

November 2001

**Asset Risk Management in
electricity and gas networks –**

**A proposed survey and its
interaction with the Information
and Incentives Project**

First consultation document

Executive summary

Great Britain's gas and electricity networks are vital for their role in providing energy to consumers and in delivering essential services that underpin the economy as a whole. It is in the interests of existing and future consumers that the complex and connected assets of the large energy delivery networks are well managed.

- Asset risk management refers to the policies and practices adopted by companies to gather information, analyse it, act on it and review the effects in relation to the assets that are integral to the service performance of the network businesses. It is a fundamental function and responsibility of the network operating companies and is of particular relevance to ensuring the satisfactory longer term performance of the networks.
- Ofgem is tasked with protecting the interests of existing and future consumers. We recognise that encouraging good asset risk management in the electricity and gas networks is an important element in achieving this.
- Ofgem proposes an annual survey to establish the status of asset risk management in each company. Publishing the results of the survey will encourage the network operating companies to maintain and pursue high standards in this key activity.
- The first survey will be carried out in June 2002 and its results published in September 2002.
- These major network operating businesses would be included in the survey:
 - the electricity distribution licence holders;
 - the electricity transmission licence holders; and
 - the principal gas transportation licence holder, Transco plc (Transco).

This is our first consultation paper on the subject. We welcome views from the companies that will be included in the survey and from other interested parties.

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1. Introduction

Purpose of this document

- 1.1 This document proposes the establishment of a high-level, annual survey of the policy and practices for asset risk management in the regulated electricity and gas network operating companies.
- 1.2 This consultation paper invites views on the basic information requirements of a survey and on the processes for its completion, review, development and confidentiality.
- 1.3 The proposed survey shares some common aims with the IIP (Information and Incentives Project), which applies to electricity DNOs (Distribution Network Operators). The survey may also impact on the proposals for medium term performance reporting by Transco. We are taking account of these interactions and invite views on them.
- 1.4 In particular, we seek the views of the companies affected by this proposal. Views from other bodies and individuals are also welcome.

Background

- 1.5 Asset risk management refers to the policies and practices adopted by companies to gather information, analyse it, act on it and review the effects in relation to the assets that are integral to the service performance of the network businesses. It is of particular relevance in helping to ensure the satisfactory longer term performance of the networks.
- 1.6 The aim of effective asset risk management is satisfactory asset integrity, i.e. assets that are fit for purpose and whose performance and risk of failure meet acceptable standards. It is not about achieving a 'nil risk' of failure at unlimited expense, or the over-engineering of the network infrastructure.
- 1.7 The assets referred to in this document are those that are critical to the operation of the gas and electricity networks. These are likely to include the wires/pipes, the equipment that connects them, control centres and systems, monitoring and

communication systems, together with the land and buildings used to house these categories of equipment.

1.8 Question 1: Is this definition of the relevant assets appropriate?

1.9 The quality of a company's asset risk management impacts on a number of outputs. In addition to quality and security of supply, good asset risk management can be expected to have a positive impact on safety, the environment and cost efficiency.

1.10 Ofgem's primary obligation is to protect the interests of both existing and future consumers. The responsible stewardship of long-life network assets by the companies is a key factor which impacts on the interests of existing and future consumers and as a consequence it is an area that Ofgem takes an interest in.

1.11 In addition, Ofgem must carry out its work with regard to the effects on the environment and in a manner best calculated to protect the public from danger. In strengthening its interest in the responsible stewardship of network assets, Ofgem is taking account of these important additional objectives.

1.12 Ofgem currently takes account of the way in which the network operating companies manage their assets by assessments at the five-yearly price control reviews.

1.13 However, a number of factors have prompted a review of the important subject of asset risk management. These include:

- Lessons from other sectors, in this country and internationally, following serious asset infrastructure failures. These include the electricity supply failures in Auckland, New Zealand (1998) and Chicago, USA (1999) and the rail infrastructure problems experienced by Railtrack (2000). These events rightly prompt important questions about the integrity of the nationally critical energy infrastructure in this country. Ofgem is seeking to promote greater visibility of asset risk management in order to encourage best practice and to gain reassurance in the management of network infrastructure.
- The development of the IIP (Information and Incentives Project) for the DNOs. This recognises that stronger incentivisation for improvements in

short term performance must not be made at the detriment of the medium term performance. Chapter 5 discusses further the interaction between asset risk management reporting and IIP.

- Experience from the periodic price control reviews points towards potential benefits to all parties of improving the information available for assessing capital expenditure, and also smoothing the information flows.

1.14 This consultation proposes an annual survey to respond to these points. We have taken views from a number of parties, including the regulated companies, in developing our initial thoughts. Two points may be noted:

- Firstly, that much good asset management practice can be found in the regulated companies.
- Secondly, that Ofgem is seeking here to work with the companies, in a non-bureaucratic way, to promote high standards in a core business area.

