Theft of electricity and gas

Next Steps

January 2005

Summary

The theft of electricity and gas by dishonest customers can increase energy prices for honest customers as energy suppliers seek to recover the costs of stolen energy. Theft of gas and electricity also has safety risks.

The scale of theft of gas and electricity is difficult to asses. Measuring the extent of theft is problematic due to the tens of millions of premises that take energy and associated meters that could potentially be tampered with. Energy is also lost in transmission to customer premises so that understanding the extent of theft is not simply a matter of identifying the difference between the inputs and outputs from energy networks. Some estimates provided to Ofgem suggest that the value of gas and electricity stolen each year may be as much as £100m per year.

Ofgem initiated a review of the current arrangements in place to detect, investigate and prevent the theft of gas and electricity in April 2004. Ofgem published a consultation document setting out the current arrangements and inviting views on whether they were appropriate and how they could be improved. Ofgem asked gas and electricity suppliers and network providers for information to gain a better understanding of the scale of energy theft and the performance of companies in detecting, investigating and preventing it. Ofgem also held a seminar on energy theft in June 2004.

This document summarises the responses received to the April document and the data received from suppliers and network providers. The document also sets out Ofgem's current views on improvements to the existing arrangements and incentives on energy companies to detect, investigate and prevent theft and sets out the next steps to develop Ofgem's proposals.

In the April 2004 document Ofgem stated that if, after considering the responses received to the document changes to the current arrangements were appropriate then, it was important that the industry led in identifying and implementing changes. The industry should now consider the principles and conclusions set out in this document and develop proposals on how, and whether, changes are required to give them effect

Regulated monopolies known as GTs and DNOs are responsible for the pipes and wires that transmit/transport energy and suppliers compete to supply customers using these systems. Both groups of companies have a role to play in tackling theft. Customers may take an illegal supply of energy direct from the network and may not be registered with a supplier or may have a supplier but tamper with the meter. Given the industry bodies

involved and the differing ways in which energy theft may occur, it is Ofgem's view having carefully considered responses to the April document that:

- energy suppliers should be required by the regulatory framework to make reasonable endeavours to detect, investigate and prevent theft arising from meter interference and restoration of supply without consent where they are responsible for that metering point

- distribution network operators (DNOs) and gas transporters (GTs) should be obliged by the regulatory framework to make reasonable endeavours to detect, investigate and prevent theft in conveyance to a customer premise or where there is no supplier responsible under a contract, deemed or otherwise, with a supplier at that metering point

- a scheme should be implemented to improve the incentives on suppliers, DNOs and GTs to meet their obligations. The principles behind the Reasonable Endeavours Scheme appear to be sound basis for these arrangements. Under the Reasonable Endeavours Scheme gas suppliers and GTs are currently able to recover gas charges and other defined costs where they have undertaken reasonable endeavours to recover these from the customer but have failed to do so

- the required supplier, DNO and GT regulatory obligations referred to above should be supported by industry developed codes of practice, and

- DNOs and GTs should not be required, under the standard conditions of their licence conditions, to provide revenue protection services (RPS[1]) for use by suppliers on their networks.

Ofgem is encouraged by the commitment given by the Energy Retail Association (ERA) and Energy Networks Association (ENA) in setting up workgroups covering obligations, incentives and operational procedures in the gas and electricity markets to tackle theft. Ofgem is also encouraged by the ERA and ENA's commitment, through the workgroups, to provide recommendations on potential changes to Ofgem by June 2005. Once these

[1] The role of the RPS is typically to investigate suspected theft incidents, conduct remedial work, for example fitting a replacement meter or disconnecting the premises, identify the extent of any theft and collate evidence for a possible prosecution.

recommendations have been received, Ofgem intends to consult on them in Q3 2005 so that any changes can be implemented at the earliest opportunity.

Ofgem also intends to review the performance of network and supply companies under the revised arrangements to tackle energy theft twelve months after they are implemented.

Table of contents

1. Introduction....1

Discussion Document - April 2004....1

Theft Seminar – June 2004....2

Purpose of this document....3

Responses....3

2. Update on industry performance data and cost of theft....5

3. Principles....7

4. Theft obligations in the electricity market....14

5. Theft obligations in the gas market....25

6. Incentives in the gas and electricity markets....29

Incentives to prevent, detect and investigate theft....29

Incentive models....32

Ofgem's Views....33

7. Compliance....35

Compliance through commercial incentives....35

Regulatory enforcement vs. industry self-regulation....36

Ofgem's Views....37

8. Codes of practice....39

Respondents' Views....39

9. Way forward and work programme....44

Appendix 1 Data analysis....47

General comments....48

Appendix 1 A Electricity data....50

Appendix 1 B Gas Data....61

1. Introduction

1.1. Ofgem has committed to reviewing the arrangements in place to detect, investigate and prevent theft of gas and electricity. This work has been stimulated by concerns raised by energy suppliers and network operators that the current arrangements are not effective. There is particular concern that electricity suppliers do not have appropriate incentives to detect and prevent theft.

1.2. Over the last 10 years, there have been a number of changes to both the wholesale and retail arrangements in energy markets that have affected the incentives to detect, investigate and prevent theft. Ofgem considers that it is now sensible, given the concerns raised by the industry and the impact on customers of theft, to review these arrangements and incentives to determine whether they remain appropriate.

1.3. For the purposes of Ofgem's review, theft is used as a generic term to describe a supply of gas and electricity taken illegally through meter tampering, restoration of supply without consent and in the course of transportation/transmission to a customer's premises. This definition has been amended slightly from that proposed in the April 2004 Discussion Document.

1.4. This review does not consider the wider issue of customers' failure to pay for electricity or gas obtained legitimately and other reasons for unrecorded use of gas and electricity[2]. Ofgem will be considering, as a separate project, the appropriateness of the current methodology for measuring the volume of electricity distributed and Line Loss Factors[3] (LLFs) in 2005.

Discussion Document - April 2004

1.5. In April 2004, Ofgem published a document (the Discussion Document) to set out the current arrangements, the concerns raised by industry and other

[2] Gas and electricity may not be recorded as being taken from a network for several reasons. These include technical losses in transmission and transportation of the energy (an example of this is heat loss from electricity cables) and measurement inaccuracies, for example due to meter inaccuracies.
[3] A Line Loss Factor provides information on the assumed electrical losses in transmitting electricity across the distribution network to a supply point].

interested parties and to seek views on the issues raised. In particular, the Discussion Document:

- provided a summary of the existing obligations on industry participants and outlined the incentives on them to meet their obligations
- provided a summary of data available at the time relating to the performance of industry participants in meeting their theft obligations
- highlighted a number of areas where improvements to the current arrangements could potentially be made
- set out a draft work plan for reviewing the current arrangements for detecting, investigating and preventing the theft of gas and electricity, and
- proposed a set of draft principles to assess the current arrangements against and to assist in identifying improvements to the current arrangements.

1.6. The Discussion Document asked for views from respondents on the issues raised and committed to producing a further document that would provide a summary of responses and set out the identified next steps. In total, Ofgem received 19 responses to the Discussion Document[4].

Theft Seminar – June 2004

1.7. On 7 June, a seminar was held to review the issues raised in the Discussion Document. At the seminar Ofgem set out its initial thoughts and presentations were also made by Central Networks, National Grid Transco (NGT), British Gas Trading (BGT), energywatch, the United Kingdom Revenue Protection Association (UKRPA) and Siemens Metering Ltd. Copies of the presentation slides can be viewed in the Theft of Electricity and Gas section of the Ofgem web-site (www.ofgem.gov.uk).

[4] Responses to the Discussion Document can be viewed in the Theft of Electricity and Gas section of the Ofgem web-site (www.ofgem.gov.uk)

Purpose of this document

1.8. The purpose of this document is to:

- provide a summary of views received on the issues raised in the Discussion Document, in particular relating to incentives, obligations, supporting procedures and the Draft Principles
- present an update on the data received by Ofgem from suppliers and network operators on the scale of theft and the performance of the industry in detecting and preventing cases, and
- set out the identified next steps.

Responses

1.9. Comments are not explicitly requested on the issues raised in this document. Ofgem is however happy to receive any comments and it would be helpful if these were received by 28 February 2005. Responses should be sent to:

Andrew Wallace
Ofgem
9 Millbank
London
SW1P 3GE
Tel: 020 7901 7067
Fax: 020 7901 7130
Email: andrew.wallace@ofgem.gov.uk

1.10. If there are any questions regarding this document please contact either Andrew Wallace or Ian Anthony (email: ian.anthony@ofgem.gov.uk, tel: 020 7901 7441).

1.11. All responses will normally be published on the Ofgem website and held electronically in the Ofgem Research and Information Centre unless there are good reasons why they must remain confidential. Where possible, any

confidential material should be placed in appendices in responses. Ofgem prefers to receive responses in an electronic form so they can easily be placed on the Ofgem website.

2. Update on industry performance data and cost of theft

2.1. Ofgem has requested data from gas and electricity companies on two occasions (in December 2001 and April 2004) to gain a better understanding of the scale of energy theft and the performance of companies in detecting, investigating and preventing it. In both data requests, Ofgem is concerned that many companies, particularly suppliers, have not provided full and complete data on their theft related obligations. This includes information on the number of suspected and actual cases they have become aware of and what action was taken.

2.2. Ofgem had intended that the latest request for data would help to identify an estimate of the value of stolen gas and electricity for comparison with the estimates reported in the Discussion Document. However, the information provided has not been of sufficient quality to provide a more accurate estimate of the value of stolen gas and electricity.

2.3. Where theft has been identified, suppliers were asked to provide data on the volume of energy illegally taken. Analysis of the available data on these volumes suggests that electricity worth between £10.9m and £58.3m across the market at retail value[5] was identified as being illegally abstracted in 2003. The latter figure was reported by DNOs, the former by suppliers. In gas, the data indicates that gas worth[6] between £474k and £848k was identified as being stolen in 2003. The first figure was reported by suppliers and the second by GTs.

