

**March 2001**

**Ofgem's strategy for metering  
A consultation paper**

## Summary

This document sets out Ofgem's strategy for metering, and its proposed programme of work over the next two years to deliver value for gas and electricity customers in respect of metering services.

Energy suppliers pay around £800m for metering and meter reading services each year. Ofgem's strategy, which builds on its work over the past two years to open up these services to competition, is expected to reduce the cost of providing existing services. Given the amounts involved, potential savings for customers are significant. However, while such cost savings are important, the more substantial benefits for energy consumers are likely to flow from the development of new services based on advanced metering technology.

Ofgem's strategy proposes a range of measures to be taken forward over the next two years to enable gas and electricity customers to enjoy the benefits of technological advances in metering, and benefit from lower cost metering services. These proposals follow a detailed review of competition in metering services carried out by Ofgem in Autumn last year.

The proposals include measures to:

- ◆ sharpen further the regulation of existing providers of metering services in terms of the prices charges and processes used;
- ◆ increase the contractual flexibility available to market entrants and suppliers over how the deliver metering services to consumers, and;
- ◆ create two industry workgroups to review issues associated with the application of advances in metering technology.

Following consultation on these proposals, Ofgem intends to come forward with detailed proposals later in the year. Ofgem will also be holding an open seminar to discuss the strategy on Thursday, 26 April 2001.

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# 1. Introduction

## *Background*

- 1.1 This document sets out Ofgem's strategy for metering. The strategy seeks to ensure that gas and electricity customers get the best value for money in terms of metering and meter reading services.
- 1.2 Ofgem has taken forward a number of initiatives in recent years to promote competition in metering services. The strategy set out in this document what further steps Ofgem proposes to take, and in particular how it can act most effectively to facilitate the introduction of advanced metering technology within a competitive environment.
- 1.3 Ofgem's strategy has been informed by its review of competition in gas and electricity metering and meter reading services, carried out in Autumn last year, and responses to its consultation document on gas energy measurement published in November 2000.<sup>1</sup>

## *Rationale*

- 1.4 Ofgem has a principal statutory duty to protect the interests of energy consumers, where appropriate through the promotion of effective competition. Metering and meter reading services are competitive activities. However, the current degree of competition is limited. Energy consumers would be better served by more effective competition, which would reduce costs and promote innovation.
- 1.5 The development of effective competition is critically dependent on effective regulation. In addition, Ofgem has a role to ensure that the wider commercial framework is in place to enable new organisations to provide services in these markets.
- 1.6 Energy suppliers pay around £800m for metering and meter reading services each year. Given the amounts involved, potential savings for customers are significant. However, while such cost savings are important, the more

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<sup>1</sup> Gas energy measurement – A consultation document, November 2000.

substantial benefits for energy consumers are likely to flow from the development of new services based on advanced metering technology. The application of new metering technology also has significant potential to increase energy efficiency and reduce fuel poverty.

- 1.7 The strategy set out in this paper is consistent with Ofgem's priority, as set out in its Plan and Budget for 2001/02, to work on industrial structures and competitiveness. The strategy is also relevant to other priorities cited in the plan, such as social and environmental action and regulation of monopoly businesses.

### ***Structure of the document***

- 1.8 Background information on the range of different metering services, and the manner in which these services are currently provided to customers, is given in Chapter 2.
- 1.9 The details of Ofgem's proposed strategy, and associated programme of work, are set out in Chapter 3. Conclusions are set out in Chapter 4.
- 1.10 The proposals set out in this document have been informed by Ofgem's review of competition in metering and meter reading services. A description of the scope of Ofgem's review, and a summary of responses, is set out in Appendix 1.

### ***Views invited***

- 1.11 Ofgem would welcome views on the issues raised in this document, and individual policy proposals set out in Chapter 3. If you wish to comment in writing on any of the issues raised then please write to:

Pam Barrett  
Director, Metering & Business Transactions  
Office of Gas and Electricity Markets  
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London  
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Email: [pam.barrett@ofgem.gov.uk](mailto:pam.barrett@ofgem.gov.uk)

- 1.12 If you wish to comment, it would be helpful if responses could be submitted to Ofgem by Friday, 25 May 2001. It is open to respondents to mark all or part of their responses as confidential. However, Ofgem would prefer as far as possible that responses are provided in a form that can be placed in Ofgem's library.

### ***Metering strategy seminar***

- 1.13 In addition to written responses, Ofgem will be hosting an open seminar to seek views and stimulate debate in respect of the proposed metering strategy – and to answer any questions you may have about the proposed strategy. The seminar will be held in London on Thursday, 26 April 2001.
- 1.14 If you wish to attend this seminar, then please contact Adrienne Monroe (020 7901 7414, [adrienne.monroe@ofgem.gov.uk](mailto:adrienne.monroe@ofgem.gov.uk)) by Thursday, 19 April 2001.

### ***Contacts***

- 1.15 If you have any questions about the issues raised in this document, then Colin Sausman (020 7901 7339, [colin.sausman@ofgem.gov.uk](mailto:colin.sausman@ofgem.gov.uk)) or Simon Doggett (020 7901 7057, [simon.doggett@ofgem.gov.uk](mailto:simon.doggett@ofgem.gov.uk)) will be happy to discuss.

## 2. Background

- 2.1 This chapter describes the different metering and meter reading services, and explains how these services are currently provided.

### *Metering and meter reading services*

- 2.2 Customers require two core services in respect of meters installed at their premises. First, they need to be provided, on an ongoing basis, with an accurate meter of an appropriate type ('metering services'). Second, a reading needs to be taken from that meter periodically ('meter reading or data services').

### **Metering services**

- 2.3 It is useful to separate 'metering services' into:

- ◆ meter provision; and
- ◆ meter operation.

- 2.4 Meter provision relates solely to making meters available for installation. Meter operation covers all work associated with installing and maintaining meters.

### **Meter reading or data services**

- 2.5 Meter reading services also involve two separate functions:

- ◆ data retrieval; and
- ◆ data processing.

- 2.6 Data retrieval relates to obtaining a read (either manually or remotely) from a meter. Data processing involves the validation of such data, and the transfer of the relevant information to interested parties.

- 2.7 In electricity, there is the additional service of:

- ◆ data aggregation.

- 2.8 This involves the aggregation of individual meter read data, and submission to Elexon for settlement.

### **Prepayment infrastructure**

- 2.9 In addition, customers with prepayment meters need a means of pre-paying, and suppliers with prepayment customers need a means of collecting such payments.
- 2.10 Prepayment meters currently use electronic tokens, keys or cards. The customer therefore needs to be provided with a network of outlets where tokens can be purchased, or cards and keys can be charged up. This network of outlets needs to be linked to a payment settlement system for suppliers.

### ***Current provision of metering and meter reading services***

#### **Metering services**

- 2.11 Metering services are provided by meter operators. Metering services are not a statutory monopoly. There are provisions within the Gas Act and the Electricity Act (as amended by the Utilities Act) for any competent party to provide metering services, including customers.

#### *Gas*

- 2.12 Public Gas Transporters (PGTs) are *de facto* monopoly meter providers and operators. Metering services are provided under the respective Network Codes. Transco has separately identified charges for meter provision, installation and maintenance – and has introduced a range of one-off charges for individual meter work jobs, e.g. meter repositioning.
- 2.13 Shippers are the purchasers of metering services. Transco separately identifies metering charges, and such charges are avoided by a shipper if it makes alternative arrangements.
- 2.14 Shippers currently pay Transco around £415m a year for providing metering services. This breaks down into around £180m for meter provision and £235m for meter operation. Transco's meter assets are valued at around £1.2 billion for regulatory purposes. This valuation reflects the approach taken in setting Transco's price control following the last period review. It is Ofgem's

understanding that the replacement cost of these assets is significantly lower, and could be around 50 to 60% of the regulatory value.

- 2.15 PGTs, as incumbent providers of metering services, have a licence obligation to provide a meter, if requested by a shipper. In addition, Transco's provision of metering services is separately price-controlled. Transco also has a licence obligation to publish its charges in a clear and transparent form.