1.15 We recognise that there may, on occasions, be issues of commercial confidentiality for companies in sharing asset risk management information with their peers. These issues are discussed in Chapter 3.

References

- 1.16 Information and Incentives project (IIP) – Output measures and monitoring delivery between reviews, Final Proposal, Ofgem, September 2000
- 1.17 Review of Transco's Price Control from 2002 – Draft Regulatory Instructions and Guidance for Reporting Output Measures, Ofgem, September 2001

Rationale

- 1.18 Ofgem is the office of the Gas and Electricity Markets Authority (the Authority), which was established under the Utilities Act 2000.
- 1.19 The duties of the Authority are set out in section 4AA of the Gas Act 1986 and section 3A of the Electricity Act 1989. The principal objective of the Authority in carrying out its functions under the Acts is to protect the interests of consumers in relation to gas and electricity, wherever possible by promoting

effective competition between those engaged or concerned in the activities licensed under the respective Acts, or engaged in commercial activities relating to such activities. In carrying out its functions under the Acts in a manner which furthers the principal objective, the Authority must do so (amongst other duties) in the manner which it considers best calculated to:

- secure a diverse and viable long-term energy supply;
- protect the public from dangers arising from conveyance or use of gas and the dangers from generation, transmission, distribution and supply of electricity.

The reference to consumers includes both existing and future consumers.

- 1.20 It is clear that the responsible stewardship of the network assets by the companies is a key element in which Ofgem must take an interest on behalf of consumers. Good stewardship secures the infrastructure and systems that delivers security and quality of supply and effective cost management, all of which are in the interests of today's and tomorrow's consumers.
- 1.21 Ofgem acts with consideration for safety matters and with regard to government advice on the environment. However, lead responsibility for policy in these areas lies with other government departments. Health and safety issues associated with people who work on the networks are the responsibility of the Health and Safety Executive (HSE). In addition, the Engineering Inspectorate of the DTI defines and ensures compliance with the Electricity Supply Regulations to ensure the safe design and operation of electricity networks. Environmental policy is the responsibility of the Department of Environment, Food and Rural Affairs (DEFRA). Our view is that good asset risk management will have a positive impact on both safety and the environment.
- 1.22 Asset risk management is important for all network operators. The proposed survey could apply to all holders of electricity distribution and transmission licences and to all holders of gas transportation licences. We propose that, since a number of holders of gas transportation licences have only relatively small and new networks, and service only a small proportion of the nation's consumers, they will not be included in the survey at this stage. This is also likely to apply

to networks exempt from licences and to potential new electricity distribution licence holders. Their inclusion will, however be kept under review.

1.23 The following companies would be included in the survey:

- electricity distribution licence holders; i.e. those that have distribution services provider obligations (the DNOs);
- electricity transmission licence holders; and
- the principal gas transportation licence holder, Transco.

1.24 **Question 2: Is this list appropriate? Should the smaller network operators be included in the surveys at this stage, or in the future?**

1.25 A yearly, high level, survey of these companies' asset risk management activities is proposed. This will bring benefits to the companies themselves and to the effectiveness of regulation by Ofgem. These benefits are:

- A systematic and consistent approach to assessing performance in asset risk management, giving greater understanding between companies and Ofgem.
- A 'smoothing' of information flow between the companies and Ofgem, with asset risk management reporting becoming more frequent, as opposed to being a major task once every five years under the price control review (though recognising that this does not preclude Ofgem asking for information on asset risk management at price control reviews).
- A better understanding of asset risk management activities and its key role in the relationship between operating and capital expenditure. This will allow the policies and expenditure of companies to be more effectively understood and assessed for price control purposes.
- To encourage the companies to develop best practices in asset risk management to deliver better security and reliability of supply, in a way consistent with their responsibilities for safety and the environment.

- 1.26 Overall, Ofgem judges that the development and undertaking of a survey is likely to have a materially beneficial impact on the network operators, the consumers and others.
- 1.27 Ofgem believes that, since the companies are already engaged in asset management as a key part of their business, the burden of reporting their activities in an annual survey will be small in relation to the companies' overall costs.
- 1.28 Ofgem's own costs, under the proposals set out here, have been estimated for the first year at approximately half of one man-year, together with a consultancy spend of less than £50,000.

