that this would be appropriate.

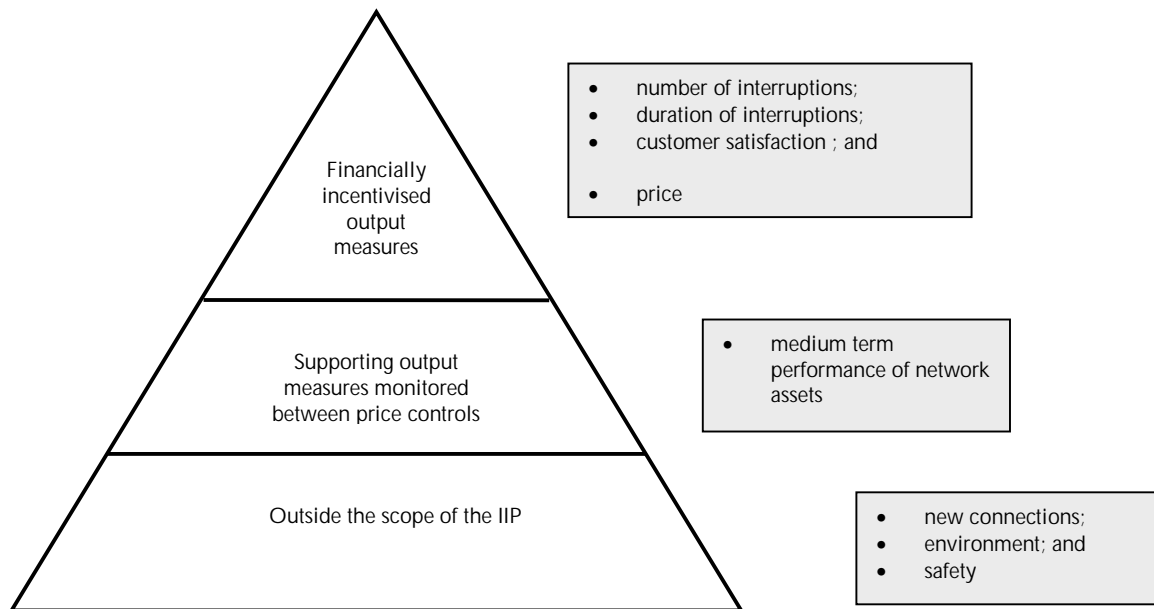
As such, its initial view is that it would be appropriate to monitor the medium term performance of network assets in some way, but not to incentivise directly changes in asset condition between price controls. It should be noted in this respect that over the price control period 2000-2005 companies have been allowed an operating allowance of £3 million per year to invest in asset management IT systems. Ofgem would expect therefore that companies should be in a better position to monitor medium term performance and it is for consideration what would constitute appropriate measures;

- ◆ ***the delivery of information*** – It may be the case that PESs are unable or unwilling to provide the information that will be required to operate the incentive regime. Ofgem will want to consider whether it is appropriate to place explicit financial incentives on companies to provide information or to rely instead on the penalties that can be imposed (once the Utility Bill is enacted) for a breach in a licence condition; and
- ◆ ***industry wide incentives*** – Introducing stronger incentives on PESs to outperform peers could lead to perverse incentives in some areas. For example, by incentivising PESs to compete on the duration of interruptions to supply, may mean that PESs are less willing to respond in a co-ordinated way to storm damage. This could impact adversely on all customers. Additionally, a greater emphasis on comparative performance may mean that PESs are more reluctant to share best working practices and technology which could mean that the efficiency frontier of the industry as a whole may not move forward as quickly as would otherwise be the case. This would impact adversely on all customers. It is not clear how incentives on the industry could be introduced through the incentive regime. If these issues are argued to be important Ofgem may need to consider an alternative mechanism to ensure that these concerns are met.

3.26 It appears that there are three categories or tiers to be considered in defining output measures and the incentive regime. First, those output measures that are subject to financial incentives and are part of the incentive regime and the price that customers pay. Second, those 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 explicit financial incentives between price control reviews. 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. This is shown in Figure 3.2 below.



Figure 3.2: Output measures and the incentive regime



### *Measurement systems*

3.27 It is important that PESs have measurement systems that are capable of producing accurate and consistent data both over time and across companies. Some PESs have indicated that they already have systems that allow them to measure with a significant degree of accuracy the number and duration of interruptions to supply. It will be necessary to assess the extent of this and particularly the level of automation, and hence reliability, involved in collating the information.