### *Electricity*

- 2.16 In electricity, the situation differs between half-hourly meter points and non-half-hourly meter points. Public Electricity Suppliers (PESs) are *de facto* monopoly metering services providers for non-half-hourly meter points. In respect of half-hourly meter points there are a range of different providers, including PESs operating 'out of area', and independent third parties.
- 2.17 Following PES business separation, metering services will be provided by the distribution business, or in some cases a stand-alone business unit separate from both supply and distribution. A small number of PESs have sold the operational side of their metering businesses, while retaining control of the meter assets within the distribution business.
- 2.18 PESs have a licence obligation to provide metering services for all meter points, if requested by the relevant supplier. There are also obligations to publish statements of charges for metering services in a transparent form, and to ensure that such charges do not distort competition. However, metering charges are not separately price controlled (apart from a £15 cap on the surcharge for providing a prepayment meter over and above the cost of providing a credit meter).
- 2.19 If a PES sells its metering business then the obligations remain – and the vendor PES is required to meet its obligations through contract (likely to be with the purchaser of the business).
- 2.20 'Meter operator' is a defined role within electricity, with supporting systems and processes recognised within the Data Transfer Network (an electronic network for transferring data between electricity industry participants). 'Meter operators' are required to be accredited by Elexon. Under the 'supplier hub' principle,

suppliers are required to appoint an accredited meter operator for each meter point they supply.

- 2.21 Electricity suppliers currently pay meter operators around £270m a year for providing metering services in respect of non-half-hourly meter points. This includes a notional amount to reflect PES supply businesses 'buying' metering services from PES distribution businesses.
- 2.22 Whilst PES metering assets have not been separately valued for regulatory purposes, as a broad indication the net book value of these assets for PESs in total is in the region of £1.3 billion.
- 2.23 Evidence from business sales also provides an indication of value. TXU (Eastern) sold its metering business (excluding all meter assets) 12 months ago to Siemens for £42.5m. Seeboard sold its metering business (including half-hourly meter assets) to Invensys for £37m.

### **Meter reading and data services**

#### *Gas*

- 2.24 Meter reading services are provided by meter reading agencies. These include Transco, PES metering businesses, and independents such as Accuread. Transco provides services under a contract separate from its Network Code.
- 2.25 For Daily Metered (DM) supply points<sup>2</sup> Transco is the *de facto* monopoly meter reading agency. Transco's provision of this service forms part of Network Code.
- 2.26 Transco's meter reading activities are separately price controlled. In addition, Transco has a licence obligation to publish a clear and transparent statement of charges for its services.
- 2.27 Shippers are the purchasers of meter reading services. While the majority of shippers continue to use Transco to obtain meter readings, 14 out of 35 shippers have migrated all or some of their business to other service providers. Most

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<sup>2</sup> There are approximately 2,000 Daily Meter supply points. These are interruptible sites, and sites that consume large amounts of gas.

notably, BGT has contracted separately for its meter reading services for the past four years.

- 2.28 Shippers currently pay around £90m a year to meter reading agencies for the provision of non-daily meter reading services. Of this, around £30m is accounted for by Transco. The largest contracts are between BGT and its appointed meter reading agencies.

### *Electricity*

- 2.29 'Data collector' (which covers data retrieval and data processing) and 'Data aggregator' are defined roles within electricity, with supporting systems and processes recognised within the Data Transfer Network. 'Data collectors' and 'Data aggregators' are required to be accredited by the Pool/Elexon. Under the 'supplier hub' principle, suppliers are required to appoint an accredited data collector and data aggregator for each meter point.
- 2.30 Suppliers currently pay around £120m a year to data collectors, and around £11m a year to data aggregators, in respect of non-half-hourly meter points. This includes notional payments for services 'bought' in-house by PES supply businesses.

### **Prepayment infrastructure**

#### *Gas*

- 2.31 In gas, prepayment infrastructure services are provided by Siemens Metering Services. All suppliers contract with Siemens to provide prepayment customers with cards, access to a point of sale network, and to provide settlement services. This service costs suppliers £8 a year per prepayment customer. In addition, Siemens offer a service, at additional cost, to provide suppliers with branded payment cards.
- 2.32 Siemens also charges a fee per transaction made via its point of sale network, which it offers to suppliers via contracts with Post Office Counters Limited (POCL) and Paypoint. However, not all suppliers use this service. BGT contracts directly with POCL and Paypoint.

### *Electricity*

- 2.33 Public Electricity Suppliers (PESs) have a licence obligation to provide a prepayment infrastructure. Systems vary across PESs, but most systems make use of the POCL and Paypoint networks. Charges for provision of this service are capped at £15 a year.
- 2.34 After the introduction of separate licences for ex-PES supply and distribution businesses, the licence obligation to make available a prepayment meter payment infrastructure will lie with ex-PES supply businesses in their authorised areas (referred to in the proposed standard licences, consequent to the Utilities Act, as supply service areas).

### 3. Ofgem's metering strategy

3.1 This chapter sets out Ofgem's strategy for metering. It highlights how Ofgem's strategic objective has been pursued to date, and proposes eight strands of work to be taken forward over the next two years.

#### *Introduction*

3.2 Metering is important to gas and electricity customers for four key reasons:

- ◆ meter readings determine how much a customer is billed;
- ◆ the type of meter provided determines whether a customer pays for his energy on credit, or whether he pays before he consumes energy;
- ◆ meters can provide information to the customer on how much gas or electricity they use in any particular time period; and
- ◆ metering costs contribute to the total bill paid by a customer.

3.3 It is Ofgem's role to ensure that metering services are delivered in a manner that provides customers with the greatest value. The strategy set out in this document highlights the means by which Ofgem proposes to pursue this value for customers.

#### *Strategic objective*

3.4 Ofgem's strategic objective is to enable shippers, suppliers and customers to exercise choice over how they obtain metering and meter reading services.

3.5 By facilitating such choice we are enabling buyers of metering services to take up more attractive offers from competing service providers (rather than relying on the host PES or PGT as the 'service provider of last resort').

3.6 In structural terms, Ofgem is seeking to separate metering from monopoly transportation and distribution businesses. In the future, Ofgem does not envisage metering being a regulated activity. Unlicensed metering businesses will provide services directly to suppliers or customers on commercial terms.

### ***Benefits for customers***

- 3.7 If buyers of these services can exercise choice, and new service providers can enter the market, then costs are likely to fall and innovation in new services will be stimulated, to the benefit of gas and electricity consumers.

#### *Cost reductions for existing services*

- 3.8 Experience over recent years in gas meter reading suggests that potential cost reductions are substantial. BGT, for example, has cut its meter reading costs significantly through competitive tendering.
- 3.9 Discussions with potential new entrants suggest that significant cost savings are also viable in gas metering services. A saving of 25% in the provision of gas metering services would translate to around £100m a year for customers.
- 3.10 Competition and choice also encourages greater integration between gas and electricity, as suppliers can make use of 'dual fuel' service providers. While there is some evidence of such activity, the full benefits have not yet been exploited by suppliers.

#### *Innovation and new services*

- 3.11 However, customers are likely to benefit most from the development of new services. While it is difficult to quantify the benefits in monetary terms (indeed, some new services may cost more than the services currently provided), the following benefits are likely to figure:
- ◆ more accurate billing (through remote meter reading);
  - ◆ more effective energy management;
  - ◆ development of new tariffs, e.g. which link charges more closely to levels and profiles of consumption;
  - ◆ greater demand side participation in energy trading; and
  - ◆ cheaper prepayment meters, or meters that can interchange more easily between credit and prepayment modes.

### ***Implementing the strategy***

- 3.12 There are two related strands of work associated with the strategy. First, regulation of incumbent service providers (i.e. PESs and PGTs). Competition will not develop if the 'basics' are not in place, i.e. prices need to be transparent and cost-reflective, and buyers of services need to be able to move their business away ('unbundle') from the PES or PGT without undue cost or risk.
- 3.13 Second, promotion of new entry and new investment. Even if the 'basics' are in place, there are a number of steps Ofgem proposes to take to improve the commercial framework under which competition develops. The intention is that this will further stimulate market entry and new investment.