Structure of the document

- 1.29 The document is structured as follows:
- Chapter 2 of this paper discusses the role of asset risk management in network infrastructure companies.
 - Chapter 3 outlines the proposed survey.
 - Chapter 4 proposes the introduction of enabling licence requirements.
 - Chapter 5 discusses the interaction of this work with IIP and with Transco medium term performance reporting.
 - Chapter 6 discusses how the companies are incentivised to participate in this work.
 - Chapter 7 outlines the timetable for the consultation and the proposed work.
 - Appendix 1 gives an outline of the survey questions as currently proposed.
 - Appendix 2 suggests a model that could be used as the basis for scoring companies' responses to the survey questions.

Timetable

- 1.30 The first survey will take place around June 2002. The first year of surveys will be a learning process for the companies and for Ofgem, and we anticipate developing a framework for continuous improvement of the surveys.
- 1.31 The deadline for responses to this consultation document is 21st December 2001.
- 1.32 Following receipt of responses, we intend to hold a seminar for the companies involved, and a limited number of other interested parties, so that we can openly discuss and begin to define the form and content of the survey. This will be held on 17th January 2002 at Ofgem's Millbank Office, London.
- 1.33 In the light of the seminar we will publish a second consultation paper in February 2002, setting out our intended survey format and method.
- 1.34 A full timetable is given in Chapter 7.

Use of consultants

- 1.35 We may use consultants to develop the form of the survey and its detailed questions. We will use consultants to carry out the the survey process and analyse and report results.

Ofgem contact

- 1.36 Responses should be sent to:

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- 1.37 It would be helpful if responses could be submitted both electronically and in writing.

Confidentiality

- 1.38 We intend to make all responses to this consultation publicly available, through the Ofgem Library. However, if asked to do so, we shall respect the confidentiality of any response. If you wish your response to remain confidential, please mark it (or the relevant parts) as confidential. Where possible, please consign any confidential elements of your response to a separate appendix.
- 1.39 Confidentiality of the proposed survey is addressed in Chapter 3.

2. Asset risk management

A key function for the network operating companies

- 2.1 Asset risk management is a fundamental function and responsibility for the companies that own and operate Great Britain's gas and electricity networks. The networks are vital for their role in providing energy to consumers and in delivering essential services that underpin the economy as a whole.
- 2.2 The electricity transmission and distribution companies in Great Britain between them manage over 750,000 km of circuits, together with the plant and equipment required to connect them and to operate them. Their assets enable power to be supplied from some seventy large power stations, and a growing number of smaller ones, together with the interconnectors, to over 27 million consumers, ranging in size from large industrial plants to domestic properties.
- 2.3 The major gas transporting company, Transco, owns and operates over 270,000km of pipelines, together with associated plant to operate this extensive system. This network is used to transmit and distribute gas from five major receiving terminals to more than 20 million consumers.
- 2.4 It is in the interests of existing and future consumers, and the wider public, that the assets of these large networks are well managed. Throughout their lives, which may be forty years or more, almost all network assets need to be maintained or repaired and, at the end of their lives, are usually replaced. Understanding these processes, monitoring them, and striving to improve the results are integral functions of the network operating companies.
- 2.5 Asset risk management requires quality business processes, business infrastructure (e.g. IT) and technical and management skills. Ofgem recognises the complexities of managing these networks and is firmly of the view that asset risk management decisions are best taken by the companies and not by the regulator. These are decisions that should be taken 'close to the assets', in the full knowledge of plant history, local operating conditions and informed risk assessments.

- 2.6 Our approach is consistent with this view. The proposed survey is intentionally high-level, addressing the policies and practices that are embedded in each company. It will only seek further detail where evidence is sought to support survey responses and to provide assurance that good policies and practices are genuinely integrated into a company's business and are delivering material benefits.
- 2.7 Ofgem does not have, and will not be formulating, a model framework of best practice for asset risk management. Its interest is to ascertain that key asset management activities are being undertaken effectively.

Experience in other sectors

- 2.8 Electricity and gas are not alone in being nationally important networks comprising expensive assets and operating in a public environment. Other examples include the rail, road, telecommunications and water networks. Examples of issues deriving from the management of assets can be found in these other sectors and in electricity or gas networks overseas. Views and experiences from other sectors will be welcome.
- 2.9 In New Zealand in 1998, serious shortcomings in asset management resulted in the shutdown of electricity supplies to Auckland's central business district for more than a week. The resulting widespread disruption resulted in a full Public Inquiry.
- 2.10 In Chicago in 1999, significant power failures were experienced. This was due to the deterioration of the transmission and distribution network assets and capacity shortfalls. The utility, Commonwealth Edison Company, was faced with a large and costly emergency programme of condition assessment, repair and replacement of unreliable equipment, and network reinforcement.
- 2.11 Recent problems in the UK rail industry, notably at Hatfield, have led to an increased interest in Railtrack's stewardship of its network assets and, in this case, the public safety consequences.