3.28 While Ofgem does not want to specify the measurement systems that PESs should install it is expected that they should meet some basic requirements, such as:

- ◆ the provision of accurate information;
- ◆ the auditability of systems which collate the data; and
- ◆ the capacity to provide disaggregated information if required.

### ***Audit arrangements***

- 3.29 At present little external scrutiny of company data is carried out between price control reviews. This will need to change if financial penalties and rewards are dependent on this information as it would not be appropriate for PESs to gain by changing the basis on which information is submitted or because of measurement inaccuracies on their part.
- 3.30 In an incentive regime based on comparative performance it would seem that all PESs would have as much interest as the regulator in ensuring that each company's information was accurate and consistent.
- 3.31 The scope and role of audit is an area where Ofgem will want to consider the views of other utility regulators. Issues of relevance include whether PESs undertake their own audit and, if so, whether there should be a requirement on their auditors to have a duty of care to Ofgem. Alternatively, Ofgem could appoint independent auditors to assess the accuracy and consistency of the information submitted by PESs.

## 4. Incentive regimes

- 4.1 The December 1999 letter explained that the outcome from a price control review comprises two broad elements: the price or revenue that a company is allowed to recover over the duration of the price control and the outputs which it is expected to deliver in return. The letter also indicated that, to date, the balance of consideration has been weighted more towards the level of allowed revenue rather than towards outputs.
- 4.2 While quality of supply has generally improved since privatisation there is a concern that in future companies will attempt to outperform the cost assumptions underlying price controls by reducing the quality of service provided. There is also a concern that, unlike in a competitive market, customers are unable to form a judgement on, and react to, a company's performance on the basis of both price and quality. It is for these reasons that, in the future, distribution businesses should be given clearer and continuous incentives to deliver a particular level of quality of supply that is consistent with the conclusions of the price control.
- 4.3 Any balancing of price and quality of service requires an evaluation of the determinants of the quality of service. It is likely that a number of such balances could be struck, generating a "value for money" line (see below). Such evaluation will form an important part of the work programme in 2001.

### *Setting targets, starting points and disaggregation of output measures*

- 4.4 Although in many respects distribution businesses are similar in terms of the types of assets that they own and the service that they provide there are important differences. These differences mean it is difficult to compare distribution businesses directly at the PES level and could impact on the setting of targets for output measures. Consolidation within the industry may make this more important.
- 4.5 There are three areas in which differences between distribution businesses might affect network performance and price. These are:
- ◆ the nature of the network inherited at privatisation;

- ◆ the demography of the authorised area within which the distribution business operates; and
- ◆ the influence of management on network performance since privatisation.

4.6 Although managements of the distribution businesses have had over 10 years in which to influence the nature of the networks that were inherited at privatisation, there may be a need to take some account of inherited differences in setting targets for output measures and in comparing PESs' performance. For example, the extent to which a network comprises overhead line and underground cable may need to be considered as this could impact on company performance against the possible output measures identified in Section 3 or costs of improvements to quality of service.