### ***Policy action to date***

- 3.14 Ofgem has focused on ensuring that prices for services are separately identified and cost-reflective, and facilitating the development of processes to enable shippers and suppliers to migrate their metering business away from PESs and PGTs.
- 3.15 Ofgem has also been involved in work associated with the organisational separation of metering from transportation and distribution. In electricity, this has related to PESs wishing to sell their metering businesses. In gas, this has related to Transco's plans to separate, in operational and contractual terms, its metering and meter reading activities from its core transportation activities.
- 3.16 The main initiatives taken forward to date are as follows:
- ◆ introduction of disaggregated (i.e. separate from transportation or distribution) charges for metering and meter reading in gas and electricity; (1998-1999);
  - ◆ split of Transco's price control to create separate controls for metering and meter reading (to ensure cost-reflective charges); (1999-2000);
  - ◆ introduction of PES 'agent competition' systems, to enable suppliers to choose alternative meter operators, data collectors or data aggregators; (1999-2000); and

- ◆ instigation of Review of Gas Metering Arrangements (RGMA) project to oversee of Transco's proposed separation of its metering and meter reading business from its transportation business, and develop industry processes to enable shippers and suppliers to choose alternative metering services providers (2000 onwards).

### ***Next steps***

3.17 Whilst there is still some work to do to ensure that prices and processes to promote choice are right, Ofgem's objective going forward is to encourage new investment and new market entrants.

3.18 In Autumn last year Ofgem carried out a review of competition in metering and meter reading services.<sup>3</sup> This review gathered a wide range of views from current market participants and potential new entrants as to the remaining barriers to competition in metering and data services. These findings have informed the development of our proposals. A summary of the views expressed through Ofgem's review is set out in Appendix 1.

3.19 In the light of the finding of its review, Ofgem is proposing a total of eight different strands of work to take forward the strategy. Three of these strands of work relate to finalising the work on getting the basics right:

1. an investigation of the cost basis for PESs' current prices for metering services, and publication of these findings together with a range of indicative charges;
2. the continuation of the RGMA workstream to oversee the proposed separation of Transco's metering business from its transportation business, and the development of industry processes to facilitate choice; and
3. the development of proposals for metering under Transco's price control review.

3.20 In terms of promoting market entry and new investment, Ofgem is consulting on four separate initiatives:

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<sup>3</sup> Review of competition in metering and meter reading services – Survey document , September 2000.

4. to increase the contractual flexibility of suppliers in providing metering services directly to customers, and of PGTs and PESs in offering metering services;
  5. to make metering charges more visible to customers, and enable customers to avoid these charges by making their own arrangements;
  6. to initiate an industry discussion on 'standards' for advanced metering, to ensure, where possible, that new meter types can be supported by other suppliers; and
  7. to keep under review the current arrangements for 'accreditation' as an electricity meter operator, data collector or data aggregator, to ensure accreditation requirements do not act as a barrier to competition.
- 3.21 In addition, following consultation last November, Ofgem has decided to establish an industry workgroup to consider the extent to which, and the ways in which, gas energy measurement can be improved in the context of the proposed EC Measuring Instruments Directive (MID).
- 3.22 These proposals are discussed in turn below. The quarterly references cited in these sections relate to:
- Q1 = April to June 2001                      Q2 = July to September 2001
- Q3 = October to December 2001      Q4 = January to March 2002

## **1. Cost-reflectivity of PES metering charges**

### *Issue*

- 3.23 PESs are the incumbent providers of metering and data services. If price signals are unclear or distorted then new entrants will find it difficult to compete. PESs have an incentive to set low metering charges to deter market entrants, while recovering costs through monopoly distribution charges.
- 3.24 PESs have a licence obligation to publish metering charges in a form approved by Ofgem, and to ensure that such charges and terms do not restrict, prevent or

distort competition. Suppliers have a right to bring such charges or terms to Ofgem for determination if there is a dispute.

3.25 While Ofgem has only been asked to determine two disputes since 1999, a number of respondents to our competitive review questioned the cost-reflectivity of PES charges, and the degree to which they provided headroom for market entry.

3.26 It is certainly true that charges for metering and data services vary widely between PESs. For example, annual standing charges for data collection and aggregation ranged from £2.66 to £5.88 per domestic customer, while charges for meter operation ranged from £1.56 to £5.84 per domestic customer.

#### *Ofgem's proposals*

3.27 In Ofgem's view, it is uncertain as to whether existing licence obligations are in themselves sufficient to ensure appropriate prices. **Ofgem is therefore proposing to investigate the cost basis of PES charges, and publish the findings together with some indicative charges (or ranges of charges)** based on the evidence.

3.28 While there is no formal mechanism to ensure that PESs comply with these indicative charges, Ofgem would bear in mind compliance with these indicative charges in assessing any request to determine disputes.

3.29 It is Ofgem's intention to perform this review in Q3 with a view to publishing findings in Q4. Ofgem would hope that the findings of this review would be incorporated into the relevant charging statements during 2002/03.

3.30 **Ofgem would welcome views on:**

- ◆ **whether the proposed review and publication of indicative charges would have a positive effect on the development of competition in metering and data services;**
- ◆ **the degree to which the proposed review and publication of indicative charges sufficiently addresses the concerns raised about the current levels and range of charges; and**

◆ **the range of services that should be included within the review.**

3.31 In the longer term Ofgem has stated its intention to create separate price controls for metering at the next distribution price control review, to the extent that metering activities continue to require price regulation. It is not Ofgem's intention to modify the structure of distribution price controls before the next periodic review.

3.32 However, following consultation last year Ofgem has stated that a sale of metering assets by a PES would require a modification to its distribution price control, to separately identify metering. Ofgem intends to publish proposals later this year on how such a price control split, consequent to a sale of metering assets, could be made.

## **2. Development and review of industry processes**

3.33 In electricity there is a formal, codified system for transferring relevant information on metering. For example, when a customer changes supplier, details of the relevant meter operator are passed to the new supplier (or its appointed agent).

3.34 In gas, such systems do not exist. In practical terms, this makes switching metering service provider more difficult and risky for suppliers and competing metering services providers. The development work to remedy this situation is being taken forward under the Review of Gas Metering Arrangements (RGMA) project, which is led by Ofgem and which involves the industry through workgroups.

3.35 This project has produced a 'metering protocol' document, which describes the obligations of respective parties and highlights the pieces of information that are required to be transferred in various circumstances. A copy of the metering protocol and details of the RGMA project can be obtained from Ofgem's metering website at:

*[www.ofgem.gov.uk/metering](http://www.ofgem.gov.uk/metering)*

3.36 The industry is presently deliberating the appropriate degree of standardisation of processes and data to support this transfer of information.

3.37 The development of processes and systems is linked with Transco's plans to separate its metering business from its PGT business. Through this separation, Transco is developing new IT systems which will support the provision of Transco's metering services to shippers – and the interaction with Transco in its role as a PGT. This implies consequent changes to systems of shippers who continue to use Transco as a provider of metering services.

*Ofgem's proposals*

3.38 In terms of the electricity industry, while processes exist to handle the transfer of data within a competitive metering market, there is anecdotal evidence of practical problems with the transfer of data upon change of agent. These processes play a key role in establishing the framework for open and fair competition in metering and data services. It is essential that they work, and are seen to work, smoothly and efficiently.

3.39 **It is therefore Ofgem's intention to review the operation of 'change of agent' processes, and to assess the degree to which any problems are caused by the actions of the 'outgoing' agent.** Clearly, any such anti-competitive behaviour is not acceptable. It is Ofgem's intention to initiate this work in Q1.

3.40 **Ofgem would welcome views on:**

- ◆ **its proposal to undertake this review; and**
- ◆ **what scope the review should take, i.e. is it sufficient to focus solely on 'change of agent' processes.**

3.41 In respect of gas, the RGMA project enjoys support from the industry and many existing and new players have committed resources to help carry out the necessary work. Ofgem views this project as essential for the effective development of competition. **Ofgem will therefore continue to play an active role within the project to facilitate discussion, where necessary resolve differences and assist the timely completion of the project.**

3.42 The development of agreed competitive market business processes and possible governance arrangements for these processes in gas is the subject of considerable debate at present. Although it is likely that the market will arrive at

a solution, **it is possible that Ofgem will need to take a more proactive role in seeking agreement on business processes and establishing a governance framework.** In developing such processes, Ofgem is keen to ensure that any outcome is as consistent as practicable with the principles underpinning Ofgem's Improving Customer Transfers project.