3. A survey of asset risk management

Introduction

- 3.1 This chapter explains the format of the survey, including its guiding principles, the survey topics, running the survey, assessing responses and reporting its results.

Guiding principles of the survey

- 3.2 The following guiding principles will apply in the development and operation of the survey:

Guiding Principles

1. Ofgem recognises that the companies are the most appropriate parties to make informed asset risk management decisions.
2. The survey will cover the policies, procedures, management and supporting systems used by the companies to undertake asset risk management.
3. The survey will look for evidence of good practices in both the philosophy of the approach and the clarity, consistency, quality and timeliness of its delivery.
4. The survey will seek evidence that policies and practices are integrated into the operation of the business, that they are current, and that they are delivering material benefits for asset stewardship.
5. A yearly survey is proposed, to allow the companies and Ofgem to monitor and encourage improvements in performance within a reasonable time-frame. The survey itself will evolve each year, to ensure continuing relevance.
6. Ofgem is committed to ensuring that the survey does not constrain, but rather encourages, innovation in company structures and the use of new technology or systems.
7. The survey will apply to the risk management of assets that are critical to the operation of the energy-transfer networks.

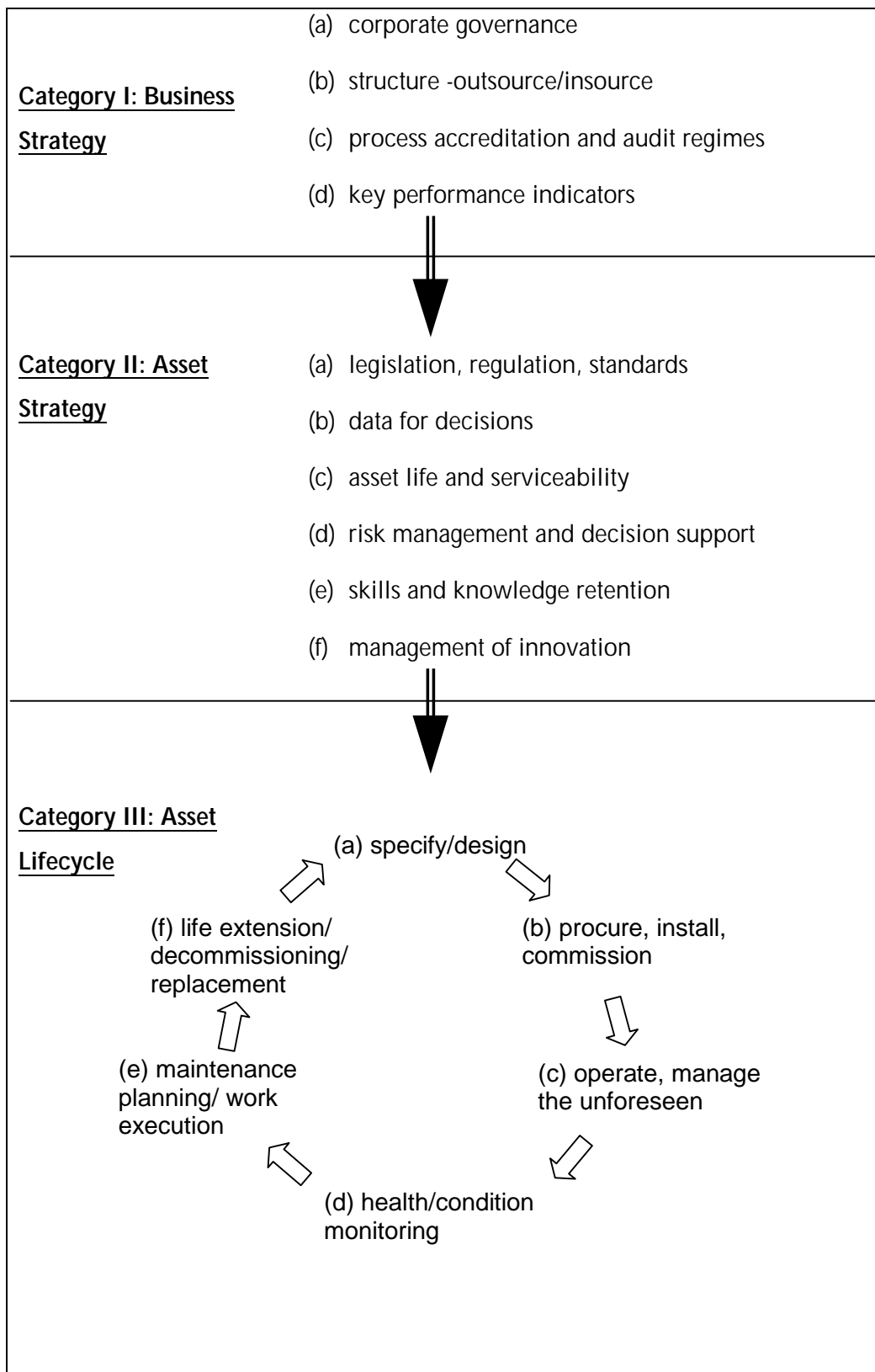
Form of the survey

- 3.3 Asset risk management is an activity whose elements are broadly similar across a range of industry sectors. It is proposed that the survey reflects this by being largely common across the gas and electricity distribution and transmission network operators. However, it is recognised that there may be benefit in tailoring some parts of the survey to particular network operator classes. If necessary, this will be achieved by the use of appendices that supplement the main body of the common survey.
- 3.4 **Question 3: Views are invited on this. Would most value be gained from a survey that is entirely generic and covers all classes of network operator, or would it be more appropriate to include class-specific questions?**

Example model of asset risk management activities

- 3.5 Table 1 below shows a basic model for how asset risk management may fit into a company's structure and activities. This model is generic and is not intended to reflect the individual structure of the companies. It does, however, provide a foundation for defining the topic areas that the survey will address.
- 3.6 The basic model shows Categories I to III. Category I represents the company's high level strategy and the model moves down through the management structure to the delivery of the asset lifecycle at Category III. Within each category, a number of subcategories are identified.

Table 1 – a structure for defining survey question categories



- 3.7 **Question 4: Is this model reasonably representative of asset risk management frameworks and processes? Does it form a useful basis around which to structure the survey questions? Are there any activities that should be changed or added?**

Survey topics

- 3.8 The model in Table 1 can be used to provide a structure for a series of headings under which the survey questions are addressed. Under each heading, supplementary questions will be asked. The supplementary questions will allow the companies to demonstrate the quality, completeness and effectiveness of their asset risk management processes.
- 3.9 Appendix 1 shows these headings, together with Ofgem's initial thoughts on the detailed questions beneath them. A summary of the heading topics, taken from Table 1, is given below:

I. Business Strategy

- a) Corporate governance
- b) Structure – outsource/insource
- c) Process accreditation and audit regimes