2.4. Very few estimates were provided on the total volume of theft (including theft not detected) that companies think occurred each year.

2.5. The number of cases of theft identified in the electricity market has fluctuated over the sample period but has remained roughly equal at approximately 0.5 cases per 1,000 customers.

---

[5] The retail value is calculated using a median unit price of 8.240p/kWh. This figure is based on a medium consumption bill (3,300kWh over one year) for a domestic electricity customer on the Standard Credit payment method in November 2004.

[6] The retail value is calculated using a median unit price of 1.917p/kWh. This figure is based on a medium consumption bill (19,050kWh over one year) for a domestic gas customer on the Standard Credit payment method in November 2004

2.6. In the gas market, the number of cases where theft has been identified has risen. This is largely based on data from one supplier that appears to have adopted a more active approach to investigating cases of theft over the period. It is not clear if this increase is representative of the whole market as very little data from other suppliers was available. However, it does indicate that more active efforts by suppliers may lead to a significant increase in the number of cases identified. Overall the figure is lower than that in electricity and was between 0.05 and 0.11 cases per 1,000 customers in 2003.

2.7. An analysis of all the data provided is set out in appendices 1, 1A (for electricity) and 1B (for gas).

3. Principles

3.1. In the Discussion Document, Ofgem proposed four guiding principles to assist in determining:

- whether the current arrangements are effective at delivering the required outcome, and
- the merits of any potential changes in meeting this desired outcome.

3.2. The original Draft Principles are set out in Figure 1 and the views of respondents on these principles are set out below.

Principle 1: Customers who are taking an illegal supply of gas or electricity face a high risk of being detected and prosecuted. These customers should also face effective sanctions where theft is detected.

Principle 2: Commercial incentives on suppliers, GTs and DNOs should actively encourage the detection and prevention of theft of gas and electricity. Where appropriate commercial incentives cannot be put in place there should be effective regulatory safeguards in place.

Principle 3: The arrangements should not require detailed monitoring as a matter of course or require regular Ofgem intervention to ensure compliance and their overall effectiveness.

Principle 4: The arrangements should be cost effective and should take into account the impact of theft on customers both in terms of cost and safety.

Figure 1: Draft Principles proposed in April 2004 Discussion Document

3.3. Ten respondents commented on Ofgem's draft principles. In general, respondents were supportive of the suggested principles. One respondent considered that they should be enshrined in revised and updated codes of practice.

Draft Principle 1

Respondents' Views

3.4. Some respondents suggested minor revisions to change the emphasis of Draft Principle 1.

3.5. One respondent considered that the wording should be changed to say that customers taking an illegal supply *should* face a high risk of being detected and prosecuted.

3.6. Another respondent suggested that Principle 1 should state that customers stealing should face a high risk of being detected and *potentially* prosecuted, reflecting that measures taken against customers should be proportional to the scale and nature of the theft.

3.7. It was the view of another respondent that, while this principle was a reasonable aspiration, it was not realistic or achievable under the current arrangements.

3.8. One respondent considered that the requirement set out in Draft Principle 1 seemed to be lower than was fit for purpose as there should be certainty of detection of theft.

Ofgem's Views

3.9. Ofgem accepts the arguments and suggested amendments to Draft Principle 1 summarised above in paragraph 3.5. This comment reflects the original intent of the drafting.

3.10. Ofgem considers that it is not necessary to include in Principle 1 that the customer may face a risk of being *potentially* prosecuted. It is clear that the customer may not be prosecuted in every instance but there should be a clear risk apparent to the customer that this may occur.

3.11. Ofgem notes the point summarised in paragraph 3.7 and considers that the purpose of the principles is to determine if the current or any revised, arrangements are fit for purpose.

3.12. With reference to the comment summarised in paragraph 3.8, Ofgem believes that consideration on the likelihood of detection of theft must include the cost of achieving the required level of detection and the impact of not achieving certainty of detection. Such considerations should therefore be subject to the issue of cost-effectiveness proposed in Draft Principle 4.

Draft Principle 2

Respondents' Views

3.13. Comments received in relation to this Draft Principle related to whether the current incentives and obligations are appropriate and, if not, what changes were required. Full consideration is given to obligations and incentives in Chapters 4, 5 and 6.

3.14. One respondent noted that, unlike other industries where cost effective prevention of theft is a sufficient incentive on parties, electricity suppliers have wider obligations, not only to their shareholders but to other industry parties affected by theft.

3.15. One respondent considered that Draft Principle 2 would be acceptable if Ofgem were to include reference to the respondent's patented proposal for measuring network losses.

Ofgem's Views

3.16. With consideration of the views received relating to obligations and incentives summarised in Chapters 4, 5 and 6, Ofgem maintains its view that clear obligations with commercial incentives where appropriate, supported by regulatory safeguards, are most likely to deliver an effective set of arrangements. Appropriate commercial incentives will encourage licensees to take proactive measures to detect, investigate and prevent theft. They may also encourage licensees to exceed, rather than meet, the minimum standards.

3.17. In relation to the issue raised in paragraph 3.15, Ofgem does not consider that it is appropriate for it to recommend specific technical solutions for tackling theft. Decisions on such solutions should be taken by market participants based on consideration of the benefits and costs.

3.18. Ofgem considers that it would be useful to add to this Principle the obligation to investigate. This is consistent with the approach set out in the rest of this document. Without incentives to investigate, a licensee may not take the appropriate action to rectify or understand the extent of the theft.

3.19. Ofgem further considers that a minor textual amendment should be made to remove the second reference to "in place" from the drafting of the last sentence.

Draft Principle 3

Respondents' Views

3.20. Comments received considered whether performance monitoring and compliance auditing would need to be conducted by Ofgem or whether the industry arrangements could be designed so as not to require such regulatory involvement as a matter of course.

Ofgem's Views

3.21. The Energy Act 2004 introduced a statutory duty for the Authority under which it is required to have regard to the principles of best regulatory practice in carrying out its functions. This requires the Authority to consider an approach to regulation that is transparent, accountable, proportionate, consistent, targeted only at cases in which action is needed, and any other principles which appear to the Authority to represent the best regulatory practice. Ofgem is committed to these principles. Under the principle of proportionality regulators should only intervene when necessary. Remedies should be appropriate to the risk posed, and costs identified and minimised.

3.22. Ofgem therefore maintains its view, following the comments summarised in Chapter 7, that effective arrangements should not require intervention by Ofgem, as a matter of course, to ensure their effectiveness. However, at this stage it is unclear what the exact monitoring requirements should be and it is possible that a regulatory requirement could exist if considered necessary. Ofgem therefore proposes to remove the reference to compliance monitoring from the wording of Draft Principle 3 but considers that this requires further discussion once the issues of obligations, incentives and supporting procedures have become clearer.

3.23. Chapter 7 gives consideration to how to secure compliance with any arrangements in place.

Draft Principle 4

Respondents' Views

3.24. Two respondents considered that some clarification was required to Draft Principle 4 to set out the meaning of cost effective. One respondent felt it should be made clear as for whom the arrangements should be cost effective. They asked whether the improvement in safety from effective arrangements should be subject to considerations about cost effectiveness.

3.25. Another respondent suggested for the electricity market that cost effectiveness should be measured in terms of the overall industry picture, reflected in non-technical losses.

3.26. Another respondent, who agreed with the wording of the Draft Principle, expressed the view that additional activity to detect and prevent theft would need to provide benefits to suppliers and customers in terms of cost recovery, to prevent costs being passed through to other customers. Arrangements concerning safety risks, they stated, should include consideration of not just the consumers involved in theft but their neighbours and surrounding community.

Ofgem's Views

3.27. Ofgem considers that the cost-effectiveness of the arrangements for the detection, investigation and prevention of theft should take into account the likelihood of theft, its impact and a licensee's ability to recover costs and charges.

3.28. Apart from the cost of theft to honest customers, safety is an important impact and the risk of damage to property and personal injury must be factored into the assessment of the cost of the arrangements to tackle theft.

3.29. Ofgem considers that deterrence, such as publicity campaigns that lead to increased perception of the likelihood of detection, may also be cost effective measures in reducing theft.

Additional Comments

Respondents' Views

3.30. One respondent suggested that there should be an additional Draft Principle to create a deterrent factor and suggested the wording "The arrangements should be such that they act as an effective deterrent to those customers that are considering theft of energy".

3.31. Other respondents also considered that a deterrent effect was important, although they did not suggest that an additional principle should be devised. One suggested that suppliers should have licence obligations or an incentive to increase the publicity of the dangers and penalties for theft, prosecute offenders or install security equipment or robust sealing on meters to deter theft. Another respondent agreed that more emphasis should be placed on deterrence, and considered that the current arrangements did not sufficiently encourage prosecutions to be sought, which would help deter potential offenders. Greater emphasis, they stated, should be placed on deterrent action and the industry needed to get to the point where there were incentives to encourage deterrence as well as detection. One supplier said that a co-ordinated approach was required between market participants to achieve more prosecutions with appropriate evidence being collected and stored.

3.32. One supplier, commenting generally on the Draft Principles, expressed the view that any solutions must be simple and easy to work with as little administration as possible and that GTs, DNOs and smaller suppliers should be actively involved in the debate and in the detection and prevention of theft.

Ofgem's Views

3.33. Ofgem agrees that the arrangements should provide a deterrent to potential offenders. Part of this deterrent effect would result from the arrangements meeting the requirements of Draft Principle 1 by resulting in a high risk of detection and having effective sanctions. Ofgem agrees that Principle 1 could helpfully be amended to provide a greater focus on deterrence but has slightly amended the proposed wording.

3.34. Ofgem considers that explicit obligations or incentives could be placed on participants to take certain defined actions to deter theft. This issue is discussed further in the following chapters.

Principles

3.35. Ofgem therefore proposes that the Principles to determine the effectiveness of the current arrangements and any proposed changes should be as set out in Figure 2. Underscore denotes additions and strikethrough denotes omission from the original drafting.