### **3. Transco's price control review**

#### *Issue*

- 3.43 The current Transco price control review includes the development of proposals for metering. There are a number of ways in which the current price control represents an opportunity to improve on the current regime. Ofgem's initial thoughts on Transco's price control regime after March 2002, including metering and meter reading, were published in February<sup>4</sup>.
- 3.44 In developing these proposals, Ofgem is taking particular interest in Transco's costs for prepayment metering. There is strong evidence over recent years of significant reductions in the cost of gas and electricity meters, with the exception of gas prepayment meters. As a result, the difference in costs between gas prepayment meters and electricity prepayment meters has grown significantly. Gas prepayment meters now cost over twice the amount of electricity prepayment meters.
- 3.45 All prepayment meters purchased by Transco are designed for use with the Quantum payment infrastructure system. The Quantum system is used by all gas suppliers with prepayment customers. Siemens holds the patent for meters that can interact with the Quantum system. All Quantum meters are therefore available from Siemens, or from companies operating under licence from Siemens.

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<sup>4</sup> Review of Transco's price control from 2002 - Initial thoughts consultation document, February 2000.

### *Ofgem's proposals*

- 3.46 **Ofgem is proposing to review the cost of gas prepayment metering, to seek to establish whether and how prepayment costs can be brought down.** In the first instance, this work will form part of Transco's price control review process.
- 3.47 One option, which could potentially be addressed through the price control review process, is to improve Transco's incentives as a buyer of prepayment meters. This could be achieved by applying a separate tariff cap to Transco's prepayment meter service. This possibility was highlighted in Ofgem's 'Initial Thoughts' document published in February.
- 3.48 Ofgem is also considering alternative options in discussion with Transco. In the light of this dialogue with Transco, and in the light of feedback from Ofgem's February 'Initial Thoughts' price control document, initial proposals for Transco's price control will be published in June.
- 3.49 However, the price of gas prepayment meters reflects both Transco's behaviour as a buyer and Siemens' behaviour as a supplier of Quantum meters. Siemens, due to its ownership of the intellectual property rights over meters that can interact with the Quantum system, has considerable market power. It may also therefore be appropriate, as part of Ofgem's review of gas prepayment metering costs, to consider Siemens' position in the market and its conduct.
- 3.50 **Ofgem would welcome views on its proposed approach to addressing concerns about the cost of gas prepayment meters.**

### **4. Contractual flexibility**

#### *Issue*

- 3.51 Ofgem's strategy is based on the premise that suppliers and customers will benefit if they can take a more proactive approach to procuring metering services.
- 3.52 Suppliers, for example, may wish to compete for new customers by offering a time-of-day tariff that requires a particular type of meter. The supplier may wish to provide this type of meter to the customer on commercial terms, as part of the

supply contract. Alternatively, existing service providers (i.e. PGTs and PESs and independent meter companies) may wish to market new services directly to suppliers, or even customers. In Ofgem's view, such developments have significant potential to extend competition in energy supply markets, and increase value to customers.

- 3.53 However, there are a number of licence conditions that militate against such developments by restricting the contractual flexibility available to suppliers, and by limiting the returns available to existing service providers from the development of new services.
- 3.54 For example, a supplier may be unwilling to provide a customer with a new type of meter without the assurance of a termination payment if the customer switches supplier. However, presently a supplier could not require such a payment without also changing the customer's contract from an 'evergreen' basis to a fixed-term basis.
- 3.55 The form of regulation applied to Transco as a provider of metering services may also limit the development of new services. Transco's price control revenues are based on an efficient level of costs associated with providing all of its metering services. Transco therefore has an incentive to reduce its metering costs. Arguably, this has deterred service innovation, e.g. based on advanced metering technology, since such innovation would not generally result in providing existing services at lower cost.
- 3.56 However, new metering services have not been introduced by PESs either – where revenue from such services would be excluded from the price control. This suggests that, while the form and scope of Transco's price control may be a contributing factor, there are other reasons for the lack of new services being introduced.

### *Ofgem's proposals*

#### *Suppliers*

- 3.57 Presently the provision of metering services by a supplier is linked directly with the provision of energy supply. **Ofgem is proposing** to consult on a means of de-linking these two components, **to enable suppliers to contract more flexibly**

**with customers where they are also providing the customer with a new type of meter.**

- 3.58 While the current arrangements already provide for some contractual flexibility, e.g. through the use of fixed term contracts, Ofgem believes that this contractual flexibility could be usefully extended.
- 3.59 For example, if a supplier provides 'other goods and services' (e.g. energy efficiency goods, such as loft insulation or energy efficient light-bulbs) together with a customer's supply of electricity or gas, then the customer's termination rights apply only to the energy supply aspects of the contract. However, 'other goods and services' presently do not include metering equipment.
- 3.60 Commercial flexibility could be extended, while retaining existing protection for customers in terms of supply contract terms, by modifying the licences to include metering equipment within the definition of 'other goods and services'.
- 3.61 In changing the definition of 'other goods and services' it may be desirable to make a distinction between standard metering equipment and 'advanced' metering equipment. For example, 'other goods and services' could be defined to exclude 'standard' metering equipment.
- 3.62 **Ofgem would welcome views on the proposed approach to increasing the commercial flexibility available to suppliers in offering customers metering equipment.**
- 3.63 In the light of responses to this document, Ofgem intends to come forward with proposals for consultation in Q3.

*Existing service providers*

- 3.64 In terms of promoting innovation in gas metering services Ofgem highlighted the possibility of excluding 'advanced' metering services from Transco's price control through its recent Initial Thoughts document.
- 3.65 In the light of respondents' comments to that document, this option may be incorporated into Ofgem's initial proposals to be published in June.

## 5. Extending choice to customers

### *Issue*

- 3.66 In seeking to encourage choice in metering services, Ofgem has also considered ways of enabling customers to make their own metering arrangements. This may be particularly relevant to non-domestic customers. Some customers in the half-hourly market in electricity already make such arrangements. In effect, they have separate contracts for energy supply and metering.
- 3.67 In order to facilitate such developments it may be necessary formally to require dominant incumbent suppliers to separately identify metering costs on a customer's bill, and provide for cost savings against the published tariff if customers choose to make their own metering arrangements.

### *Ofgem's proposals*

- 3.68 Ofgem is therefore proposing **to consult on a requirement for BGT (gas) and PES supply businesses within their authorised areas (electricity) to identify separately metering costs on customers' bills, and where requested, offer a 'no meter' tariff.**
- 3.69 It is important that customers have ready access to relevant information about what metering services are being provided if such a proposal is to work effectively. In developing these proposals, Ofgem will consider the degree to which licence modifications are required to ensure that such information is accessible to customers.
- 3.70 **Ofgem would welcome views on:**
- ◆ **the proposal to require dominant incumbent suppliers to identify metering separately on customers' bills, and offer a 'no meter' tariff where requested; and**
  - ◆ **the degree to which additional action is required to ensure that relevant information is available to customers to inform choices about metering arrangements.**

- 3.71 In the light of responses to Ofgem's metering strategy, Ofgem intends to consult further on these issues in Q3.
- 3.72 Given the far-reaching nature of such changes, (and the wide range of issues associated with large-scale customer ownership of meters) it is likely that these proposals will require significant further consultation.

## **6. Standardisation of 'advanced metering'**

### *Issue*

- 3.73 One of the potential problems with introducing new metering services based on advanced meter technology is the transferability of the meter (and associated services) if a customer switches supplier. Where separate contracts exist for metering and energy supply, the meter can easily be transferred. The customer simply takes his metering contract with him to his new supplier.
- 3.74 However, irrespective of whether metering services are provided together with energy supply or separately, there is a danger that an incoming supplier will not be able to support the metering arrangements of the customer, even if the outgoing supplier were to make such metering arrangements available to the incoming supplier. Such a situation could affect supply competition, and could inconvenience the customer, e.g. a customer may need to change meter if they wish to change supplier.
- 3.75 This risk could be reduced if there was a degree of standardisation in the types of advanced meters being used, and the form and type of information being produced by such meters, over and above the basic requirement for all meters to visually display units consumed.
- 3.76 For example, if an advanced meter generates data on meter reads in a form that cannot be used by an incoming supplier, then the supplier may not be able to take that customer on. Alternatively, if the meter itself is technically complex or non-standard, then the incoming supplier (or his appointed meter operator) may not be able to support it operationally.
- 3.77 While there are a number of possible benefits to standards for advanced metering, there are also risks. Standards may limit the scope for innovation in

the longer term by excluding meter types that do not conform to the standard. Agreements to establish standards also have the potential to be anti-competitive. In addition, standards may be difficult to establish in practice, given that there are already a number of different competing technologies.