- d) Key performance indicators

II. Asset Strategy

- a) Legislation, regulation, standards
- b) Data for decisions
- c) Asset life and serviceability
- d) Risk management and decision support
- e) Skills and knowledge retention
- f) Management of innovation

III. Asset Lifecycle

- a) Specify/design
- b) Procure, install, commission
- c) Operate, manage the unforeseen

- d) Health/condition monitoring
- e) Maintenance planning and work execution
- f) Life extension/decommissioning/replacement

3.10 **Question 5: Do the questions in Appendix 1 provide an appropriate basis for the survey? Are there any important topics that are not covered by the questions? Are there areas where different types of company should be treated differently, in either the model or the survey headings?**

Running the survey

3.11 The surveys, as currently envisaged, would operate as follows:

- An initial baseline survey will be undertaken in June 2002 and there will be an annual survey thereafter.
- The results of the baseline survey will be published, stating which companies participated, but without identifying which results are attributed to each. Survey results in following years would be on an open basis and would not have this anonymity.
- As the survey seeks to promote best practice and continuous improvement, its content is expected to evolve year on year. The first opportunity for evolution will be after the results of the initial survey are published in September 2002.
- It is intended that the survey will take no more than a one or two day visit to each company.
- The survey will be undertaken by a trained and independent consultant, and will take careful account of company confidentiality and ensure consistency of approach.

Assessing company responses

3.12 The survey is intended to reveal the asset risk management elements in which particular companies lag or lead their peers. A maximum score in every element of the survey would not be expected, given that companies face differing

challenges and priorities in managing asset risks. The scoring across the range of elements would, however, be expected to highlight the excellent performers. This will be dealt with in detail in our second consultation on the subject, in February 2002. Appendix 2 shows a possible scoring system to separate performance into three classes: Leading, Good and Low. Within each survey category and sub-category, a company would accumulate points that would determine its position in the class.

3.13 This scoring system outlined is a first proposal to encourage discussion as to how companies could be scored for their responses to survey questions. If this model is used, it will need further consideration, to define the criteria for achieving particular scores, and how this should be translated into an assessment of Leading, Good and Low performers.

3.14 **Question 6: Is the preliminary model in Appendix 2 useful in helping to define a scoring system? Are there other alternatives that may be more suitable?**

Reporting survey results

3.15 Ofgem recognises that companies will wish to protect those aspects of asset risk management policies and procedures that they regard as intellectual property. In recognition of this, Ofgem will not publish or share details of particular management structures, tools or working practices with other operators, without permission from the company. For the first year, an anonymous report will show how many companies were classified as Leading performers, Good performers, and Low performers in the different categories of the survey model. It will list the participating companies, but their results will be shown as Company A, B, C, etc. From the second year onwards, we propose to reveal the company names under these assessment classifications. This is important, not only for visibility of performance, but also to encourage the exchange of best practice. The further development of reporting is addressed later in this chapter.