Principle 1 - Customers who are taking an illegal supply of gas or electricity should face a high risk of being detected and prosecuted. These customers should also face effective sanctions where theft is detected. The arrangements should create an effective deterrent to those customers considering stealing energy.

Principle 2 – Commercial incentives on suppliers, GTs and DNOs should actively encourage the detection, investigation and prevention of theft of gas and electricity. Where appropriate commercial incentives cannot be put in place, there should be effective regulatory safeguards ~~in place~~.

Principle 3 – The arrangements should not ~~require detailed monitoring as a matter of course or~~ require regular Ofgem intervention to ensure compliance and their overall effectiveness.

Principle 4 – The arrangements should be cost effective and should take into account the impact of theft on customers both in terms of cost and safety.

Figure 2: Revised Principles

4. Theft obligations in the electricity market

4.1. In the Discussion Document, Ofgem set out its views on the obligations to detect, investigate and prevent theft in the electricity market. Comments were requested on whether amendment was required.

4.2. A number of comments were made on the current arrangements and many respondents suggested some changes. Several views were received on the allocation of any obligation to prevent, investigate and detect theft, and whether it would be appropriate to modify the present allocation of obligations. Views were also expressed on the more specific issue of whether there should be obligations regarding the provision of revenue protection services.

4.3. A summary of views regarding obligations is set out below.

Obligations to detect, investigate and prevent theft

Respondents' Views

4.4. Many respondents expressed the view that there was currently a mismatch between the obligations and the incentives under the current arrangements. It was important, they considered, under any review of the arrangements to consider both the obligations and the incentives in order to ensure that they fit together.

4.5. As noted in the Discussion Document, suppliers have an obligation under their standard licence conditions to detect and prevent theft. In summary, many respondents believed that the current arrangements were correct, that this activity should continue to be supplier-driven and that the obligation on them should be retained. Some respondents considered that these obligations could be strengthened but retained within the present structure. Others believed that the obligation should be shared between suppliers and DNOs. One respondent considered that DNOs alone should have this responsibility.

i) Current arrangements

4.6. Several respondents considered that the current obligations on parties were sufficient and did not need to be revised. They asserted that it was the supplier,

through its obligation to inspect meters, its relationship with metering and data collection agents through the supplier hub principle, the relationship with customers and the responsibility for the metering system that should rightly have the licence obligation. In addition, it was argued that only the supplier was able to analyse consumption patterns to detect theft and initiate legal action against the customer as it is they who have suffered the direct loss. One DNO considered that it was not appropriate for DNOs to have an obligation to prevent and detect theft as some were increasingly moving away from metering activities and contact with end users.

4.7. One supplier considered that encouraging a more proactive focus on theft should not necessarily mean any increase in the regulatory obligations but that incentives should be considered. Consideration is given to incentives in Chapter 6.

4.8. energywatch, in their response, stated their view that the supplier has a clear duty to minimise the impact of theft on their customers. In addition, it is the supplier that has the relationship with, and is accountable to, the customer.

ii) Proposed changes

4.9. The majority of respondents considered that the current set of obligations on licensees may not be sufficient and that there was scope for revision. Some respondents advocated maintaining the same overall structure of obligations, such that the supplier retained the obligation to detect and prevent theft. However, they considered that some alterations should be made to strengthen or broaden responsibilities. One respondent believed that only DNOs should have the obligation to detect and prevent theft. Finally, four respondents considered that the obligations should be shared between suppliers and DNOs. These views are summarised below.

4.10. **Broadening and clarifying the current licence obligations** - Some respondents considered that the obligation to detect, investigate and prevent theft should remain with the supplier. However, they considered that suppliers and their agents should abide by standard service levels enshrined within a mandatory code of practice. They considered that the supply licence obligation should be strengthened to include compliance with this code and provisions governing the conduct of supplier agents. Codes of practice are discussed further in Chapter 8.

4.11. One respondent considered that, rather than a modification, a review of Standard Condition 16[7] of the supply licence was required to clarify its requirements.

4.12. One independent respondent believed that a greater emphasis should be placed on safety. They suggested that there should be a strong and policed obligation on meter readers to report signs of interference. They also suggested that Ofgem should request that DNOs set up long-term substation monitoring in areas of suspected theft in order to monitor its extent and the effectiveness of measures being taken to tackle theft.

4.13. **DNO Obligation** - One supplier considered in its response that the obligation to detect and prevent theft should sit with DNOs. They believed that, as DNOs have a regional base and an economic incentive to detect cases of theft, they should therefore have the obligation.

4.14. **Shared obligation** - Four respondents considered that both suppliers and DNOs should have an obligation to prevent, investigate and detect theft. Three of these believed that the responsibilities should be shared, with each party's obligations clearly distinguished in their licence conditions and with effective reporting to Ofgem.

4.15. One supplier believed that DNOs should have an obligation to detect and prevent theft at a network level. They said that DNOs should publish schemes under Schedule 6 of the Electricity Act to set out how they would recover the cost of electricity stolen from their networks. The fact that none so far has done so, the respondent suggested, may imply that it is cheaper for DNOs to do nothing than to pursue cases of theft from their networks. One DNO commented that DNOs were not able to publish such a scheme as they do not trade energy.

4.16. **Inspections** - A number of comments were received regarding the supplier obligation to inspect meters every two years where they have continuously been the supplier. Some respondents considered that the current obligation to inspect meters was not sufficient as customers who switch supplier at least every two years are not required to have their meter inspected. One respondent believed

[7] Standard Condition 16 of the supply licence sets out the procedures for the detection and prevention of

that, in addition to the present two year requirement, suppliers should be required to inspect meters on each change of supplier or occupier. energywatch suggested that the arrangements for meter inspection in the gas market be mirrored in electricity to require the regular inspection of all meters.

4.17. Other respondents believed that the obligation to inspect was not given sufficient consideration and expressed doubts about whether meter inspections were carried out by staff of sufficient competence to detect meter tampering. One respondent suggested that Ofgem ask suppliers to demonstrate how they have complied with their licence obligation in this respect. One respondent suggested that suppliers should pay incentives to their meter and data collection agents based on the number of potential leads received from them.

4.18. **Settlement** - Some respondents expressed views on obligations relating to the Settlement arrangements[8]. Three respondents considered that there should be a requirement for suppliers to enter revised consumption values into Settlement when theft had been detected and a consumption estimate produced. Other respondents considered that the incentives on DNOs to reduce the unbilled units on their networks could only be realised if estimates of stolen units are entered into settlement. They suggested that this should therefore be a mandatory requirement.

4.19. Two respondents recommended that the obligation should be to enter a revised consumption level rather than a meter reading which could affect the validation of subsequent readings. Another respondent noted that it is possible under the current arrangements for a supplier to recover the cost of stolen units from the customer but not pay for the energy if they do not enter the stolen units into Settlement. They believed that a simple and auditable process should be developed to resolve this anomaly.

4.20. **Deterrence** - A number of respondents commented on the subject of deterrence. One suggested that suppliers should have an obligation to take measures to deter possible offenders. This could include publicity of the dangers of tampering with

---

theft of electricity, damage and meter interference.

[8] Under the BSC arrangements, where theft is identified and the non half-hourly data collector has been informed by the RPS, then they are required to amend the consumption information for that meter point based on information provided by the RPS. This information is then passed into the settlement process via

equipment, the fitting of certain security equipment to meters and the successful prosecution of those identified as stealing. As set out above, comments were also received and an amendment has been made to the draft principles set out in the Discussion Document to require that the arrangements for theft should provide a deterrent for possible future offenders.

Ofgem's Views

4.21. It is Ofgem's view that both DNOs and suppliers should have obligations to prevent, investigate and detect theft of electricity. These obligations should apply to suppliers with regards to meter interference and restoration of supply without consent (where such supply is taken under a deemed contract). DNOs should have obligations with regard to theft in conveyance or in cases of restoration of supply without consent where there is no supplier registered to that meter point.

4.22. Where it is the supplier that has the contractual relationship with the customer, the energy is stolen from the supplier by the customer. As noted above, where theft results from meter interference and restoration of supply without consent (where there is still a supplier registered to that site), it is appropriate that detection, investigation and prevention should be a supplier driven activity. The supplier also has rights of entry in this circumstance. A licence obligation on suppliers to prevent and detect is currently in place and, where theft of energy results in a breach of the supply contract, the supplier may bring proceedings in relation to that breach. Ofgem will work with the ERA/ENA workgroups to determine whether an obligation to investigate theft, when a suspected incident is identified, needs to be more formally stated.

4.23. Where electricity is illegally abstracted from the network rather than from a metering system, or where there is no individual supplier responsible, the DNO should be obligated to prevent, detect and investigate. In these situations DNOs are the ones who are entitled under the Electricity Act 1989 to recover the value of the electricity illegally taken and any theft will still impact on the price paid for electricity by honest customers and public safety. Customers may only connect to the network with the permission of the DNO who is otherwise able to take restorative action. In addition, Ofgem considers that in such

circumstances, the DNO may be able to disconnect the customer, including where necessary as a result of health and safety issues .The licence does not currently contain explicit obligations on DNOs to detect, investigate and prevent electricity theft. Ofgem will work with the ERA/ENA workgroups to determine whether these obligations could usefully be added to the DNO licence or whether other legislation, such as the Electricity Safety, Quality and Continuity Regulations (ESQCR) 2002, are sufficient to meet these aims.

4.24. Ofgem considers that the codes of practice should set out how licensees will work together when the obligations to prevent, investigate and detect theft impact on both DNOs and suppliers.

4.25. Ofgem acknowledges the concerns raised by some respondents regarding the obligation to inspect meters. In particular, Ofgem notes that it is possible under the current arrangements for an electricity meter not to be inspected for more than two years if the customer changes supplier before an inspection is due and for suppliers to interpret differently the rigour of the inspection requirement. Ofgem will consider this subject as part of its forthcoming review of the gas and electricity supply licence conditions.