#### *Ofgem's proposals*

- 3.78 There is a balance to be struck between seeking to ensure that unnecessary differences between meter types (and the data they generate) are avoided, while maintaining incentives on suppliers and metering services companies to develop new services as a means of securing competitive advantage.
- 3.79 As a first step, **Ofgem is proposing to establish an industry discussion group to review the possible dimensions for standardising meter types and formats for transferring data.** Dependent on the findings of this group, which would need to consider the technical, operational and legal practicalities of such standards, Ofgem may wish to develop proposals for consultation.
- 3.80 This group, the Metering Innovation Working Party (MIWP), will be convened by Ofgem as soon as practicable after publication of Ofgem's metering strategy document. The group will produce a report in Q3, which may then result in further consultation.
- 3.81 **Ofgem would welcome views on:**
- ◆ **its proposal to create a Metering Innovation Working Party (MIWP);**  
**and**
  - ◆ **the terms of reference for any such MIWP.**

#### *Ofgem's view on alternative options*

- 3.82 Over the past twelve months, Ofgem has been in discussion and correspondence with a number of parties interested in promoting the use of new metering technologies through regulatory action. These options have been carefully assessed in developing the proposals presented in this document.
- 3.83 The alternative options raised included a proposal supported by two PESs and the NECC to formalise a monopoly for PESs and PGTs in respect of providing

'basic' meters, subject to the condition that all such meters were 'communications-ready'.

- 3.84 Under this model, metering competition would occur in respect of the modules that could be attached to the basic, communication-ready meters. For example, modules could be developed to change the basic meter into a prepayment meter, or to enable the meter to be read remotely. These modules could be switched without changing the meter itself.
- 3.85 Ofgem's reasons for rejecting this option are twofold. First, there is no statutory monopoly in metering. Indeed, in respect of electricity half-hourly metering there is not even a *de facto* monopoly. To seek to create such a statutory monopoly would therefore represent a dilution of the rights of shippers, suppliers and customers to choose. In practical terms, it would also deny customers potentially significant cost savings through competition providing these 'basic' metering services more efficiently.
- 3.86 Second, while the 'modular' model is one possible standard, it is not the only one. It may be the case that the deliberations of Ofgem's Metering Innovation Working Party (MIWP) establish that a standard should be developed around the notion of a communications-ready meter. However, in Ofgem's view it is appropriate that a formal, open process of discussion should precede such a decision. It would be entirely inappropriate for Ofgem unilaterally to prescribe a standard.

## **7. Accreditation by Elexon**

### *Issue*

- 3.87 Suppliers were required under the Pool & Settlement Agreement (P&SA) to use an accredited meter operator, data collector and data aggregator. This requirement was carried forward into the Balancing & Settlement Code (BSC).
- 3.88 A number of respondents to Ofgem's competitive market review highlighted the system of accreditation in electricity as a significant barrier to new entry. Another respondent stated that it made trials of new technology by new entrants virtually impossible. Only one new entrant in the non-half-hourly market

(Accuread) has gained accreditation as an electricity data collector since market opening.

- 3.89 However, while the IT requirements are complex, it has not been established that such complexity is unnecessary – given the underlying complexity of the settlement system.

#### *Ofgem's proposals*

- 3.90 Under the BSC, industry participants can propose modifications to the accreditation processes. One option is therefore to rely on this 'natural' change mechanism to address any concerns about the onerous nature of accreditation procedures.
- 3.91 However, there is a danger that such an approach may be insufficient. Potential new entrants may not have the power to propose modifications, and once a party has been accredited then arguably its incentives to propose changes are significantly reduced.
- 3.92 Given that there is a means of changing accreditation procedures through the BSC modification process, it is Ofgem's intention to give this process time to work before considering any further action. However, Ofgem will keep this issue under close review – and may consider appropriate action if the accreditation system remains unchanged, and complaints about its effect as a barrier to competition persist.
- 3.93 **Ofgem would welcome views on its proposed approach, and whether the BSC modification process is sufficient to deliver any required change to the accreditation requirements for electricity meter operators, data collectors and data aggregators.**

## **8. Gas Energy Measurement**

- 3.94 Meters measure the volume of gas consumed. This measured volume is affected by ambient temperature and pressure. Within the UK, an adjustment is made for these effects by applying fixed factors (reflecting 'average' temperatures and pressures) to the measured volumes of gas. The application of fixed factors

based on averages means that, to a small extent, some consumers are billed for less than they consume, while other consumers are over-billed.

3.95 However, the proposed EC Measuring Instruments Directive (MID) would allow the use of meters which adjust on site for temperature and pressure. As such, billing systems based on the application of fixed factors may need to be modified to recognise such meters.

3.96 In November 2000, Ofgem published a consultation document on energy measurement and the ramifications of the proposed EC Measuring Instruments Directive (MID). The document also highlighted the scope for using the opportunity presented by the MID to improve other aspects of energy billing.

#### *Ofgem's proposals*

3.97 As a principle, customers should be billed as accurately as possible, having regard to the additional cost of improving accuracy. The MID has the scope to improve the accuracy of energy billing by allowing the use of site-specific adjustment of measured volume for temperature and pressure.

3.98 In November's consultation document on energy measurement, Ofgem proposed to establish an industry group to examine the issues surrounding improving measurement accuracy within the context of the introduction of the proposed MID. This proposal was broadly supported by respondents to Ofgem's document.

3.99 **Ofgem will therefore establish and chair an industry group, the Measurement Accuracy Working Group (MAWG) to consider:**

- ◆ **the changes to billing systems required as a direct consequence of the proposed MID; and**
- ◆ **the scope for introducing complementary changes which, although are not directly related to the proposed MID, would further enhance measurement accuracy to the benefit of customers.**

3.100 The findings of the group will be published and made open for discussion at meetings of the Metering Competition Focus Group (MCFG). If you wish to be

involved in MAWG, please contact Ndidi Njoku (ndidi.njoku@ofgem.gov.uk,  
020 7901 7137) by 27 April 2001.

## 4. Conclusions

- 4.1 This document sets out Ofgem's strategy for metering, and proposes a programme of work to be implemented over the next two years.
- 4.2 The key theme underpinning the strategy is the promotion of choice. In Ofgem's view, greater choice over the provision of metering services will deliver significant value to customers – both in terms of how much they pay for existing services, and more importantly through the promotion of innovation and new technology.
- 4.3 Ofgem is proposing eight different strands of work to implement its metering strategy. Three of these strands represent more effective regulation of incumbent service providers. Namely:
- ◆ to investigate the cost basis for PESs' current prices for metering services, and publication of these findings together with a range of indicative charges;
  - ◆ to continue the work of the Review of Gas Metering Arrangements (RGMA) project; and
  - ◆ to develop proposals for the price regulation of Transco's metering and meter reading activities, as part of Transco's periodic review process – with particular regard to the cost of prepayment metering.
- 4.4 A further four strands of work relate to promoting market entry and new investment. Specifically:
- ◆ to increase the contractual flexibility of suppliers in providing metering services directly to customers, and of PGTs and PESs in offering metering services;
  - ◆ to make metering charges more visible to customers, and enable customers to avoid these charges by making their own arrangements;
  - ◆ to initiate an industry discussion on 'standards' for advanced metering; and

- ◆ to keep under review the current arrangements for 'accreditation' as an electricity meter operator, data collector or data aggregator, to ensure accreditation requirements do not act as a barrier to competition.
- 4.5 In addition, following consultation last year, Ofgem has decided to establish an industry workgroup to consider the extent to which, and the ways in which, gas energy measurement can be improved in the context of the proposed EC Measuring Instruments Directive (MID).
- 4.6 This work programme constitutes an important programme of reform that will deliver significant benefits for gas and electricity customers. The programme of work has been prioritised to focus Ofgem's resources on those areas where regulatory intervention can best promote the interests of customers.
- 4.7 Ofgem would welcome views on its proposed strategy, and the associated programme of work. In the light of respondents' views it is Ofgem's intention to take forward individual work streams for each of the strands set out in this document over the next two years.
- 4.8 It would be helpful if responses could be submitted to Ofgem by Friday, 25 May 2001. In addition, Ofgem is hosting an open seminar to discuss the strategy on Thursday, 26 April 2001.