3.16 The extent of disaggregation of results in the published reports will be developed in the next stage of consultation. It should be sufficiently disaggregated to provide visibility of performance under the key topics, thereby stimulating peer review and best practices, but not to compromise company confidentiality of intellectual property. Detailed survey results will remain confidential to Ofgem,

under the provisions of section 105 of the Utilities Act 2000, but will be available as feedback to the individual companies concerned.

- 3.17 A suggested form for the presentation of results is shown in Table 2. Companies are classified in each of the three main areas of asset risk management identified in Table 1 and given a performance ranking of leading, good or low. Table 2 is populated with example results for seven companies, named 'A' to 'G'.

Table 2 – format for publishing the survey results (Companies A,B,C,...)

		Categories from model in Table 1:			Other sub categories?
		Category I – Business Strategy	Category II – Asset Strategy	Category III – Asset lifecycle	
Performance assessment from model in Appendix 2:	Leading	A D	B C	A C	
	Good	B C E	A D G	G D E	
	Low	F G	E F	B F	

- 3.18 We anticipate that the assessment of performance will be weighted differently in different categories. For example, a great deal of asset related work takes place in Category III (Asset Lifecycle), so the sub-categories beneath it are likely to carry a higher weighting than those under the less resource intensive Category I (Business Strategy). We believe it is appropriate to report results based on a number of categories of performance rather than assigning each company one overall score. This should ensure that companies attempt to achieve appropriate scores across a range of categories, and avoids strong performance in some areas masking weak performance in others.

- 3.19 **Question 7: Are you supportive of anonymity for the companies' individual survey results in the first year? Do you agree that, from the second year of the survey, the companies' relative performance should be published, albeit at a suitably aggregated level? Are you supportive of a weighted scoring system for assessing asset risk management? Is the model in Table 2 appropriate for reporting results?**
- 3.20 **Question 8: Where a single company holds more than one licence, should the results be shown separately for each licensed business?**

4. Licence requirements

- 4.1 Under the Electricity Act 1989 the transmission and distribution licences holders must develop and maintain an efficient, coordinated and economical system. Similarly, gas transporters, are obliged by the Gas Act 1986 to develop and maintain an efficient and economical system.
- 4.2 The companies are also obliged under their licences to provide information on their activities to Ofgem as may be reasonably necessary or required to perform its duties.
- 4.3 Ofgem has a function of initiating any modifications to standard or special licence conditions in the light of its principal objective and associated duties.
- 4.4 The first survey (2002) will be undertaken on an anonymous and voluntary basis. This will allow a view to be taken on the sector's standing in asset risk management. Based on this, Ofgem may consider the case for licence changes.

5. Interaction with IIP (Information and Incentives Project) and with Transco medium term performance reporting

5.1 This section applies directly to the electricity distribution licence holders (IIP Interaction) and Transco. For the other companies for whom we are proposing an asset risk management survey, this section provides background information.

IIP Interaction

5.2 This sub-section applies directly to the electricity distribution licence holders.

5.3 The Information and Incentives Project (IIP) is an important recent development in the regulation of distribution licence holders. The IIP has two main elements:

- the establishment of a reporting and audit framework; and
- the development of an output based financial incentive scheme, focussing on key areas of customer services, such as number and duration of interruptions to supply.

5.4 A key element in developing IIP has been the need to ensure that perverse incentives are not created under which companies meet their output performance targets at the expense of necessary work and investment in the networks for the longer term. With this in mind, the IIP reporting framework¹ requires that the companies report on medium term performance measures.

5.5 Medium term performance reporting under IIP concentrates on fault rate information as an indicator of asset condition. Companies are also requested to provide detailed explanatory narratives on trends in fault rates and other aspects of asset monitoring.

5.6 In contrast, the asset risk management survey will look at the policies, and practices for risk management of the assets, rather than at the absolute condition of individual classes of assets.