4.26. Ofgem considers that safety must not be compromised. This includes the safety not only of those who have taken, or are considering taking, an illegal supply but also those people in the immediate vicinity, those who come into contact with the premises through their work requirements (such as metering and data collection agents), and new occupants of premises where interference has taken place. Reducing the incidence of theft is likely to increase safety.

4.27. Ofgem notes that there are commercial disincentives on electricity suppliers entering revised consumption data into settlement. Ofgem considers that the settlements systems should be in receipt of sufficient data from suppliers to deliver an acceptable allocation of costs between suppliers. Ofgem recommends that the settlement requirements are reviewed by the ERA/ENA workgroups, to ensure that this is the case. Where changes to BSC[9] obligations are deemed

[9] The BSC contains the rules and governance arrangements for the electricity balancing and Settlement arrangements in England, Wales and Scotland.

necessary, BSC parties should raise modifications and pursue them through the normal BSC modification processes. This issue is discussed further in Chapter 6.

4.28. Ofgem considers that there may be scope for DNOs to put in place substation monitoring. Such monitoring could examine substation volumes with volumes taken at exist points connected via that substation to compare actual against projected losses. This may provide a potential indication of theft. Ofgem considers that the market arrangements should encourage DNOs to do so where this is a cost effective exercise. Ofgem also notes that there may be difficulties to be overcome for DNOs in co-ordinating such arrangements with suppliers and in interpreting the results of this comparison exercise in particular, getting customer specific consumptions on a comparable basis.

4.29. Ofgem considers that the creation of an effective deterrent is important in reducing the incidence of theft. As such, Ofgem has amended the Principles to place a greater emphasis on deterrence. Ofgem considers that there are two main aspects to the required obligation on suppliers, DNOs, and GTs to prevent theft. These are, halting the continuance of the theft once it has been discovered, and seeking to undertake reasonable measures to deter customers from undertaking theft in the first place. Ofgem will work with the ERA/ENA work groups to determine whether the existing provisions relating to deterrence are sufficient, or whether they require further clarification, in particular through an amendment to the standard conditions of licences.

Provision of RPS in the electricity market

4.30. In the Discussion Document, Ofgem invited comments on whether DNOs should be required to provide revenue protection services (RPS) for suppliers on their networks.

Respondents' Views

4.31. In summary, some respondents believed that DNOs should have an obligation to provide RPS while others considered that there should be no such obligation. Some respondents said that suppliers should be free to procure the service from their chosen provider. One respondent considered that the supplier should have an obligation to carry out RPS activities. There was no clear split of views between supplier and DNO responses.

i) No direct obligation

4.32. Many respondents considered that there should not be an obligation on any market participant to provide a RPS. Instead, they believed that clear and enforced obligations supported by correct incentives on the suppliers to detect, investigate and prevent theft would allow them to determine how best to carry out this activity.

4.33. Three DNOs expressed the view that DNOs have become distanced from customers through a reduced role in metering and data collection. In addition, it was noted by some respondents that the DNO does not have rights of entry to customer premises under the Electricity Act to carry out investigations without the permission of the supplier responsible for the meter[10]. Consequently, it was felt by some respondents that there should not be an obligation on DNOs to provide RPS.

4.34. One DNO suggested that the best place for RPS would be with metering businesses and it should therefore form part of the meter operator role. They believed that the only benefit that DNOs could bring to revenue protection arrangements was the ability to smear costs across suppliers to remove disincentive effects. However, they considered that this smearing could be done by other parties, including Elexon.

4.35. Some respondents asserted that suppliers should be free to procure their own arrangements. Of these, some felt that, while they should not be obliged to provide RPS, there were benefits to DNOs carrying out this activity as they had a local presence and an incentive to investigate suspected cases. One respondent considered that DNOs which declined to conduct revenue protection activities themselves would expose their income to the vigilance of suppliers and their agents in detecting theft.

[10] Ofgem notes under the Electricity Code, the DNO has the right of entry where there is damage to electrical plant. During continuance of connection or supply, DNOs may enter premises for the purpose of inspecting any electric line or plant provided by him (paragraph 7). Similarly for the purposes of replacing, repairing or altering lines or plant, the DNO may also enter premises

4.36. In circumstances where a DNO were to provide RPS, two respondents noted that it should be as the agent of the supplier in order to preserve the line of accountability and allow access to metering equipment.

4.37. One supplier considered that charges for RPS should be removed from DUoS charges. This would prevent suppliers paying twice for any RP activity should they procure a service elsewhere. Another respondent believed that, if suppliers did not use the DNO-provided RPS, this may impact on the viability of that service and that this also has implications for the Distribution Price Control.

4.38. Views were expressed that consideration would be needed about what activities a RPS should carry out. They noted that some RPS at present have a broader remit than investigating cases of theft, including investigating any incorrect recording by meters, and that a consistent minimum scope should be agreed upon.

4.39. One revenue protection company advised that revenue protection works best when managed end to end, rather than when it is passed between a number of market participants.

4.40. One supplier pointed out that they currently have RPS embedded in their supply business so that they visit premises and investigate cases themselves.

4.41. Some consideration was given by respondents to IDNOs. One supplier noted that IDNOs, like other DNOs, should be free to offer RPS on a competitive basis. However, one DNO believed that the incentive on IDNOs would be weaker as they will not have the same losses incentive as DNOs.

ii) Obligation on DNOs

4.42. Seven respondents believed that there should be an obligation on DNOs to provide RPS for suppliers on their networks. They believed that there were considerable benefits to having a single service in each geographical area, stressing the importance of local knowledge in RPS activity and a local presence to conduct follow-up visits.

4.43. One respondent said that DNOs are responsible for the safety of their networks and already have an incentive through the Distribution Price Control to carry out RPS activities to reduce losses. A further respondent suggested that having more

than one RPS provided on each network could lead to a fragmented and disjointed service. DNOs, it was argued, should therefore, with the correct incentives in place, be obliged to provide RPS on their networks.

4.44. One supplier expressed the view that IDNOs should be governed by the same obligations as other DNOs.

iii) Obligation on Suppliers

4.45. One independent respondent believed that there should not be a licence obligation on DNOs to provide a RPS but there should be an obligation on suppliers to procure one. They considered that RPS would be best provided by independent companies, such as a metering or debt recovery agent.

Ofgem's Views

4.46. Ofgem does not consider that there should a requirement for DNOs to provide RPS for use by suppliers. Similarly Ofgem does not consider it appropriate to mandate through licence obligations that suppliers use a DNO-provided RPS in its distribution services area. Licensees should be free to procure RPS in the manner that they choose to meet the requirements of their obligations and to meet the needs of their businesses. Such RPS should ideally meet the requirements of industry agreed codes of practice as discussed in Chapter 8.

4.47. Ofgem notes that some DNOs have increasingly moved their core business activities away from customer interface areas such as metering. As part of the current price control proposals it is Ofgem's aim to remove the DNO licence obligation to provide new metering services for use by suppliers in their distribution services areas from 1 April 2007[11]. After that date DNOs will be able to choose whether to provide new metering services. The link that may previously have existed between the DNO and the provision of an RPS service through its metering business may therefore be weakened in the future.

4.48. Ofgem notes that there may be advantages to the existence of a single RPS, or small number of them, in each geographic area. However, it is up to suppliers and DNOs to determine how best to manage their own obligations to detect,

[11] Electricity Distribution Price Control Review – Final Proposals, November 2004 (www.ofgem.gov.uk).

investigate and prevent theft. Ofgem suggests that codes of practice (discussed in Chapter 8) be designed to counter the potential negative impacts of having multiple RPS in one geographical area.

4.49. Ofgem considers that suppliers and DNOs will need to provide or procure RPS to meet their regulatory obligations. Such a set of arrangements would not preclude this service being offered to suppliers by DNOs where they felt there was merit in doing so.

4.50. Ofgem agrees with the respondent who noted that IDNOs are not price-controlled in the same way as existing DNOs but believes that they should similarly have obligations to prevent, investigate and detect theft and could also provide an RPS for use by suppliers on their networks if they considered this to be viable.

5. Theft obligations in the gas market

5.1. In the Discussion Document, Ofgem set out its views on the obligations to detect, investigate and prevent theft in the gas market.

5.2. A number of comments were made on the current arrangements and some changes suggested. Views were received on where any obligation to prevent, investigate and detect theft should sit, and whether there was a requirement to amend them from their current form. Views were also expressed on whether there should be obligations regarding the provision of RPS by GTs.

Obligation to prevent, investigate and detect theft

Respondents' Views

5.3. Of the comments received on obligations in the gas market, some considered that the current obligations were correct while others suggested a greater role for GTs.

5.4. One supplier suggested that, as they recommended in the electricity industry, the obligation to detect and prevent theft should lie with network operators.

Current Arrangements

5.5. One supplier and network operator believed that the current obligations were sufficient and did not need to be changed. Another respondent considered that the current obligations were correct and that where a customer stole gas from a supplier, the contractual relationship between the customer and supplier makes this the best interface to detect and prevent theft. Where gas has been stolen in conveyance, they believed that it was appropriate for the relevant GT to be responsible for investigating.

5.6. One supplier suggested that the current obligations need not be amended, but recommended that suppliers ensure that their contracts for metering and meter reading provided obligations on their agents to identify and report cases of theft.

5.7. One supplier considered that participants should be encouraged to be more proactive in detecting theft but that this should not be through increased regulatory obligations.

Proposed Amendments

5.8. One GT suggested that, following recent developments in the gas industry, it may be appropriate to review the involvement of the GT, with a view to placing the supplier at the centre of theft of gas management.

Ofgem's Views

5.9. Ofgem believes that, in cases where gas is stolen as a result of restoration of supply without consent (where a supplier is registered for that site) or meter interference, the obligation to detect, investigate and prevent theft should rest with the supplier. It is the supplier who has the contractual relationship with the customer. GTs should be responsible for detecting, investigating and preventing theft of gas in conveyance or through restoration of supply without consent where no supplier is responsible for the metering point.