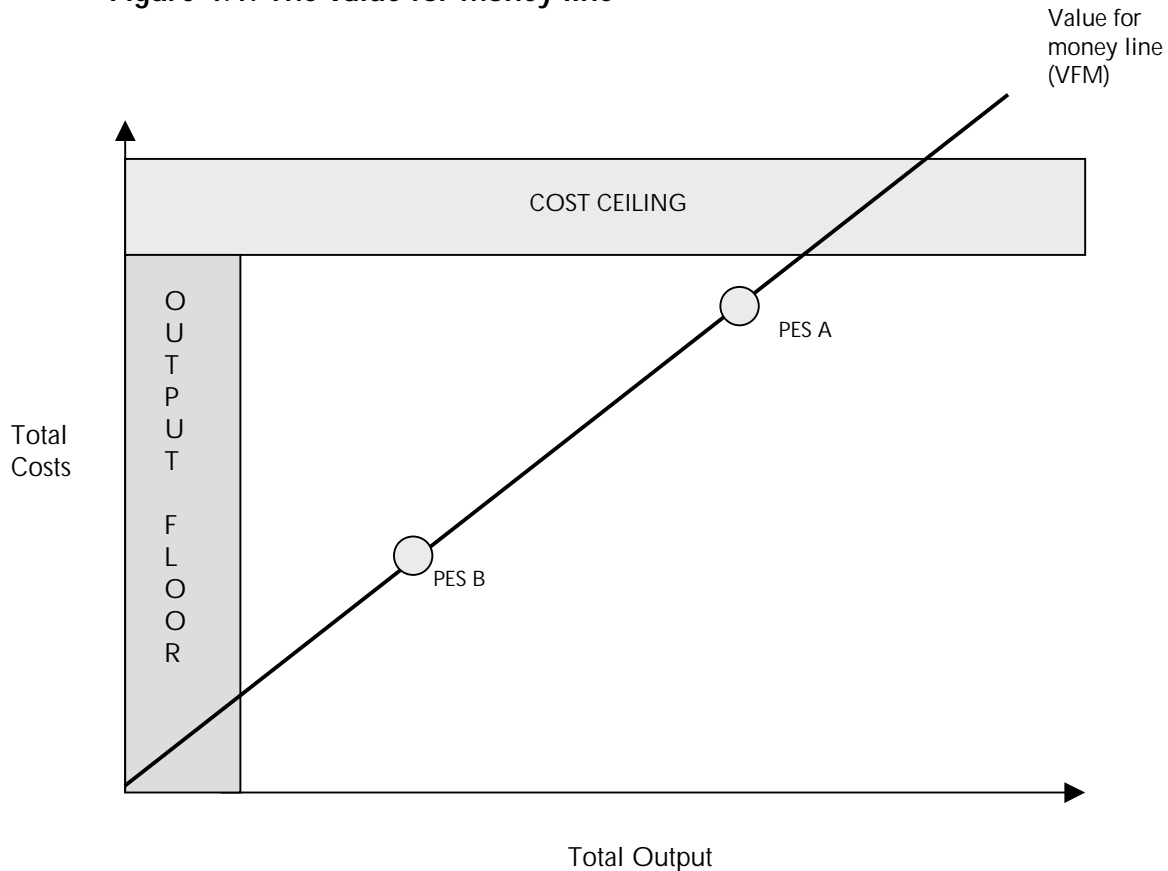
4.7 There are also demographic differences in the authorised areas within which the distribution businesses operate. For example, companies vary in terms of size (in terms of area or the number of customers or the quantity of electricity distributed), in the degree to which their customers are scattered in rural areas or concentrated in urban areas, the geography and topography of an area, as well as in other ways. These factors may influence the setting of targets for output measures and in comparing PESs' performance in respect of these.

4.8 One way of making PESs more comparable would be to compare outputs at a sub-PES level, for example distinguishing between urban, rural and sparse areas or between overhead line and underground cable. This would allow the production of better comparators for PESs that had previously appeared as outliers, such as London that has a predominantly urban underground network, and Hydro-Electric that has a more sparse overhead network. Such an approach would be consistent with the composite variable used in the regression analysis in the recent price control review, but considerably more precise. Some PESs have indicated that it would be possible to provide data on output measures at a sub-PES level while others have indicated that it may be harder and that any information would be subject to significant uncertainty as regards its accuracy.

4.9 Different management have taken different approaches to operating the distribution networks, particularly over the last four or five years. For example,

some PESs have spent more on network investment and have a higher quality of supply but higher prices (PES A), while others have spent less and have a lower quality of supply but lower prices (PES B). This is illustrated schematically in figure 4.1 below.

**Figure 4.1: The value for money line**



- 4.10 Ofgem considers that companies could be providing customers with value for money at any point on the VFM line. Ofgem does not want to specify (subject to certain limits on minimum quality and maximum costs) where a distribution business should position themselves on the VFM line. The operation and strategy of the distribution business is a matter for the management of the companies not the regulator.
- 4.11 In setting price controls the regulator in effect makes a judgement about where the value for money line lies. The output based incentive regime will be designed to reward or penalise companies based on their position relative to the value for money line and to their peers. It therefore focuses on providing clearer and stronger incentives on companies towards quality of supply between price reviews.

### ***Output measures and the 2 per cent financial limit***

- 4.12 In order to limit the extent to which PESs are exposed to risk between price reviews the financial impact of the incentive regime will be limited to 2 per cent of regulated revenue during the price control period 2000-2005. It will be important to consider how much of this revenue should be at risk to any individual measure and hence the prioritisation of the measures. The amount of revenue put at risk to an individual measure should reflect the value which customers place on that measure relative to the other outputs. Further work will need to be undertaken next year in considering this. It may be that it will be necessary to undertake further customer research to inform this decision.
- 4.13 There may be concerns over the accuracy of information relating to the output measures at the time when the incentive regime is introduced in April 2002. If this is the case it will be necessary to consider whether the full 2 per cent of regulated revenue should be put at risk. It would not be appropriate, for example, for PESs to gain because of their own measurement inaccuracies. Nonetheless, Ofgem is concerned that by not providing sufficient financial incentives, PESs may have perverse incentives to opt for poor performance in the period up to the next price review, so that if more revenue is subsequently put at risk, they can then achieve significant improvement and hence greater financial rewards.