¹ Information and Incentives project (IIP) – Output measures and monitoring delivery between reviews, Final Proposal, Ofgem, September 2000

- 5.7 **Question 9: In the light of the proposed survey, are there any elements of IIP medium term performance reporting that should be reviewed, and if so, in what way and to what timescale?**

Transco medium term performance reporting

- 5.8 This sub-section applies directly to Transco.
- 5.9 As part of the Transco price control review Ofgem published draft Regulatory Instructions and Guidance for Reporting Output Measures (the RIGs). These indicated that Transco would be required to report on a range of medium-term performance measures, with an accompanying narrative explaining changes in performance and the company's asset management strategy. The intention of these measures and the associated narrative was to ensure that Ofgem were provided with information on Transco's maintenance and replacement of assets.
- 5.10 As described in this document, Ofgem is giving further consideration to the approach for monitoring the asset management and medium-term performance of gas and electricity transmission and distribution businesses. Ofgem has therefore decided to defer its decision on medium-term performance reporting for Transco so that it can reflect the outcome of this consultation.
- 5.11 Appendix 2 of the latest draft RIGs² contains an updated draft of the medium term performance measures for Transco to inform this consultation.
- 5.12 **Question 10: In the light of the proposed survey, are there any elements of the draft Transco medium term performance reporting that should be reviewed, and if so, in what way and to what timescale?**

² Review of Transco's Price Control from 2002 – Draft Regulatory Instructions and Guidance for Reporting Output Measures, Ofgem, September 2001

6. Incentivisation

6.1 The survey is intended to assess performance in a systematic and objective way and encourage best practices in asset risk management. The companies all have a statutory obligation to manage their networks in an economic, efficient and (in the case of electricity) coordinated way. Companies would be expected to participate actively in the surveys by virtue of the following incentives:

- Survey results will help to demonstrate compliance with their statutory obligations.
- Good survey results provide a positive comparison with their peers. This is given visibility by the publication of comparator information from the surveys.
- It contributes to the companies' and Ofgem's understanding of the interaction between capital expenditure and operating expenditure at price control reviews.
- The risk is minimised of future consumers and company management being penalised where there has been a short-term management outlook in the past.

7. Timetable

7.1 This timetable outlines the steps planned from now until the end of 2002.

Event	Timescale
Responses to this consultation document	Deadline: 21 st Dec 2001
Seminar to develop the first year survey	17th January 2002
Issue second consultation paper. To contain detail of intended survey questions and definition of the scoring system.	February 2002
Responses to second consultation document	March 2002
Issue conclusions and form of survey	April 2002
Conduct surveys with companies	June 2002
Discuss results with companies individually	August 2002
Publish results (anonymous reporting)	September 2002
Consult on the need for (and form of) licence requirements to establish the survey on an ongoing basis	September 2002

7.2 **Question 11: This timetable allows the surveys to be conducted at the same time as audits for IIP. Is this proposal helpful to those involved in IIP?**

Appendix 1 - Asset risk management survey – suggested format

- A1.1 Section 3 of the main body of this paper describes the aim and form of the survey and gives a summary of the questionnaire elements that could be applied to any class of company, whether gas or electricity, transmission or distribution. This appendix gives a suggested survey questionnaire, by defining a series of questions beneath the headings in Table 1.
- A1.2 We recognise that there may be a need for a tailored set of questions for different classes of company. These will be defined in the next stage of the development of asset risk management and will be the subject of a second consultation paper.
- A1.3 The questions are intended to explore the aspects of asset risk management that contribute to satisfactory long term performance, identify Leading/Good/Low practice, and address topics where lessons have been learned from past experience.
- A1.4 The following headings and questions for the general survey are suggested:

Category I: Business Strategy

- a) **Corporate governance:** How is accountability for Asset risk management assigned in your company? Is a single named individual accountable? At what level do they report on the management hierarchy? What is the extent of board level experience in utility asset management?
- b) **Structure – outsource/insource:** Where you use service providers, what processes do you have to ensure you have the necessary visibility of asset condition? What escalation mechanisms do you use in the event of concern for an area of asset health? What incentives are there on your service provider to give attention to longer-term asset performance? What evidence is there that the incentives operate effectively?
- c) **Process accreditation and audit regimes:** Do you have a procedure for undertaking revisions to your processes? How do you ensure consistency of

policy application across the organisation? Do you have a policy on certification to national or international standards? What certification do you apply to your asset risk management processes and how widely is this implemented? What certification do you currently hold? Do you routinely audit your asset management processes?

- d) **Key performance indicators:** Are key performance indicators used to give senior management a view of asset condition? What is the frequency for updating the information? At what management level are they routinely reviewed? Is there a structured approach to the assessment of the information and for progressing actions arising? Are the indicators available to asset management staff, to service providers, to your consumers?

Category II: Asset Strategy

- a) **Legislation, regulation, standards:** Is compliance a stated accountability of a named manager? Do you have a structured process to keep external standards and other requirements under review? How do you ensure compliance in these areas?
- b) **Data for decisions:** Do you have a register of assets? How complete is the register? Is it consistent across the organisation and across asset types? How accurate is the information that is held? How do you ensure that new assets are added and redundant assets removed? How current is the register?
- c) **Asset life and serviceability:** What processes exist for the review of serviceability and asset life? What are the key parameters that support your assessments? Which asset classes are addressed? How frequently are asset lives reviewed?
- d) **Risk management and decision support:** What is your policy regarding risk management? Are asset risks managed as an integrated part of the company's wider approach to risk, or separately? Do asset management risks appear on the company's top-level risk register? Do you utilise a formalised methodology for decision support (eg Reliability Centred Maintenance)? Do you undertake quantified risk assessment for key risks? Do you obtain independent validation?