5.10. A supplier is required under the standard conditions of its licence to investigate suspected cases of meter interference and restoration of supply without consent. These may be notified to them by the GT or the supplier may identify them separately. The supply licence does not contain explicit requirements to prevent theft although an obligation to detect is included through the 2 year inspection obligation. Ofgem will work with the ERA/ENA workgroups to consider whether the current regulatory obligations on suppliers are sufficient or require amendment to include formally such provisions.

5.11. A GT is required under the standard conditions of its licence to investigate suspected theft in conveyance and restoration of supply without consent where there is no supplier responsible for that supply. They are also required to make reasonable endeavours to recover the value of the gas illegally taken. The GT licence does not contain an explicit provision to detect and prevent theft of gas. Ofgem will similarly work with the ERA/ENA workgroups to identify whether an obligation to prevent and detect theft needs to be more formally stated.

5.12. Ofgem considers that the codes of practice should set out how licensees will work together when the obligations to prevent, investigate and detect theft impacts on both GTs and suppliers.

5.13. As noted above, Ofgem considers that safety must not be compromised. This includes the safety not only of those who have taken, or are considering taking, an illegal supply of gas but also those people in the immediate vicinity, those who come into contact with the premises through their work requirements (such as metering and data collection agents), and new occupants of premises where interference has taken place. Reducing the incidence of theft is likely to increase safety.

5.14. As noted in the previous chapter Ofgem, in conjunction with the ERA/ENA working groups, will consider whether there is a formal requirement to include provisions for deterrence of theft in the standard conditions of licences.

Provision of RPS in the gas market

5.15. A number of respondents considered whether there should be an obligation on GTs to provide RPS for use by suppliers. Three respondents considered that there should be such an obligation. As with views expressed relating to the electricity industry, respondents believed that there were advantages to network operators providing this service as they had a geographical presence and knowledge. One of these respondents said that, if RPS were provided by the GT, consideration should be given to the impact of the proposed sale of NGT's distribution networks, in particular whether RPS should be provided centrally or whether obligations should be placed on individual distribution networks.

5.16. One GT considered that it would be inappropriate for there to be a requirement on GTs to provide RPS as they were only responsible for theft in conveyance, unofficial connections and shipper-less sites.

5.17. As with the electricity market, the response from energywatch expressed the view that GTs should not be required to provide RPS as this would blur the lines of accountability for dealing with customers.

Ofgem's Views

5.18. It is Ofgem's view that suppliers and GTs should have in place arrangements to meet their licence obligations but that there should be no requirement for GTs to provide RPS for use by other parties on their networks. Suppliers and GTs should be free to procure appropriate services in order for them to meet their obligations. Such RPS should ideally meet the requirements of industry agreed codes of practice as discussed in Chapter 8.

5.19. As with the electricity industry, if there are advantages to network operators providing such a service or incentives for them to do so, this could be taken into consideration by GTs in deciding whether to offer to provide such services and by suppliers in the procurement of these services. Ofgem would expect that any concerns surrounding multiple providers of RPS operating in the same geographical area should be addressed through codes of practice.

6. Incentives in the gas and electricity markets

6.1. Comments were received from respondents on the incentives that currently exist in the gas and electricity markets for participants to detect, investigate and prevent cases of theft and what amendments, if any, were required.

6.2. In the electricity market it was widely considered that, as suggested in Ofgem's Discussion Document, the current arrangements did not provide suitable incentives and, in some cases, they could actually deter suppliers from taking active measures to detect, investigate and prevent theft. Many respondents considered that although there are incentives on DNOs through their price control, the obligations to detect and prevent theft rest with electricity suppliers.

6.3. In the gas market, the majority of the comments received related to the Reasonable Endeavours Scheme. Respondents believed that this scheme should be reviewed as it was thought to be complex and did not offer sufficient reimbursement for the costs incurred by suppliers.

6.4. Some respondents proposed changes to the arrangements in order to improve or realign incentives on participants in both markets.

6.5. This chapter sets out the views received, first on the electricity market, then gas, a summary of alternative incentives models proposed by respondents and Ofgem's views.

Incentives to prevent, detect and investigate theft

Electricity Respondents' Views

6.6. The majority of respondents considered that the current arrangements did not provide suitable incentives for participants to take active steps to detect, investigate and prevent theft. Many believed that there was currently a mismatch between obligations and incentives. Many expressed the view that obligations would only ensure that a minimum standard was achieved whereas a more proactive basis for work, such as that provided by effective incentives, is required in this area.

6.7. One revenue protection company believed that at present DNOs appeared to comply with their licence obligations but that it was very difficult to measure whether suppliers were complying with their requirements. They considered that effective incentives were needed as suppliers currently had little commercial interest in proactive action.

6.8. A number of respondents pointed to disincentives that they felt deterred suppliers from taking steps to detect, investigate and prevent theft. The cost of investigating cases compared to the perceived low likelihood of recovering money meant that suppliers were unlikely to be active as there was a strong risk that the supplier would worsen their financial position by doing so. One respondent noted that there was an incentive on suppliers as a group to reduce the level of theft, but that this would not be achieved without a consistent approach across the industry.

6.9. Some respondents considered that the smearing of the costs of un-metered consumption on all non-half-hourly suppliers through the Grid Supply Point Group Correction Factor (GSPGCF) provided a further disincentive. A reduction in the level of theft by one supplier, some respondents argued, can lead to reduced smeared costs attributable to their competitors and yet an increase in the number of units of energy for which that supplier is responsible.

6.10. One supplier suggested that, without this smearing effect, suppliers and DNOs would have an incentive to work together to identify cases of theft.

6.11. One respondent believed that including half-hourly (HH) customers in the smearing of costs of un-metered units would provide them with an incentive to look more proactively for cases of theft. A second respondent agreed and suggested that the assumption that HH meters are accurate and therefore did not contribute to the GSPGCF was not necessarily correct.

6.12. Responses from some DNOs expressed the view that the incentive on DNOs to reduce the level of theft could only be fully realised if the stolen units were entered into the Settlements process. They advocated that entering estimated stolen volumes into Settlement should be mandatory. However, another DNO believed that a commercial driver for DNOs to run effective revenue protection activities already exists and pointed out that they have run a viable RPS for the last few years under the current arrangements. The contrasting views of DNOs

on the question of incentives that was reported by Ofgem in the Discussion Document led one respondent to consider that the current incentives were too lenient or were misunderstood by participants.

6.13. Some respondents believed that a Reasonable Endeavours Scheme, with the same principle as that currently operating in the gas market, should be provided by DNOs. This, they considered, would help suppliers to reclaim the cost of an unsuccessful investigation and thereby remove one of the current disincentives.

6.14. One respondent believed that carrying out an investigation could increase the likelihood of a complaint being made to energywatch relating to any repayment of electricity and revenue protection charges. The potential effect on their complaint statistics may deter some suppliers from being proactive in this area.

6.15. energywatch, in their response, believed that incentives would not be necessary if there were clear and enforceable obligations. They were however supportive of work to remove disincentives on suppliers.

6.16. A number of respondents suggested further improvements to the current arrangements to help improve the available incentives. These are discussed later in this chapter.

Gas Respondents' Views

6.17. The majority of respondents considered that the Reasonable Endeavours Scheme could provide a useful mechanism for removing the cost disincentive on suppliers. However, many considered that the process was too complicated to operate and the criteria currently in effect made it bureaucratic and unlikely to be cost effective for suppliers. In particular, respondents suggested that it was not clear what suppliers were able to claim money for and what information would be required to substantiate a claim. Many respondents therefore considered that the scheme should be reviewed and clarified in order to increase its use by suppliers. One respondent believed that the level of evidence required to support a claim may not be proportionate to the benefits of that claim. They recommended that claims be generally accepted in good faith with audits to ensure the scheme was not abused.

6.18. As well as the complexity of the process, some respondents believed that the amount of money that could be recovered under the scheme did not reflect the actual costs incurred by carrying out an investigation. They recommended that this also should be reviewed.

6.19. NGT, in their response, pointed out that a review of the scheme was undertaken in 2003 but that the level of supplier engagement was low. They asserted their commitment to facilitate the scheme.

6.20. As well as reviewing the NGT scheme, some respondents stated that they would welcome similar schemes being operated by IGTs.

6.21. One respondent believed that there should also be an incentive placed on GTs to detect theft directly from the network or from shipper-less sites. They believed that such cases of theft are likely to be harder to detect, of greater volume and more dangerous than theft from premises and GTs should have an incentive to detect them above their current level of exposure due to shrinkage.

6.22. energywatch, as with electricity, in their response believed that incentives should not be necessary where there were clear and enforceable obligations on parties. However, they expressed support for work to remove disincentives on suppliers.

Incentive models

6.23. Some respondents set out ideas for new incentive models. These views were typically presented as potential options for further analysis and have been included here in an attempt to stimulate debate in the ERA/ENA workgroups.

6.24. Several respondents proposed a central fund into which suppliers would pay. Payments should be pro-rata based on the number of sites that a supplier had in their portfolio. Two respondents said that if an individual had identified theft of gas or electricity at a premise then, where they were unable to recover monies from the customer, they could apply to this fund for remuneration. One of these respondents suggested that payment into this fund should be mandatory, and could also be used to procure the services of the supplier's chosen RPS.

6.25. Two respondents who supported mandatory DNO provision of RPS agreed that this service should be paid on a pence per metering point basis with any additional services covered by transactional charges.

6.26. One respondent noted that transactional charges for RPS appeared to provide a disincentive on suppliers to take proactive action against theft. They said that all suppliers should be required to contribute to a managed service so that they would be incentivised to use a service that they had already paid for.

6.27. One respondent felt that the main deterrent to proactive behaviour by suppliers was the current settlement system. They suggested that when a theft had been identified, rather than entering estimated data into settlements and incurring liabilities of associated charges, this data should not be included and suppliers should be able to keep all monies recovered from customers that had been taken illegally.

Ofgem's Views

6.28. Ofgem believes that, as set out in the revised Principles, the removal of commercial disincentives and the inclusion of appropriate incentives would usefully encourage participants to be proactive in detecting, investigating and preventing cases of theft in both the gas and electricity markets.