### ***Exemptions from the incentive regime***

- 4.14 The majority of the PESs argued that in defining the framework for the incentive regime it would be appropriate to exclude factors that are not under the direct control of PESs, but that could impact on their performance. In particular, two factors were identified, interruptions to supply caused by severe weather and those caused by faults on the transmission network.
- 4.15 Ofgem does not consider that it is appropriate to exclude incidences of severe weather from the incentive regime. Ultimately customers are concerned with whether they are on or off supply rather than the cause of the fault. Excluding incidences of severe weather seems to be in conflict with the underlying principles of the IIP - to provide stronger incentives on companies with regards to delivering quality of supply.

- 4.16 There are other ways of dealing with severe weather. For example, it may be possible to incentivise performance on a moving average basis. This would reduce volatility and allow the underlying trends in performance to be more readily identified. Alternatively, it may be possible to have separate incentive arrangements relating to incidences of severe weather. The distribution network should be capable of maintaining integrity over a wide range of weather conditions. In these circumstances PESs could be incentivised against the number and duration of any outages. Under severe weather conditions, which would be specified in advance, different arrangements could apply. For example, it may be appropriate to incentivise PESs against the speed of restoration in such circumstances.
- 4.17 Ofgem considers that it would not be appropriate for PESs to be financially penalised because of faults that occur on the transmission network that impact directly on their performance. As part of the Condition 9 statements on system performance, PESs supply information to Ofgem on customer interruptions that are attributed either to the distribution network or the transmission network. On this basis it should be possible to take account of interruptions to supply that are directly caused by faults on the transmission network. It will be necessary however to ensure that the information is accurate and consistent across PESs. An alternative approach may be to investigate the linkages between incentives on the distribution network and incentives on the transmission network.

### ***Settlement issues***

- 4.18 As part of the work on designing the framework for the incentive regime it will be necessary to consider how the financial penalties and rewards will be settled. This will be taken forward next year. There are a number of issues to consider, for example:
- ◆ whether the financial impact of the regimes should only affect shareholders or whether customers should pay more or less depending on the performance of their incumbent distribution business; and
  - ◆ how the financial penalties and rewards are allocated if all companies have improved their absolute performance.

4.19 Ofgem's views on these issues are that:

- ◆ it is not appropriate for customers of an outstanding company to fund its excess return. In any competitive market, customers of underperforming companies would be free to take advantage of the superior company's service. It follows that the inferior company should achieve a lower return as a consequence; and
- ◆ it is important to retain the principal benefit of RPI-X, namely that companies which improve cost and/or service beyond that assumed in setting price controls, should make more than an average return.

For example, it will be necessary to consider the appropriate rate of return for:

- ◆ the worst-performing company, when all companies outperform; and
- ◆ the best performing company when all companies underperform;

and to compare these rates of return with the regulatory target rate of return.



## 5. Next Steps

### *Consultation and communication*

- 5.1 The December 1999 letter indicated that the project scope was potentially wide ranging and that if the objectives were to be delivered innovative thinking and new ways of working would be required. The letter suggested that one way of working would be to set up a small working group to discuss issues raised by the IIP in advance of full written consultation. Most PESs felt unhappy about not being represented on this group. Further, it has been pointed out that any working group should involve customers of distribution businesses and users of the system (suppliers).
- 5.2 Ofgem will be setting up a number of working groups structured around the key issues raised by the definition of output measures and the specification of the information template. The working groups will not be decision making fora and they will in no way preclude, but rather inform, a full and open consultation process. Ofgem considers that it would be appropriate for these working groups to include customer representatives and other interested parties such as suppliers, as well as the PESs themselves. Each working group will have a chairman nominated by Ofgem.
- 5.3 It is Ofgem's intention that the working groups will consider broadly the following issues:
- ◆ the definition of output measures for PES distribution businesses;
  - ◆ the appropriate approach for monitoring the medium term performance of distribution business network assets;
  - ◆ the framework for the information template, particularly its scope and structure and the framework for, and role of, audit so that output measures are collected on a consistent basis both across PESs and over time; and
  - ◆ the measurement of customer satisfaction, particularly with respect to the level of service that customers experience when they are off supply, for

example the quality and accuracy of information provided over the telephone.