## Appendix 1 Ofgem's competitive market review

- 1.1 In Autumn 2000, Ofgem carried out a review of competition in metering and meter reading services in gas and electricity. This appendix presents the key findings of the review.

### Rationale

- 1.2 The rationale for this review was twofold. First, to inform Ofgem's strategy for metering – and to assist in developing and prioritising the associated programme of work set out in this document. Second, to set a benchmark against which the development of competition could be assessed in the future.
- 1.3 The review was based on the finding of a survey which Ofgem published in September 2000. Copies were sent to a wide range of meter manufacturers, licensed companies and other stakeholders. In total, thirty organisations responded to Ofgem's survey.

### Survey structure

- 1.4 The survey document was structured in four sections, covering the buying and selling of:
- ◆ meters;
  - ◆ metering services;
  - ◆ half-hourly electricity metering and data services; and
  - ◆ meter reading and data services.
- 1.5 Within each section, there were quantitative questions about existing volumes of activity and contractual arrangements, and qualitative questions about perceived barriers to competition. The qualitative questions were designed to give interested parties the opportunity to highlight their own view of the key barriers to competition, and to share with Ofgem any ideas as to possible solutions.

- 1.6 These four sections are discussed in turn below. Each section includes a description of the characteristics of the markets, and a summary of the points made by respondents on the current state of competition.
- 1.7 A number of respondents expressed concerns about commercial confidentiality in respect of the information they provided and views they expressed. In this document none of the views expressed are attributed to individual respondents.

## ***Meters***

### **Description of markets**

- 1.8 Parties who provide metering services to shippers, suppliers and customers are not, generally, meter manufacturers. As such, metering services providers need to buy or lease meters from manufacturers in order to provide services.
- 1.9 PESs and PGTs are (excluding the electricity half-hourly metering services) *de facto* monopoly providers of metering services. PESs and PGTs buy, rather than lease, meters from meter manufacturers. In 1999/2000, no other party apart from PESs and PGTs bought or leased meters.
- 1.10 Contracts to supply PESs and PGTs with meters are generally let for two-three year periods following a process of competitive tendering. A number of different contracts with meter manufacturers are generally in place at any one time. For example, in 1999/00 Transco had contracts in place with eight meter manufacturers.
- 1.11 Over the past five years, PGTs in total bought an average of around 1.2 million gas meters a year from meter manufacturers. This represents average annual capital expenditure of £86m. Over the same period, PESs bought an average of around 900,000 electricity meters a year from meter manufacturers, worth approximately £31m a year.
- 1.12 The purchase prices of meters have fallen significantly for almost all types of meters over recent years. Prices in nominal terms for gas domestic credit meters, for example, have fallen by 46% over the past five years.

- 1.13 However, this downward trend in meter costs is not universal. Most notably, the purchase price of gas prepayment meters has remained virtually unchanged over the past five years. Electricity prepayment meters have fallen in price, on average, by around 22% over the same period.
- 1.14 Transco is the only buyer of gas prepayment meters. Gas prepayment meters are only manufactured by Siemens, or parties operating under licence from Siemens.

### **Views expressed by respondents**

- 1.15 Sixteen respondents commented on competition in the markets for gas and electricity meters. The views expressed have been grouped into the following six themes:
- ◆ general state of competition;
  - ◆ development of new products;
  - ◆ gas prepayment meters;
  - ◆ meter 'stamping' and approval;
  - ◆ the role of Ofgem; and
  - ◆ other issues.

#### *General state of competition*

- 1.16 There was a general view expressed by respondents that competition between meter manufacturers was relatively intense. A number of respondents cited downward pressure on prices in recent years, and the existence of volume pricing as indications of the presence of competitive pressures.
- 1.17 Some respondents also cited market entry by manufacturers from continental Europe as a positive stimulus to competition. One respondent ascribed significant reductions in electricity prepayment meters' prices to market entry. Another respondent cited over-capacity within the industry as a further reason for the competitive state of the market.

### *Development of new products*

- 1.18 A number of respondents however expressed concern about the focus of competitive pressures. Specifically, there was concern that meters had been 'commoditised' at the most basic technical level, and all competitive pressure was directed at driving the cost of this 'basic' meter further downwards – at the expense of the development of new meter types.
- 1.19 A number of respondents implied that demand for more sophisticated metering was being distorted by regulation. Specifically, it was claimed that the price controls under which Transco and PES distribution businesses operate create incentives to minimise meter purchase costs, and therefore artificially suppress demand for 'smarter' meters.

### *Gas prepayment metering*

- 1.20 A number of respondents also expressed concern about gas prepayment metering, and the *de facto* monopoly position of Quantum meters. Siemens Metering Services own the *de facto* monopoly payment and settlement infrastructure, and own the intellectual property rights for meters that can interact with this payment infrastructure.
- 1.21 Some respondents drew a comparison with electricity, where there are a number of competing suppliers of prepayment meters and a range of supporting payment systems. One respondent called on Ofgem to initiate a formal investigation into the market in gas prepayment metering.

### *Meter 'stamping' and approval*

- 1.22 A small number of respondents stated that the process for meters being approved for use in Great Britain was restrictive, and that it could act to hinder the use of imported meters. One respondent suggested that Ofgem should relax the rules under which it grants approval to new meter types.
- 1.23 Another respondent suggested that the process of self-certification should be reviewed to ensure that foreign market entry was not being restricted.

### *The role of Ofgem*

- 1.24 A number of respondents highlighted regulatory uncertainty as a barrier to competition, and called upon Ofgem to provide greater clarity on the scope and timing of developments to open up metering and data services markets.
- 1.25 One respondent called upon Ofgem to take direct action to encourage the rollout of advanced metering technologies. One respondent stated that investment in advanced metering should be funded through allowances in distribution price controls.

### *Other issues*

- 1.26 Three respondents highlighted the role of consolidation, and in particular vertical integration of manufacturers and metering services providers, as a potential barrier to competition. Two of these responses were in the context of PES metering business sales.
- 1.27 Another respondent noted that the design of meter installation equipment, e.g. semi-concealed meter boxes, could limit access to the market for competing meter types.
- 1.28 One respondent cited the potential role of distribution network assets as a communications medium, and the need to ensure that distribution companies were suitably incentivised to allow access to this medium on a non-discriminatory basis.

### ***Metering services***

- 1.29 This section covers competition in gas metering services and electricity non-half-hourly metering services.

#### **Description of markets**

- 1.30 PGTs are *de facto* monopoly providers of gas metering services. Similarly, PESs are *de facto* monopoly providers of non-half-hourly electricity metering services. While PESs and PGTs charge separately for these services, and therefore shippers and suppliers can avoid these charges by making alternative arrangements, this choice has only been exercised in a handful of cases to date.

- 1.31 Therefore, gas shippers buy metering services on behalf of all gas suppliers and customers. In electricity, PESs sell metering services to all second-tier suppliers – and provide metering services to their own supply businesses. Following PES business separation, ex-PES distribution business will provide metering services to all suppliers, including the ex-PES supply businesses, on contractual terms.
- 1.32 Transco provides and maintains approximately 21 million meters. In addition, Transco performs a number of one-off meter work jobs such as meter exchanges and new meter installations. In 1999/00, Transco performed around 900,000 meter exchanges. There are also around 150,000 sites on independent PGT networks. Independent PGTs accounted for around one-third of new gas connections in 1999/00.
- 1.33 Based on Transco's current disaggregated charges, shippers pay Transco around £415m a year for the provision of metering services. This can be disaggregated into £180m for annualised provision charges, £210m for annualised installation and maintenance charges, and around £25m for one-off transactional charges. In addition, Transco charges £352 a year for the provision, installation and maintenance of remote meter reading equipment at Daily Metered (DM) supply points.
- 1.34 PESs provide and maintain approximately 26 million non-half-hourly electricity meters. In addition, PESs perform a number of one-off meter work jobs such as meter exchanges and new installations. In 1999/00 PESs performed a total of around 2.5 million meter exchanges.
- 1.35 Second-tier suppliers pay PESs around £100m for the provision of non-half-hourly metering services. In addition, on the basis of PESs published charges, there is a notional payment of around £170m from PES supply businesses to PES distribution businesses for non-half hourly metering services provided.