6.29. Ofgem considers that in principle the gas market Reasonable Endeavours Scheme is a sound basis upon which to seek to remove disincentives on suppliers to identify and investigate cases of theft. This scheme reflects that theft is a cost for suppliers and GTs. It allows them to recover reasonable costs from unsuccessful efforts to recover charges from customers who have taken an illegal supply. Ofgem recommends that, in conjunction with the ERA/ENA workgroups' consideration of incentives, the Reasonable Endeavours Scheme be reviewed to ensure that it meets the requirements of the gas industry and consider whether a similar scheme could usefully be extended to the electricity market.

6.30. Ofgem believes that consideration should also be given to incentives which accrue to those whose efforts led to the detection and prevention of theft and that the value of the incentive should be relative to the benefits realised by customers and the industry.

6.31. Through the ERA/ENA workgroups, the industry has undertaken to consider how best to remove disincentives and provide relevant incentive mechanisms. Ofgem looks to these groups to provide recommendations and suggests that the alternative proposals for incentive mechanisms noted above be given consideration.

6.32. Ofgem notes the comment made by one respondent that licensees who take active measures to tackle theft may lead to more customers contacting energywatch and their fear that a company's complaint rate may subsequently rise. Ofgem looks to GTs, DNOs and suppliers to ensure that they carry out their theft-related responsibilities to an appropriate standard. It would be helpful if such standards were commonly identified and adhered to through the industry agreed codes of practice.

7. Compliance

7.1. Compliance with the arrangements is essential to ensure an appropriate outcome for customers. In the Discussion Document, Ofgem noted that compliance with the arrangements should principally be motivated through a suitable incentive mechanism and without requiring regular intervention by Ofgem, backed up by effective regulatory sanctions.

7.2. Thirteen respondents commented on Ofgem's proposed approach to compliance action. Some believed that Ofgem was correct and that arrangements for the detection, investigation and prevention of theft should not require regulatory action as a matter of course. They considered that effective incentives or mechanisms for self-regulation by the industry could ensure parties fulfil their obligations. Others however considered that ongoing monitoring and enforcement action by Ofgem were necessary.

Compliance through commercial incentives

Respondents' Views

7.3. Some respondents felt that regulatory safeguards and enforcement action from Ofgem should not be required at all as incentives alone should ensure an appropriate level of performance by suppliers. One respondent argued that detailed regulatory compliance monitoring would not secure proactive theft detection. They considered that enforcement action by Ofgem would attract negative publicity for the industry and send the wrong signals to those who steal. They considered that an increase in the regulatory regime would have the effect of taking up administrative resources which could otherwise have be targeted at detecting and investigating theft.

7.4. Other respondents considered that a combination of incentives and regulatory safeguards as described in Principle 2 was required to ensure compliance with obligations and proactive efforts to detect and prevent theft. One respondent held a view in line with this Principle that effective regulatory safeguards should be in place where it is not possible to have appropriate incentives on parties. They asserted that participants should comply with their obligations but that incentives could be considered as a supporting measure.

7.5. Another respondent expressed the view that compliance monitoring can only ensure that a minimum standard is reached, whereas an approach based on incentives was needed to tackle the issue of theft. The respondent said that Ofgem may wish to monitor compliance but, with effective incentives in place, this would be by exception.

Regulatory enforcement vs. industry self-regulation

Respondents' Views

7.6. Several respondents expressed concern over whether the lack of regular detailed monitoring by Ofgem proposed by Draft Principle 3 would lead to effective arrangements for the detection and prevention of theft. They were generally of the opinion that a level of compliance monitoring would be required by Ofgem. As noted in Chapter 3, Ofgem has amended Principle 3 to reflect the current concern over the monitoring requirements.

7.7. One respondent considered that, while monitoring of the arrangements by Ofgem should be minimised, there nevertheless needed to be some form of active assessment of the performance of licensees in order to have a consistent and effective deterrent.

7.8. A response from an unlicensed market participant agreed with Draft Principle 3 in theory, but doubted whether the industry is currently capable of being left to operate effectively without Ofgem involvement. They asserted that the market participants who took action to comply with their responsibilities would expect Ofgem to take action against those that did not.

7.9. One network operator stressed that compliance monitoring was essential and must be carried out by Ofgem. They expressed doubts about whether other industry participants could be expected to enforce compliance effectively and did not believe it was possible for Ofgem to step back entirely in this area.

7.10. Several respondents believed that the requirement for monitoring by Ofgem could be reduced if compliance arrangements were built into a mandatory industry agreement, for example a revised mandatory code of practice, which could monitor and enforce the performance levels of parties.

7.11. Another network operator expressed the view that a measure of the success of any new arrangements would be a reduced need for regulatory enforcement action. However, they stressed it would be essential to audit the compliance of participants with their obligations. This compliance auditing, they suggest, could potentially be carried out by the a 3rd party, such as the BSC Performance Assurance Board in the electricity market.

7.12. energywatch considered that regulatory action by Ofgem under the current arrangements would not be practical or effective. However, they believed that, under a robust set of arrangements governing suppliers' obligations, Ofgem should take compliance and enforcement action where parties are found not to be complying. This respondent stated that they would not support proposals for self-regulation by the industry.

7.13. Two respondents believed that until it can be demonstrated that parties are complying with their obligations, the case for Ofgem involvement remains compelling.

Ofgem's Views

7.14. As noted in Chapter 3 it is a principle of best regualatory practice that regulators should only intervene when necessary and that remedies should be appropriate to the risk posed, and costs identified and minimised. It is clear that Ofgem's intervention in the theft arrangements should therefore be minimised.

7.15. Ofgem agrees that an effective incentive mechanism is the most appropriate way to encourage compliance with licensees' obligations to detect, investigate and prevent theft. Ofgem considers that, at the very least, the apparent disincentives that currently exist on certain parties should be removed. Further, it is Ofgem's view that compliance arrangements purely based on Ofgem enforcement of regulatory obligations are likely to result in a lower level of proactive detection, investigation and prevention than can be achieved through effective incentives. Dependency on regulatory compliance action is likely to encourage licensees to meet, rather than exceed, the minimum acceptable standards.

7.16. It is however Ofgem's view that, given the potential safety and cost implications for customers, regulatory safeguards, in the form of clear and enforceable

obligations, will be required to underpin these arrangements. In addition, where it is not possible to introduce effective commercial incentives, regulatory safeguards will also be needed.

7.17. Ofgem notes the view expressed by one respondent that monitoring could be carried out within an industry governance structure set up to manage the new arrangements, perhaps under revised codes of practice. Such a governance structure could, as with other industry arrangements, include processes for monitoring activity and sanctions against those parties failing to comply with their obligations. Ofgem, in considering whether industry self-regulation can deliver an effective set of arrangements, will need to consider the robustness of any processes to deal with compliance that are built into industry agreements.

7.18. Ofgem concurs with the views of those respondents who considered that the arrangements should not need on-going and frequent monitoring by Ofgem to ensure compliance. However, it is Ofgem's intention to develop its thinking further on the exact monitoring requirement in conjunction with the work of the ERA/ENA workgroups. Where possible, Ofgem encourages these workgroups to seek effective means for self-regulation and compliance monitoring. At the present time it is Ofgem's belief that some monitoring by it will be necessary, especially in the initial stages following the conclusion of this review. It is therefore Ofgem's intention to conduct a review 12 months after the conclusion of this project and implementation of any resultant changes. Amongst other issues, it is intended that this review will consider whether industry governance of voluntary codes of practice (as discussed in the next chapter) is sufficient to achieve compliance or whether such codes should be mandated.

8. Codes of practice

8.1. To support the arrangements for addressing theft of energy, codes of practice were established in the gas and electricity markets.

8.2. In electricity, to facilitate the development of domestic competition, a Revenue Protection (RP) Code of Practice was established which set out the roles and responsibilities of DNOs (in particular in their provision of RPS[12]) and suppliers.

8.3. In the gas market a code of practice was established which summarised the supplier responsibilities for theft of gas, their interactions with the GT and provided a common framework for suppliers dealing with customers where suspected or actual theft had been identified. The Theft of Gas Code of Practice is voluntary and was developed under the auspices of the Gas Forum[13].

8.4. In the Discussion Document, Ofgem questioned whether there was merit in having such codes in place, whether they required amendment and, if they were thought necessary, whether compliance should be mandated.

8.5. This chapter summarises respondents' views and provides Ofgem's comments.

Respondents' Views

Requirement for codes

8.6. Respondents generally supported the need for codes in both the gas and electricity markets but felt that they required updating. Several commentators noted that both codes already provided value in the market but could be improved.

---

[12] DNOs initially provided RPS to suppliers in accordance with the RP Code of Practice. This code was mandated for use by DNOs and suppliers through the DNO's DUoS Agreement. From 2001, DNOs varied the terms of their DUoS Agreements so that they were no longer required to provide RPS however, where they did, this was still required to be done in accordance with the Code. Several DNOs no longer directly provide RPS and therefore the suppliers and RPS within that distribution services area have not been required to abide by the RP Code of Practice through the DUoS Agreement, although this requirement may alternatively be achieved through a separate contractual agreement.

[13] The Gas Forum was established in 1994 to represent the views of UK gas shippers and gas suppliers. The Gas Forum has established a number of work groups covering a wide range of issues and has in place codes of practice for both domestic and non-domestic suppliers.

8.7. One respondent believed that it would be beneficial to review the electricity code of practice to establish common and consistent arrangements across the industry. They believed that the code required amendment to reflect the full split of supply and distribution but this should only be done once it had been resolved where the obligations sat.

8.8. However, two respondents did not see value in updating the codes. One DNO suggested that, if suppliers continued to be responsible for detecting and preventing theft, they saw little value in an electricity code of practice. They felt that suppliers should be free either to undertake directly or to procure services in order to demonstrate that they effectively fulfil this obligation. A further respondent believed that obligations in the electricity code of practice were clear, that the code was sufficient overall and that it did not need to be amended at this time.