- 5.4 Ofgem will decide in advance the make up of the groups and their remit. It will be important that an appropriate range of expertise and knowledge is represented on each of the working groups. Ofgem expects that the working groups will be made up of a subset of those attending the public workshop in May and that they will then meet again on one or two occasions before the June consultation paper.
- 5.5 A public workshop will be held on 4 May to discuss the issues raised in this document and those by the IIP more generally. Ofgem would like to hear the views of all interested parties, including those of customers – both small and large – as well as suppliers, employee representatives, other utility companies, academics, and any other interested parties. The workshop will be designed to encourage active participation from all parties by making use of small working groups to discuss particular issues, such as those identified above. Further details on the workshop are set out in Annex 2.
- 5.6 When work starts on developing incentive regimes and setting targets for output measures PESs will have a direct financial interest in the outcome of the work. Therefore, Ofgem considers that it would be appropriate to make more use of individual meetings with the PESs, rather than the working groups. Ofgem would still expect to meet with consumer representatives and other interested parties on a regular basis during this period.

### ***Use of consultants***

- 5.7 Ofgem has appointed staff from PB Power to assist Ofgem on the IIP. The consultants will be expected to provide advice on all of the project workstreams. In the first instance they will provide advice on:
- ◆ Ofgem's review of existing output measures, looking particularly at measurement issues both across companies and over time; and
  - ◆ the specification of the information template, particularly on issues of data collection, measurement and comparison.

5.8 It was initially intended to engage consultants to assist in a scoping study to review the incentives created by the regulatory framework. It may also be necessary to seek advice on issues relating to the design of the incentive framework. Ofgem has decided to focus this year on the way information is collected and collated before considering next year the incentives that are created on PESs. In carrying out the work on incentives Ofgem will want to consider whether it needs specialist consulting support.

***The overall timetable***

5.9 Set out below is a table which summarises Ofgem’s further thinking on the timing of the consultation papers, industry meetings and public workshops.

<b>Workstream</b>	<b>Timing</b>
<b>Defining output measures &amp; monitoring delivery between reviews</b>	
Public workshop	May 2000
Draft proposals	June 2000
Final proposals	September 2000
Implementation starts	April 2001
<b>Developing incentive regimes</b>	
Initial thoughts	December 2000
Draft proposals	March 2001
Possible public workshop	April 2001
Possible meetings with each PES	June 2001
Final proposals	September 2001
Implementation starts	April 2002

5.10 Ofgem considers that it is appropriate to publish a further consultation paper on developing incentive regimes in March 2001. Ofgem also considers that is appropriate to publish final proposals on developing incentive regimes in September 2001. This will allow an additional consultation and will provide more time for the consideration of the views of interested parties between the draft and the final proposals.

## **Appendix 1 Summary of responses to the December 1999 letter**

- 1.1 There were 20 responses to the December 1999 letter – 12 Public Electricity Suppliers (PESs), 2 Electricity Consumers' Committees (ECC's) and the National Electricity Consumers' Council (NECC), and 5 others.

### ***Objectives & Scope***

- 1.2 Respondents broadly supported the scope and objectives of the project. PESs particularly supported the work to improve comparability and consistency of data and the opportunity for additional reward if they are able to improve the level of their quality of service performance. Customer representatives welcomed the emphasis on strengthening incentives in delivering quality of supply. One ECC suggested if the IIP were to be successful company culture would need to change towards a stronger focus on outputs.
- 1.3 A number of PESs expressed some concern at the regulatory context of the IIP, particularly with respect to the Utilities Bill, NETA and the existing Overall and Guaranteed Standards of Performance. PESs were particularly concerned that they could be exposed to undue financial risk from a combination of penalties. One PES suggested that an additional workstream on the impact of NETA on distribution business incentives should be introduced as part of the project.

### ***Consultation & Communication***

- 1.4 The majority of respondents supported the use of small working groups to discuss issues of particular concern and expressed a desire to be represented on each of the groups. Some PESs suggested that the working groups should include customers and suppliers. One other respondent argued that it appeared that suppliers had not been included in the initial consultation process. One ECC suggested that the working group should be broadened to cover business organisation and management cultures.
- 1.5 The majority of respondents supported the proposal to hold a public workshop.