- e) **Skills and knowledge retention:** Do you have a structured approach to making available the skills required to manage the asset base? Do you have a system to manage and maintain these skills? How do you keep abreast of technological developments? Do you have a policy to address retention of asset knowledge? How is specialist knowledge obtained? How is continuity of expertise addressed in service-provider relationships?
- f) **Management of innovation:** Do you have a policy for the use and management of new technology? How do you maintain awareness of new technology opportunities? How do you manage the implementation of new technology on the network?

Category III: Asset Lifecycle

- a) **Specify/design:** Do you have a policy for the specification and design of new assets? What planning tools are used to analyse and design the network for future requirements? Do you undertake periodic capacity utilisation surveys of asset classes? What is the linkage to investment plans?
- b) **Procure, install, commission:** What type of specifications do you use in procuring new assets? What elements address longer-term performance? Is there a process for managing the handover of the plant and associated information from the manufacturer/developer to the network operator? How do you address the risks of equipment performing poorly in the longer term? Do you have a structured process that ensures that all records are updated for asset changes (both asset registers and geographical records)?
- c) **Operate, manage the unforeseen:** Do you have a structured approach to failure management? How is investment planning influenced? Is the network assessed periodically for potential vulnerable points? Is a systematic approach used to address these? What is your resourcing strategy to ensure ongoing ability to operate under extreme conditions? Are plans tested and lessons fed-back? How do you assess and manage spares holdings? What assessment do you undertake of control centre robustness? Do you have a formal investigation approach to incidents and near misses? How widely are the learning points promulgated? Are action points tracked to completion?

- d) **Health/condition monitoring:** Do you have an asset condition monitoring and recording system? Does this include civil engineering aspects? How comprehensive and up to date are the findings? Do you have a structured process for utilising the information? How do you manage the large amounts of data? Do you advise your equipment suppliers of faults and defects experienced? How do you work with your suppliers to improve asset stewardship?

- e) **Maintenance planning and work execution:** What methodology do you adopt for maintenance planning? Do you have a systematic and consistent scheduling system? Do you have processes that feed information back from maintenance to inform asset risk management decisions? Do you monitor maintenance overdue? Do you have a process to assess and respond to this information? How do you assess the adequacy of your maintenance activities?

- f) **Life extension/decommissioning/replacement:** Do you have a policy on life extension of assets? Do you use a risk assessment approach? How is this validated? Do you have a policy to ensure the safe and proper disposal of redundant assets?

A1.5 We invite comments on these questions. See paragraph 3.10 (Question 5) in the main body of the text.

Appendix 2 - A proposed model for scoring company performance

A2.1 We propose to develop a scoring system that will give scores to the various elements of the survey. These could also be weighted. This will be dealt with in detail in our second consultation paper on the subject, in February 2002. Table A shows a possible scoring system to separate performance into three classes: Leading, Good and Low. Within each survey category and sub-category, a company would accumulate points that would determine its position in the class.

A2.2 The detailed scoring from an individual question would be confidential between Ofgem and the relevant company (subject to section 105 of the Utilities Act 2000).

Table A – scoring system for assessing performance against survey sub-categories

Assessment of company at survey	Score allocated to element	Assessment
Best practice, relevant to the business in question, integrated throughout the company's business planning and material benefits delivered.	10	Leading
	9	
	8	
Good practice is evident, that is reasonably well integrated and is controlled. Leading practice may, for example, be in the process of development or implementation	7	Good
	6	
	5	
	4	
Practice does not exist, or is not integrated, or its application is inconsistent or uncontrolled	3	Low
	2	
	1	
	0	

A2.3 This scoring system is a preliminary suggestion to encourage discussion as to how companies could be scored for their responses to survey questions. If this model is used, it will need refinement, to define the criteria for achieving particular scores, and how this should be translated into an assessment of Leading, Good or Low performance.

- A2.4 The scoring system, and expectations of where companies will lie within it, needs to reflect a level of performance that is appropriate to the business. For example, in many cases it would probably be unnecessary and inappropriate for a company to achieve a large number of 'ten-out-of-ten' ratings or even 'leading' performance classification, unless they could demonstrate that this had been achieved without incurring large costs.
- A2.5 We invite comments on these questions. See paragraph 3.14 (Question 6) in the main body of the text.