Code objectives

8.9. One respondent considered that, whilst there may be different levels of service, the codes should set out a minimum level of acceptable performance with incentives to take this to a higher level (where desired) built into any commercial agreement. One GT noted that the codes should be retained to set out the minimum requirement on parties to meet their licence requirements.

8.10. Further views expressed by one respondent said that it would be helpful if agreed, consistent and transparent processes were used and that consumers and their advisors were made aware of these at the appropriate time.

Harmonisation

8.11. Some respondents expressed support for harmonising the content of the gas and electricity codes where possible. One respondent noted that, by having a consistent approach for both fuels through codes of practice, suppliers would have the comfort of knowing that minimum standards of service had been provided.

Governance

8.12. Respondents were split on the governance requirements for both the gas and electricity codes of practice. Ten respondents felt that the codes should not be mandated by licence whilst five respondents thought that mandating was the most appropriate way forward.

8.13. Several of the respondents not in favour of mandating compliance with the code through the standard licence conditions felt that the MOCoPA[14] offered a viable alternative compliance structure. One respondent said that a review panel should be set up along the lines of the MOCoPA where all interested parties including Ofgem are represented. It was suggested that this review panel should meet at least four times a year. One respondent said that, rather than being a voluntary arrangement, the establishment and maintenance of an agreement similar to MOCoPA should be a requirement of the supply licence.

8.14. Alternative proposals for governance arrangements outside of the licence framework included: making supplier compliance a requirement of the DUoS Agreement (in the electricity market only), establishing a Supplier Forum, compliance monitoring by an external auditor, and including the code of practice as a schedule of SPAA in the gas market.

8.15. In general, those parties that favoured mandating the codes of practice through licence arrangements contended that this was the most effect way to achieve compliance with these arrangements. Respondents not in favour considered that this would allow more flexibility in change control and that, if the incentives were correct, then this should encourage compliance.

Code content and other issues

8.16. Some respondents provided views on the areas that should be included in codes of practice. These included:

[14] The MOCoPA is an agreement between DNOs and Meter Operators (MOPs) to regulate the relationship between them regarding safety, technical and business interface requirements surrounding the provision of meter operator services, and to ensure compliance with the Requirements by Meter Operators and Business Services.

- the skill base of employees, in particular whether they should achieve an NVQ in revenue protection
- the level of proof required to secure conviction and the level of proof required to disconnect
- arrangements for briefings to magistrates and raising public awareness
- arrangements for repeat inference
- determining whether interference was attributable to the current customer
- safety issues
- estimating the volume of stolen units and inclusion of this data in settlement, and
- details of the inspection requirement on meter readers.

8.17. In particular there was discussion by respondents on the successful prosecution of offenders as an important way of establishing a deterrent. Views were expressed that it would useful to have a nationally agreed process for dealing with offenders. Some respondents considered that there should be a combined effort across the industry to collect and retain data in order to assist prosecutions.

8.18. Views were received that there should be greater information sharing between market participants. One respondent suggested that this could be achieved through a national database of known offenders or problem areas.

8.19. energywatch believed that it was essential to pursue offenders through the courts but stressed that it is important that evidence is gathered in accordance with the Police and Criminal Evidence Act and with due regard to the rights of the individual. It was however noted in some responses that the Police and Crown Prosecution Service determine whether criminal cases should be pursued. Some respondents believed that these bodies can be reluctant to pursue cases of theft due to the low likelihood of prosecution. One DNO suggested that suppliers and Ofgem should lobby these bodies to prosecute theft more regularly.

8.20. Following the experience of parties in submitting data to Ofgem on their theft obligations, several respondents felt that there was value in the codes of practice defining agreed standards for reporting requirements.

Ofgem's Views

8.21. Ofgem considers that licensees, including suppliers, GTs and DNOs, who are obliged through their licence to undertake activity in relation to theft of gas or electricity, should have in place codes of practice. These codes should set out how the licensee intends to meet their regulatory obligations.

8.22. Ofgem considers that there are considerable merits in such codes being agreed across each industry sector and aligned between gas and electricity where possible. This will provide clarity in the expectations of customers and their representatives.

8.23. Ofgem considers that the codes of practice should be established with reference to, and incorporating, the Principles set out in Chapter 3.

8.24. Ofgem believes that it would be helpful for such codes to have in place a clear change control procedure and governance structure. At this stage it is not Ofgem's intention to propose a licence condition requiring the establishment, maintenance and compliance with a code although such codes are thought to be a practical requirement to meet licensees' obligations to prevent, investigate and detect theft. However, this will be kept under review and will depend in part upon the final split in governance between licence obligations and code of practice for the activities to support the delivery of the principles.

8.25. Ofgem considers that, amongst other things, the codes should consider customer interface issues, a common approach to the estimation of stolen units, arrangements for dealing with customers with multiple sites with different suppliers and change of supplier issues. Details concerning what measures should be taken to deter theft and whether a co-ordinated approach is required by the industry in sharing information or collecting evidence should also be considered for inclusion.

9. Way forward and work programme

9.1. In the April 2004 Discussion Document, Ofgem proposed that the next stage of the review would be either to consult on or recommend improvements, propose workgroups to take forward suggested amendments or conclude that no further work is required.

9.2. In this document Ofgem has reviewed the responses to the Discussion Document. In light of the views received, Ofgem considers that further work is required. Ofgem is grateful to respondents for providing valuable information to support this review but notes the considerable divergence in views expressed.

9.3. It is Ofgem's intention that this document should provide clarity and direction where possible on the developing requirements for an effective set of arrangements for the detection, investigation and prevention of theft of gas and electricity.

9.4. Ofgem is encouraged by the commitment from the ERA and ENA to run two workgroups to develop a recommendations paper on the issues of obligations, incentives and operational requirements. Ofgem expects that these groups will now consider the principles and conclusions set out in this document and develop proposals on how, and whether, changes are required to give them effect. Ofgem looks forward to receiving this recommendations paper in June 2005 and is committed to assisting these groups where possible.

9.5. In summary, Ofgem considers that:

- suppliers should be required to make reasonable endeavours to detect, investigate and prevent theft arising from meter interference and restoration of supply without consent where they are responsible for that metering point

- DNOs and GTs should be obliged to make reasonable endeavours to detect, investigate and prevent theft in conveyance to a customer premise or where there is no supplier responsible under a contract, deemed or otherwise with a supplier at that metering point

- a scheme should be implemented to improve the incentives on suppliers, DNOs and GTs from meeting their obligations. The principles behind the Reasonable Endeavours Scheme appear to be sound basis for these arrangements

- supplier, DNO and GT regulatory obligations should be supported by industry developed codes of practice, and

- DNOs and GTs should not be required, under the standard conditions of their licence conditions, to provide RPS for use by suppliers on their networks.

9.6. Ofgem also notes the merits of revenue protection officers and agencies having local knowledge but that, rather than making the provision of RPS by DNOs and GTs a condition of licence, suppliers should be free to secure their own arrangements for this service. To the extent that there are multiple providers of RPS in a given area, the procurers of this service should take measures, potentially through the codes of practice, to mitigate any perceived risks. Ofgem considers that the codes of practice should set out how licensees will work together when the obligations to prevent, investigate and detect theft impacts on more than one licensable activity.

9.7. Ofgem is committed to working with industry to develop cost effective and proportionate arrangements for the detection, prevention and investigation of theft of gas and electricity on behalf of the honest customer and in the interests of customer safety.

9.8. Following the receipt of the ERA/ENA workgroup recommendations paper it is Ofgem's intention to publish a document in Q3 2005 consulting on these proposals for implementation, if acceptable, at the earliest opportunity.

9.9. If the ERA/ENA workgroups are not able to provide a recommendations paper or if its conclusions are not in line with the Principles developed in this paper, Ofgem will consider making alternative proposals.

9.10. Twelve months after the conclusion of this project and the implementation of resultant changes it is Ofgem's intention to conduct a review of the

arrangements for the detection, investigation and prevention of theft of gas and electricity and the compliance of licensees with these arrangements.

Appendix 1 Data analysis

1.1 Ofgem has requested data on theft from the industry on two occasions.

Data Request 1

1.2 In December 2001, Ofgem requested data from all suppliers, DNOs and GTs relating to their performance in detecting and preventing theft. For electricity, data was requested for 1997 to 2001. Data received from DNOs, supplemented by further information, including figures for 2002 from some distributors, was analysed and published in the Discussion Document. Also published was the GT data with figures from 1995 to 2001. Data received from suppliers was incomplete or of poor quality and so was not included.

Data Request 2

1.3 In April 2004, Ofgem issued a second data request, seeking data from suppliers, GTs and DNOs on their performance in identifying and investigating cases of theft from 2000 to 2003. An overlap of the time periods for the two data requests was created to enable a comparison between the two sets of data and provide an indication as to whether a consistent interpretation had been used by recipients.

1.4 The data request asked market participants to provide information on the following broad areas:

Electricity	Gas
The number of suspected cases or leads reported to the supplier/DNO and information about their sources	The number of suspected cases or leads reported to the supplier/GT and information about their sources
The number of those cases investigated and reported as actual cases of theft	The number of those cases investigated and reported as actual cases of theft
The costs and benefits of procuring or providing RPS	The use of the Reasonable Endeavours Scheme and the amount of money paid to suppliers
An estimate of the volume of electricity illegally abstracted per year	An estimate of the volume of gas stolen each year
The success of suppliers in recovering money and prosecuting offenders where	The success of suppliers in recovering money and prosecuting offenders where

illegal abstraction has occurred	theft has occurred
The process and performance of suppliers in carrying out meter inspections in accordance with their licence requirement	The process and performance of suppliers in carrying out meter inspections in accordance with their licence requirement

1.5 In addition, recipients were asked to record the number of customers that they supplied, or that were connected on their networks, each year. A high-level summary of the data Ofgem received was presented at the June 2004 seminar. More detailed information, following further analysis, is set out below.