### ***Defining the outputs of regulated businesses***

- 1.6 All respondents broadly agreed with the specified selection criteria for defining output measures. Some respondents suggested additional selection criteria such as: that they be flexible to changes in the role of the distribution business; that they should be simple and easily understood; that they should not inhibit innovation; and that they should reflect the service received by customers rather than the performance of the network. One customer representative suggested that it would be necessary to have an understanding of the influences within and upon the distribution business to set appropriate targets for the output measures. One other respondent commented that the single most important criteria would be consistency in measurement across companies.
- 1.7 A number of PESs suggested that in setting targets for output measures historic differences in network design and specification and other differences must be taken into account. One other respondent suggested that in order to ensure that output measures could be attributed to distribution businesses it would be important to ensure that a suitable separation model (between distribution and supply) was in place. Another respondent suggested that if a PES's operating environment is particularly different to other PESs then this should be taken into account in setting targets.
- 1.8 Most respondents agreed that focussing on too narrow a set of output measures or introducing insufficient financial incentive on particular measures could create perversities. PESs broadly agreed that there could be a need for additional output measures to monitor say the condition of network assets.
- 1.9 One respondent suggested that customers value the security of supply above other outputs and that this would require appropriate recognition. It also suggested that it would be important to define health and safety output measures for both the public and employees of the companies.

### ***Developing output based incentive regimes***

- 1.10 All respondents supported the aim to develop an output based incentive scheme to provide clearer and stronger incentives on companies to improve the quality

of supply to customers and that generally the incentive regime must be transparent, fair and simple and not lead to the creation of perverse incentives.

- 1.11 The majority of PESs suggested that incidences of severe weather should be excluded from the incentive regime and their performance adjusted accordingly.
- 1.12 Several PESs suggested it would be difficult to measure performance by reference to the relative rate of improvement because of differences in the respective starting points of companies. One PES suggested companies must be measured against their own historic performance. The majority of PESs recommended that performances should be assessed separately for each PES against defined targets rather than using an overall index.
- 1.13 One customer representative expressed caution in using an overall performance index. One other respondent suggested that if an index was used it would need to be accurate and based on a basket of the output measures, with weightings on each individual output measure.
- 1.14 Some PESs and customer representatives suggested that the relative size of the penalty payments should increase the further a company is from meeting the specified target. Some PESs and customer representatives also suggested that it would be appropriate to introduce a deadband within which PESs would not be subject to either a penalty or reward.
- 1.15 Respondents generally agreed that it would be necessary to set in place an appropriate auditing and enforcement regime to ensure that the data underlying the output measures is robust and provided in a timely manner. Several PESs and one other respondent expressed a preference for an external audit, undertaken by the same auditors, to facilitate a consistent approach across companies.
- 1.16 Several PESs suggested customers of a poorly performing PES should receive a reduction in charges and that customers of a good performing PES should pay a surcharge. Most PESs opposed the notion of inter-company payments. One other respondent suggested that the funding of the incentive regime should be borne by customers, rather than companies, and that they should benefit from

any revenue reductions due to poor performance of their local distribution business.

### ***Monitoring delivery between price reviews***

- 1.17 Respondents generally agreed that one way of dealing with the uneven workload would be to collect more high quality data on an ongoing basis and to ensure consistency and comparability of data across companies.
- 1.18 All PESs supported the proposal to develop an information template. One PES suggested that the information template needs to take account of the different management and organisational structures of PESs. One of the customer representatives suggested that a review should be undertaken of the companies' own management information systems. One other respondent suggested that the information template would need to be consistent across companies and that it would need to be flexible to enable the template to meet any future information requirements.
- 1.19 PESs welcomed the review of the regulatory accounts and some suggested that it was an important element of the IIP.

### ***Reviewing the incentives created by the regulatory framework***

- 1.20 Most respondents supported the proposal to develop a better understanding of distribution business cost drivers and the incentives created by the regulatory framework. Some PESs suggested that recognition should be made of the important differences across companies in assessing cost drivers. One customer representative suggested that the availability of more disaggregated information would improve the understanding of cost drivers.
- 1.21 Most PESs agreed the incentives towards achieving operating and capital efficiencies are not balanced or clearly defined, and as a result, companies may not seek out the lowest cost solution. Several PESs suggested it would be appropriate to develop output incentives based on total cash costs. In general, PESs felt priority should be given to the development of an acceptable total cost methodology.

1.22 One other respondent suggested that it would be important to consider the overlap of the IIP with the work being undertaken to implement a capital expenditure monitoring regime for Transco.