## Views expressed by respondents

1.36 Sixteen respondents commented on competition in the markets for gas and electricity metering services. The views expressed have been grouped into the following eight themes:

- ◆ market structure;
- ◆ industry processes;
- ◆ data quality and data management;
- ◆ prices;
- ◆ definition of services;
- ◆ 'asset stranding' and innovation;
- ◆ other factors constraining innovation; and
- ◆ incumbent operational practices.

1.37 These eight themes are discussed below.

### *Market structure*

1.38 A significant number of respondents commented on the highly concentrated market structure as a barrier to new entry. A number of respondents commented that customer density was a key factor in developing a viable metering business. Two respondents suggested that Ofgem should seek to break up Transco's metering business to facilitate large-scale market entry in meter provision.

1.39 One respondent commented that concentration in the supply market could also stifle competition. The respondent noted that suppliers without customer density may be unattractive propositions for new entrants in the metering services markets.

1.40 The absence of clear information on rights and responsibilities in a competitive metering market was also highlighted. It was noted that a lack of information could deter market entry and switching behaviour.

- 1.41 A number of respondents commented that potential competitors in the metering services markets were not visible to buyers. Some respondents noted that it could be difficult for new entrants to establish credibility without a proven track record.
- 1.42 Most respondents who commented saw the separation of PES distribution and supply businesses as a positive development for metering competition. However, one respondent stated that prepayment infrastructure service should sit with metering, and should not be part of the ex-PES supply business. It was also noted that the associated separation of metering and data services could restrict the development of new services.
- 1.43 One respondent was particularly concerned about the scope for customer ownership of meters, and suggested that this issue should be subject to detailed consultation and discussion within the industry and the Health & Safety Executive (HSE) before any large scale implementation.

#### *Industry processes*

- 1.44 The importance of systems and processes to support a competitive market was highlighted by a large number of respondents. For example, a process for the transfer of data to relevant parties when there was a change in meter ownership. The lack of standard processes in gas metering services, and the risk this generated for potential new entrants, was highlighted by a number of respondents.
- 1.45 However, opinion was split on the design of systems and processes. A number of respondents supported the development of systems for gas that mirrored the Data Transfer Network (DTN) in the electricity industry. Other respondents viewed the electricity model as complex and inflexible. Four respondents identified the time and complexity of accreditation, and the associated systems costs, as significant barriers to market entry in electricity.
- 1.46 A small number of respondents noted the potential value in developing systems and processes that were applicable across gas and electricity. One respondent noted that there could be significant benefits from a 'radical rethink' of ways in which metering data flows are managed.

### *Data quality and data management*

- 1.47 A number of respondents stated that meter asset information held by Transco and PESs was not sufficiently accurate to support competition in metering installation and maintenance.
- 1.48 A number of respondents also stated that all market participants should have access to meter asset data held by Transco or PESs. Two respondents suggested that meter data should be held and managed separately. One respondent suggested that a combined gas and electricity central database should be developed.
- 1.49 Two respondents stated that Transco and PESs should be obliged to release information on the age of metering stock and the profile of planned work, so as to enable suppliers to plan third party meter work more strategically.

### *Prices*

- 1.50 Ten respondents commented on the level and structure of Transco's metering charges. All but one of the respondents who commented stated that Transco's charges provided sufficient 'headroom' for competitors.
- 1.51 However, one respondent questioned whether Transco's charges would remain at the present levels. The perception was that prices reflected allowances under Transco's price control rather than market rates. Another respondent stated that Transco's meters were over-valued, which reduced the likelihood of potential new entrants purchasing Transco meters *in situ*.
- 1.52 One respondent stated the importance of ensuring that Transco's charges did not include any element of cross-subsidy, for example between credit and prepayment metering services.
- 1.53 Thirteen respondents commented on prices for metering services in electricity. A number of respondents commented that charges for metering services were unclear, and could not be easily compared across PESs. A number of respondents commented that prices did not provide sufficient headroom for new entry.

- 1.54 A small number of respondents commented in respect of electricity that there remained scope for cross subsidy between metering and distribution activities, and that this could deter market entry. Two respondents noted that the boundary between metering and the distribution system was unclear, and stated that there should be a clear division between contestable metering activities and monopoly distribution activities.
- 1.55 A small number of respondents commented that future uncertainty about how electricity metering charges would be regulated in the future represented a barrier to market entry. Two respondents noted that price controls could distort competition, with one of these respondents highlighting the protection for 'stranded assets' within the current distribution price controls as a case in point.

*Definition of services*

- 1.56 A significant number of respondents highlighted the importance of clear definitions, including precise definitions of what equipment and fittings are included within each service. Most respondents noted that existing definitions were insufficient, and that this lack of clarity was restricting the scope for competition to develop.
- 1.57 The majority of respondents who commented in respect of electricity metering stressed the importance of resolving the issue of the definitions of meter asset provision (MAP) and meter asset maintenance (MAM). A number of respondents called on Ofgem to take the lead in resolving this issue. However, two respondents called for the issue to be dropped, noting that Ofgem could rely on its powers under the Competition Act to address PESs who chose to 'bundle' metering activities in ways which unduly restricted competition.

*'Asset stranding' and innovation*

- 1.58 A significant number of respondents highlighted the issue of 'stranding'. This is the risk that investment by (or on behalf of) a supplier to provide and install a meter for a customer could be lost if the customer changed supplier and the new supplier did not want to take ownership of, or continue paying for, the existing meter. In this event, the installation costs – which could represent a significant share of the total investment – would be written off.

- 1.59 A number of respondents highlighted the risk of 'stranding' as the single most important barrier to competition in meter provision, and the reason why PGTs and PESs were the only purchasers of meters. Many respondents stated that risk of 'stranding' was too great relative to the potential return from investment in new meters.
- 1.60 A large number of respondents noted that 'stranding' was particularly problematic for the roll-out of new technology, where the value of the meter and therefore the risk of 'stranding' were greater.
- 1.61 In terms of solutions, a number of respondents stated that there needed to be greater contractual flexibility. The current arrangement whereby metering is, in effect, tied to the energy supply contract (and where customers have freedom to change supplier at short notice) significantly reduced the likelihood of new investment in meters either by incumbent service providers or new market entrants.

*Other factors constraining innovation*

- 1.62 A number of other factors were cited as constraining the implementation of advanced metering technology. One respondent commented that the current level of concentration, both in metering services and energy supply markets, militated against this.
- 1.63 It was argued that the only way into the market was by selling meters to companies with positions of market power, and that periodic retendering by such companies reduced the incentive on meter manufacturers to develop new services – since they may lose the contract at the next contract round.

*Incumbent operational practices*

- 1.64 A small number of respondents expressed concern about arrangements for out-of-hours support, given that it may not be economically viable for independent metering services providers to offer such a service. It was suggested that arrangements needed to be developed to ensure that metering competition did not lessen standards of service to customers in respect of out-of-hours support.

- 1.65 The need for contracts to be developed to facilitate third-party work was also highlighted by a number of respondents. One respondent noted that the complexity of such contracts, for example where a third party installs a Transco or PES meter, could restrict the development of competition.
- 1.66 Some respondents noted the potential for Transco and PESs to distort competition through the operational processes employed. For example, a small number of respondents highlighted the network of depots where Transco would make available meters for installation by a third party as being inconvenient. Another respondent noted that some meter work required prior approval by the PES, and in some instances the need to collect a key to access the meter.