*List of respondents to December 1999 letter*

**PESs**

Eastern  
East Midlands  
London  
Midlands  
Northern  
NORWEB  
SEEBOARD  
SWALEC  
Western Power (formerly South Western)  
Yorkshire  
ScottishPower  
Scottish and Southern

**ECCs and other customer representatives**

South East ECC  
South West ECC  
  
National Electricity Consumers Council

**Others**

British Gas Trading  
Electricity Supply Trade Union  
IMR Solutions  
National Grid Company  
Transco

## Appendix 2 Arrangements for the public workshop

- 2.1 Ofgem will hold a public workshop on 4 May to discuss the issues raised in this document and more particularly on:
- ◆ the definition of output measures;
  - ◆ monitoring medium term performance of distribution business network assets;
  - ◆ the framework for the information template and role of audit; and
  - ◆ the measurement of customer satisfaction.
- 2.2 The structure of the workshop will involve the use of working groups each covering one of the issues identified above and plenary sessions where the groups can provide feedback to the other groups. Each working group will comprise a chairman nominated by Ofgem and a reporter who will be responsible for reporting back to the other groups in the plenary session on the conclusions that their working group reach.
- 2.3 All those that wish to attend the working group will participate in one of the working groups, although there is no guarantee that this will be the invitees first choice. To this end, invitees should indicate a first and second preference on the response form.
- 2.4 Ofgem will provide each working group with an indicative list of questions that they might wish to consider.
- 2.5 It should be noted that the working groups that will meet following the public workshop will not be an open forum, although Ofgem expects that these groups will follow the structure of the public workshop.

2.6 An indicative timetable for the workshop is set out below:

*10:15 – 10:30* registration  
*10:30 – 11:00* Ofgem opening remarks  
*11:00 – 12:45* initial working group session  
*12:45 – 1.45* buffet lunch  
*1:45 – 2:45* second working group session  
*2:45 – 3:00* refreshments  
*3:00 – 4:30* plenary session and wrap up

2.7 If the number of possible attendees exceeds the number of places it may be necessary to consider what, if any, additional arrangements will need to be made.

**RESPONSE FORM FOR ATTENDING PUBLIC WORKSHOP**

<b>Name and position</b>	
<b>Organisation</b>	
<b>Please indicate your preferred working group and a second choice:</b>	
<i>defining output measures</i>	
<i>monitoring medium term performance</i>	
<i>the framework of the information template and the role of audit</i>	
<i>the measurement of customer satisfaction</i>	
<b>Do you have any special dietary requirements?</b>	
<b>Do you have any other special requirements?</b>	

Please send your response to Cemil Altin at the address in the introduction or fax to (020) 7932 1675 by 11 April 2000.

## Appendix 3 Review of existing output measures

3.1 Companies routinely collect and provide to Ofgem on a regular basis the following information:

- ◆ ***Condition 9 statements*** – 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' reports in the Distribution and Transmission System Performance Report;
- ◆ ***Guaranteed and Overall Standards of Performance*** – at privatisation some customer specific performance standards were introduced to protect customers' interests with respect to the quality of service that was provided by PESs. These include Guaranteed Standards which set service levels which must be met in each individual case. If the PES fails to provide the level of service required, it must make a payment to the customer affected. For example, a PES must make a penalty to a customer if it PES fails to keep to a pre-arranged appointment. There are also Overall Standards which cover areas of service where it is not appropriate to give individual guarantees, but where customers in general have a right to expect from PESs predetermined minimum levels of service. For example, there is a standard which specifies the percentage of interruptions to supply to be restored within three hours of the interruption occurring; and
- ◆ ***Quality of supply reports*** – at the time of the distribution price control review in 1995, Offer introduced a requirement on PESs to report annually on the quality of supply that they deliver to customers. PESs publish these reports themselves although they are reviewed against the criteria set down in the Director General's Paper on Quality of Supply - October 1995.

***Condition 9 statements and the National Fault and Interruption Reporting Scheme (NaFIRS)***

- 3.2 NaFIRS was introduced in 1964 by the Electricity Council (now the Electricity Association). The scheme provides information on general network performance and the performance of certain asset types. Most of the PESs continue to subscribe to the NaFIRS scheme. Ofgem does not have direct access to all the data that is collected, but rather summary information submitted in the form of the Condition 9 statement.
- 3.3 The following system performance measures are reported to Ofgem:
- ◆ 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; and
  - ◆ Overall network reliability – defined as the number of faults per 100km of the network (both overhead line and underground cable);
- 3.4 The nature of the recording of faults and their accuracy differs according to where on the network the fault occurred and the circumstances under which it occurred. In most instances it appears that on the low voltage (LV) network there is no automatic logging of the time of an interruption. At higher voltage (HV) levels, faults generally appear to be logged automatically through some form of automated network control systems, often known as SCADA (Supervisory Control and Data Acquisition) systems.
- 3.5 During severe weather events which affect supply to a large number of customers, resources are generally diverted to restoring supply as soon as possible rather than recording each fault incident. Under these circumstances

PESs can choose to adopt a blanket reporting procedure which involves the submission of a single summary report for the storm period. These reports are less accurate than the individual reports produced at other times.

- 3.6 Ofgem is concerned at both the accuracy and consistency of the information collected under the NaFIRS scheme and that which is submitted to Ofgem in the form of the Condition 9 statements. For example, some PESs have recently developed customer-to-network database links enabling a more accurate analysis of faults. This has typically led to increases in the number of customers identified as being affected by a fault. This may be attributed to better measurement rather than poorer performance. Ofgem is not aware of any explicit audit that is carried out on NaFIRS data. As discussed in Section 3 Ofgem will want to review the measurement systems of PESs and consider the scope and role of audit.
- 3.7 Transient faults are not reported under the NaFIRS scheme although as explained in Section 3, PESs are under an obligation to count and report on transient interruptions. Companies are required to have in place the necessary systems by April 2001. Ofgem will review PESs progress towards having these facilities in place.

### ***Guaranteed and Overall Standards performance data***

- 3.8 PESs submit data on performance against the Guaranteed and Overall Standards of Performance on a quarterly basis. In October 1995 Offer provided detailed guidance to companies on best practice in reporting performance under the standards. Further, the guidance requires all companies to commission an annual independent audit of their reporting systems and to this end PESs have installed measurement systems to record and report their performance. Ofgem will want to consider whether the existing arrangements are adequate to provide accurate and consistent information both across companies and over time.
- 3.9 In the recent distribution price control review Ofgem proposed some new standards of performance and changes to the existing standards. These included:

- ◆ Guaranteed Standard 2 (GS2) – presently requires payment of a penalty if supply to a customer is not restored within 24 hours. This period will be reduced to 18 hours with effect from April 2000. Companies will be required to make penalty payments automatically under this standard from April 2002. Ofgem will review PESs progress on installing systems that would enable them to meet this requirement;
- ◆ there will be a new Overall Standard covering the maximum number of supply interruptions experienced by customers, such that, from April 2002, of the order of 99 per cent of customers should be subject to not more than a specified number of interruptions a year. Ofgem's initial view is that the maximum number of interruptions should be set at 5 per year, although this proposal is subject to further work. Further, the standard may differ between companies to reflect geographical and network differences;
- ◆ the associated new Guaranteed Standard will also apply from April 2002 with customers suffering more than a specified number of interruptions being entitled to a penalty payment. Ofgem will determine the way in which these standards are to be applied; and
- ◆ there will be a new Overall Standard covering substantive telephone response times, with 90 per cent of calls to be answered within 15 seconds in normal circumstances and 80 per cent of calls to be answered within 30 seconds in exceptional circumstances. Companies will be required to have suitable telephone systems operational by April 2002 with the Overall Standard to be introduced at this time. Section 2 discusses using customer satisfaction, in terms of the quality of the response that customers receive from PESs when they are off supply (particularly telephone response), as an output measure that will be subject to financial incentives. It will be necessary therefore to consider the relationship between the proposed Overall Standard and the customer satisfaction output measure.



### ***Annual quality of supply reports***

3.10 In the recent distribution price control review Ofgem confirmed that the requirement for companies to publish annual Quality of Supply Reports would continue for the forthcoming price control period to 2005. This requirement is not subject to a licence condition. Ofgem will introduce a common reporting format for the reports at the earliest appropriate date. This will be informed by best practice in present Quality of Supply Reports and by the views of Consumers' Committees, amongst other considerations. As part of the IIP Ofgem will be undertaking a review of the Quality of Supply Reports. Issues of importance may include:

- ◆ ***disaggregated data*** – PESs are required to provide disaggregated information on network security and availability using internal management boundaries. The number of boundaries differs both across companies and can change over time. This raises concerns over the accuracy and consistency of data. It will be necessary to review the Quality of Supply reports in light of these considerations;
- ◆ ***causes of supply interruptions & worst performing circuits*** – Some companies show how many faults are caused by each class of interruption including third party damage, weather-related and age-related. The worst performing HV circuits are used as a proxy for worst served customers and to differing extents PESs are able to provide information on the location of these circuits, a description of improvements planned and some measure of the improved performance this year. It may be important to review these requirements particularly in light of the importance of monitoring the medium term performance of network assets; and
- ◆ ***measurement systems and audit*** – In line with the issues set out in Section 2 it will be necessary to consider the present arrangements for audit and the accuracy and consistency of measurement systems for providing information under the Quality of Supply reports.