### ***Half-hourly metering and data services***

#### **Description of markets**

- 1.67 It has been possible for suppliers in the half-hourly market in electricity to use alternative providers of metering and data services since 1994. There are approximately one hundred thousand half-hourly sites.
- 1.68 In terms of meter operation, there are a number of competing organisations providing services to suppliers and customers. These are dominated by PESs, operating within and outside their authorised areas. In-area PESs account for around three-quarters of half-hourly sites.
- 1.69 In terms of the charges faced by suppliers and customers, there is evidence that competition is delivering benefits. On average, non-PES organisations are cheaper than PESs operating outside their authorised areas, who are in turn cheaper than PESs operating within their authorised areas. This suggests that suppliers and customers can save money by switching meter operator.
- 1.70 On average, suppliers pay around £360 a year for meter operation services for each half-hourly meter point. However, within this average there is significant variation.
- 1.71 However, the situation in respect of data collection and aggregation is somewhat different. There are fewer market participants, and IMserv provide services to the bulk of the market.

1.72 On average, suppliers pay around £190 a year for data collection services for each half-hourly meter point, and £40 a year for data aggregation services. In addition, there is little variation in charges between service providers. Charges levied by parties other than IMServ bear an extremely close relationship to the charges levied by IMServ.

### **Views expressed by respondents**

1.73 Seventeen respondents commented on competition in the markets for electricity half-hourly metering and data services. The views expressed have been grouped into the following three themes:

- ◆ general state of competition;
- ◆ accreditation and system costs; and
- ◆ pricing.

1.74 These three themes are discussed below.

#### *General state of competition*

1.75 Most respondents who commented stated that competition between half-hourly meter operators was relatively strong. A number of respondents stated that the market was 'fully competitive'.

1.76 Another respondent commented that many individual large customers contracted separately for meter operation services. One respondent drew a distinction between contracts with customers (which were seen as highly competitive) and contracts with suppliers (which were seen as less competitive, with the 'in area' PES having a large presence).

1.77 Two respondents commented that competition could be improved by greater customer awareness. One respondent expressed concerns about the quality of meter data being transferred upon change of agent.

1.78 However, the generally positive position in terms of meter operation services was in stark contrast to respondents' views in respect of half-hourly data services. Many respondents noted that a single large national player dominated

the sector, and that there were significant barriers to new entry. One respondent commented that there was a 'virtual monopoly' in data services.

#### *Accreditation and system costs*

- 1.79 A large number of respondents cited the cost and complexity of accreditation, and the associated system costs, as the most significant barrier to competition. One respondent called for a fundamental review of the existing systems and accreditation processes.
- 1.80 One respondent stated that the significant one-off costs of gaining accreditation as a meter operator deterred market entry by smaller players. It was noted that this forestalled the introduction of new technology. The respondent suggested that a minimal accreditation scheme should be developed for trials of new meter types.
- 1.81 Another respondent noted that the size of the overall half-hourly sector was being restricted by a combination of competitive non-half-hourly tariffs and the cost of half-hourly systems.

#### *Pricing*

- 1.82 A small number of respondents cited falling prices in respect of meter operation services as an indication of the strength of competition. However, a few respondents commented that competition was focusing unduly on price, at the expense of quality of service. One respondent commented that there was a lucrative niche market within half-hourly metering and data services for a premier quality service provider.
- 1.83 A small number of respondents commented on pricing of half-hourly metering and data services as a barrier to competition. One respondent stated that there was a degree of cross-subsidy from PESs' 'in-area' customers, in order to fund competitive 'out-of-area' bids.
- 1.84 Another respondent stated that PESs' metering activities should be more carefully regulated, to ensure that there was there no cross subsidy from distribution activities. The respondent advocated separate price controls for PESs' distribution and metering activities.

## ***Metering reading and data services***

### **Description of markets**

- 1.85 Gas meter reading services are provided to shippers by Transco. Transco sub-contracts the physical meter reading work to meter reading agencies. In addition, these meter reading agencies also provide services directly to shippers and suppliers. Around half of gas shippers use parties other than Transco for all or part of their meter reading portfolios.
- 1.86 Gas shippers and suppliers pay Transco and meter reading agencies around £90m a year for the provision of meter reading services. Of this, approximately £30m is paid to Transco.
- 1.87 Electricity data services for non-half-hourly meter points are provided to electricity suppliers by accredited data collectors and data aggregators. These include all PESs, and Accuread. Prior to April 2000, PESs had a *de facto* monopoly in non-half-hourly data services within their authorised areas. Since market opening, Accuread has also gained accreditation as a data collector and aggregator.
- 1.88 During 1999/00, second tier suppliers paid PESs a total of around £43m for data services. Of this, £40m related to data collection, and £3m related to data aggregation services. In addition, on the basis of PESs' published charges, there is a notional payment of around £80m for data collection services and £8m for data aggregation services provided by PESs in-house.

### **Views expressed by respondents**

- 1.89 Seventeen respondents commented on competition in the markets for gas meter reading and electricity non-half-hourly data services. The views expressed have been grouped into the following three themes:
- ◆ general state of competition;
  - ◆ processes and data quality; and
  - ◆ pricing.

1.90 These three themes are discussed below.

*General state of competition*

1.91 The broad perception from respondents was that competition in meter reading and data services is relatively robust.

1.92 A number of shippers have moved their business away from Transco, and the process for doing so is perceived as relatively straightforward. While there has been a more limited amount of activity in electricity, the general view expressed was that this reflected the short time for which choice has been an option. It was generally held that the process for moving business away from the in-area PES, although not extensively tested, was robust.

1.93 Looking forward, most respondents who commented expected a small number of large service providers operating in both the gas and electricity markets. Some respondents commented that entry by electricity meter reading businesses had stimulated competition in gas meter reading.

1.94 However, in contrast some respondents saw the entry by PES metering businesses into the gas meter reading market as distorting competition.

1.95 A number of respondents commented on the market power of Accuread, as the only national player operating in both gas and electricity. There was a concern expressed that regional PES monopolies could be replaced by a national (and unregulated) monopoly. One respondent stressed the need for Ofgem to review this situation, and if necessary use its powers under the Competition Act.

1.96 One respondent commented that Transco and BGT should be required to tender their meter reading work on regional basis. One respondent stated that all PES supply businesses should be required to tender for data services provision. One respondent stated that data services should not be part of the supply business.

1.97 One respondent commented that competitive developments in data services were being stifled by the lack of investment in new metering technology. The respondent stated that there should be a requirement to install communication-ready meters.

### *Processes and Data Quality*

- 1.98 One respondent noted that the process of 'unbundling' business from Transco could be improved, although another respondent commented that this would be addressed through the ongoing work to separate Transco's meter reading systems from its core transportation systems. A small number of respondents commented that requirements for submission of meter reads under Network Code requirements were too restrictive.
- 1.99 The cost and complexity of accreditation and associated systems costs in electricity was cited by a number of respondents. In addition, it was also noted by a number of respondents that electricity systems were inflexible, having been designed with one service level in mind. This was perceived as unsuitable for a commercial context where a range of service standards tailored to the needs of individual customers may be desirable.

### *Pricing*

- 1.100 In gas, there was a general perception that Transco's prices provide sufficient headroom for new entry. Significant savings have already been made by shippers switching away from Transco.
- 1.101 However, in electricity, a number of respondents were concerned about the appropriateness of prices. Some respondents noted the wide range of prices across PESs, while a number of respondents commented on the limited headroom for competition at current published prices.
- 1.102 A number of respondents also commented on the transparency of PES metering charges. Some respondents stated that services could be more clearly defined to make the split between data retrieval, data processing and data aggregation more transparent.
- 1.103 A number of respondents also expressed concern about potential cross-subsidy between supply and data services. One respondent stated that data services charges should be separately price controlled.

***List of respondents to the competitive market review***

1.104 The following parties responded to Ofgem's 'Review of competition in metering and meter reading services' survey published in September 2000.

Accuread  
Aquila Energy  
British Energy  
British Gas Trading (Centrica)  
EBICo Ltd  
ElectraLink  
Gas Engineering Services  
Gas West  
Hyder  
Imserv  
London Electricity  
Mainsborne Communication  
Northern Electric Distribution  
Norweb  
npower  
Pilot Systems (London) Ltd  
Powergen  
Schlumberger  
Scottish and Southern  
Scottish Power  
secure electrans.com  
Seeboard - Distribution  
Seeboard - Supply  
Siemens  
Transco  
TXU Europe  
Utilicorp  
Utility Link  
Western Power Distribution  
Yorkshire Electricity