General comments

1.6 Overall, the quality of the information returned by recipients was poor and, in many cases, inconsistent. Some respondents were unable to provide any information in certain areas; others submitted figures that led Ofgem to believe that a consistent interpretation had not been applied between the two data requests. For some data items, the number of responses was very low, leading to a possible skewing of the figures. There was considerable variation in the information presented by different respondents which, as explained at the seminar, made it difficult to identify strong trends in order to determine the effectiveness of the current arrangements.

1.7 The completeness of data reported by suppliers in particular was exceptionally poor in many cases. Some large suppliers were not able to report any figures at all. Ofgem is very concerned that industry participants have not been able to demonstrate that they are collecting and monitoring data in respect of theft. Ofgem would expect that licences should be monitoring this data to allow them to manage their regulatory obligations. Ofgem recommends that defined reporting standards are established as part of the industry-agreed codes of practice discussed in Chapter 8.

1.8 Where data has been provided for 2000 in both data requests, data request 2 has been used in the analysis.

1.9 Analysis of the data is set out in Appendix 1A for electricity and Appendix 1B for gas. To assist with interpretation, the following terms are used in these sections:

- ***Suspected case*** – a lead identified to a supplier, GT or DNO that theft may have occurred at a premise or in conveyance.

- ***Actual case*** – a *suspected case* that has been investigated and identified as a genuine case of theft at a premise or in conveyance.

- ***Uplift / uplifted*** – a calculation used in Ofgem's analysis to compensate for the small amount of data provided in many instances to give an estimate of a national figure. Respondents were asked to provide the number of customers that they supplied or that were connected to their networks in each year of the sample. An *uplifted* figure is one that has been multiplied by a factor based on the proportion of the total number of customers that the available data related to.

- ***per 1,000 customers*** – another method used by Ofgem in the analysis of *suspected cases* and *actual cases* in order to compensate for the incomplete set of data received. As with the *uplift* calculation, only the number of customers reported by those that were able to provide data was used in order to calculate a figure *per 1,000 customers*.

- ***Identified volume*** – where an *actual case* has been identified, suppliers, DNOs and GTs are requested to produce an estimate of the amount of electricity or gas taken illegally through that *actual case*.

- ***Overall estimated volume*** – Ofgem also asked suppliers, DNOs and GTs to provide an estimate of the total amount of theft that they believe occurred each year from their networks or customer base. This includes the *identified volume* defined above, as well as an estimate of the amount of theft that had occurred but not been identified.

Appendix 1A Electricity data

1.A.1 In many cases, the data which was requested from DNOs and suppliers was the same in order to determine the level and consistency of reporting of cases between the market sectors. For the purpose of the analysis in this appendix, for DNOs the information from data request 2 was added and compared to that from data request 1. This has provided a data set from 1997 to 2003. For suppliers, a comparison with data request 1 was not possible due to the quality of responses and therefore data is only shown between 2000 and 2003.

Suspected cases

1.A.2 In both data requests, DNOs were asked to provide information on the number of *suspected cases* that had been notified to them by suppliers, the number that had been identified by them and the number that had been notified to them by other sources. Figure 3 sets out the total number of *suspected cases*.

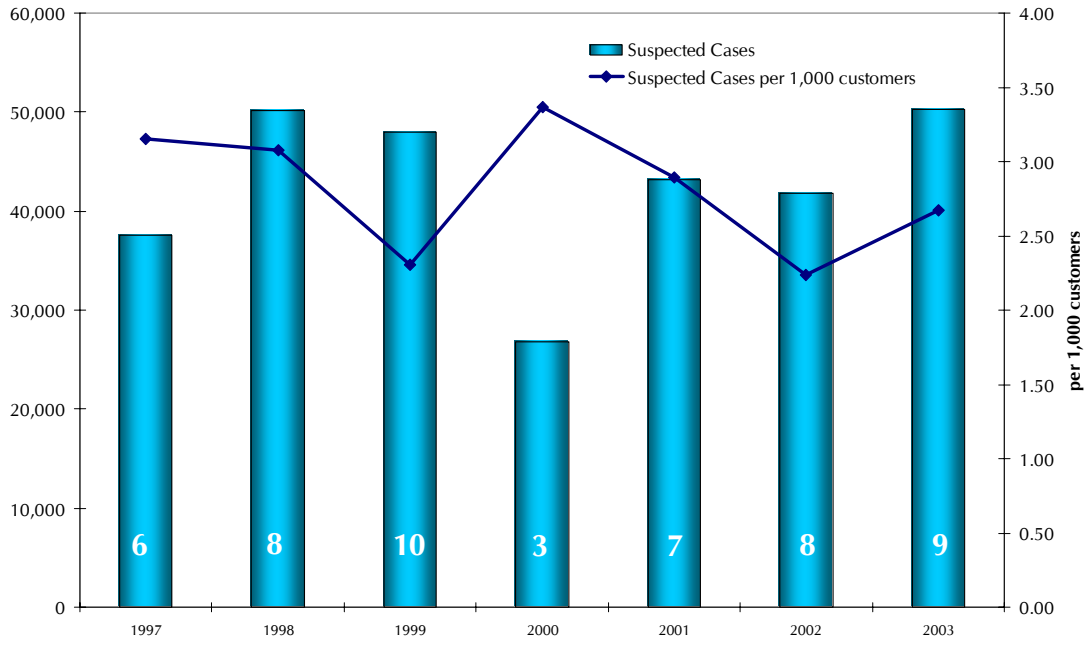

Figure 3 – Suspected Cases (*data source: DNOs*)

1.A.3 In this graph, the data is presented in two ways:

- the bars show the absolute number of *suspected cases* reported by DNOs, using the axis on the left. The numbers within the bars show the number of licensees who provided data in each of the years

- as the number of respondents varies significantly from year to year, the number of cases per 1,000 customers has been included, using the axis on the right. Where a respondent was unable to provide data in any particular year, their customer numbers were excluded from the calculation.

1.A.4 It should be remembered that the number of cases *per 1,000 customers* can be skewed where the number of respondents that provided data was low, especially as, in many cases, the few who did provide figures were the more proactive parties who reported higher numbers.

1.A.5 It may be possible to conclude from this data that there has been a general fluctuation in the number of *suspected cases* reported to, or identified by, DNOs between the ranges of 2.3 and 3.5 cases per 1,000 customers. There does not appear to be a constant trend upward or downwards over the reporting period. The incompleteness of the reporting makes conclusions problematic. The high figure *per 1,000 customers* in 2000, for example, may have been skewed by the very small data sample, with figures perhaps reported by the more proactive DNOs.

1.A.6 To further understand this area, Ofgem analysed the figures reported by suppliers. All suppliers were asked to provide the number of cases which they identified or which were reported to them by DNOs or RPS. The data received in shown in Figure 4 and is presented in the same format as Figure 3.

1.A.7 This shows a lower number of *suspected cases per 1,000 customers*, but an overall rise since 2000.

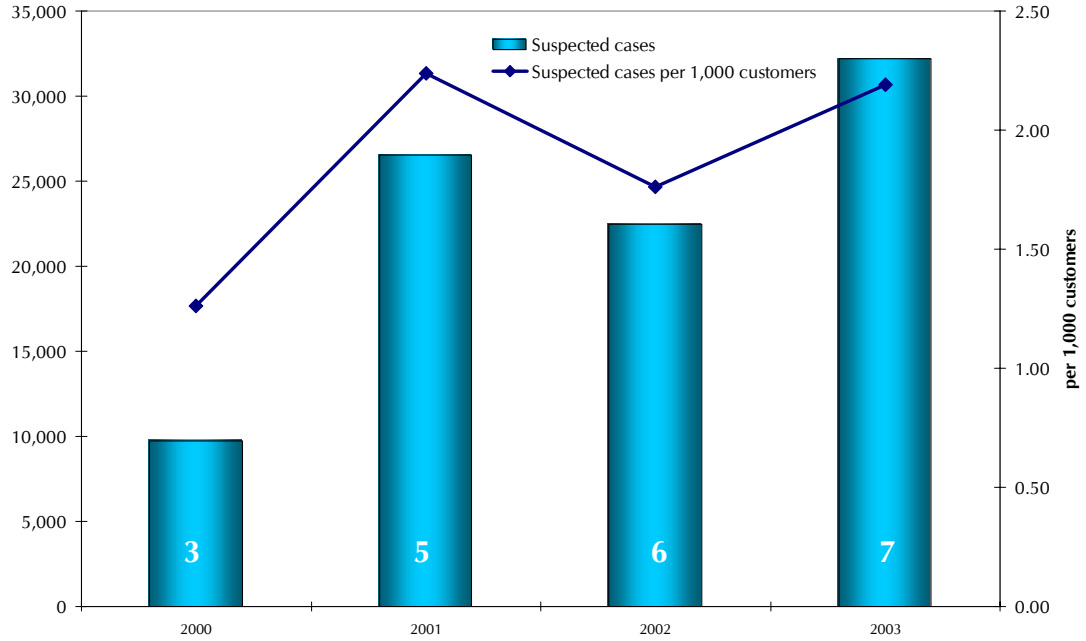

Figure 4 – Suspected Cases (*data source: electricity suppliers*)

1.A.8 Suppliers are required by their licence to inform the DNO where they have reason to believe that theft has occurred. Similarly, the DNO has an obligation to inform the supplier where they have reason to believe that theft has occurred at premises for which that supplier is responsible. In the analysis, Ofgem therefore looked for correlation in the number of *suspected cases* and *actual cases* of theft reported by suppliers and DNOs.

1.A.9 The two sets of data are compared in Figure 5. There is a reasonable correlation between the two from 2001 to 2003, with a figure of between 2.19 and 2.67 cases *per 1,000 customers* at the end of the period. This correlation could suggest that both sets of data for these years represent a reasonably accurate picture of the number of *suspected cases*. The DNO data is slightly higher than the supplier data. However, given the incompleteness of the reporting and the short period in which the data sets show a similar trend, it is difficult to have confidence in this conclusion. It should be noted that the data for 2000 in particular, in both data sets, was provided by a very small number of respondents and this may explain why the correlation is weaker in that year.

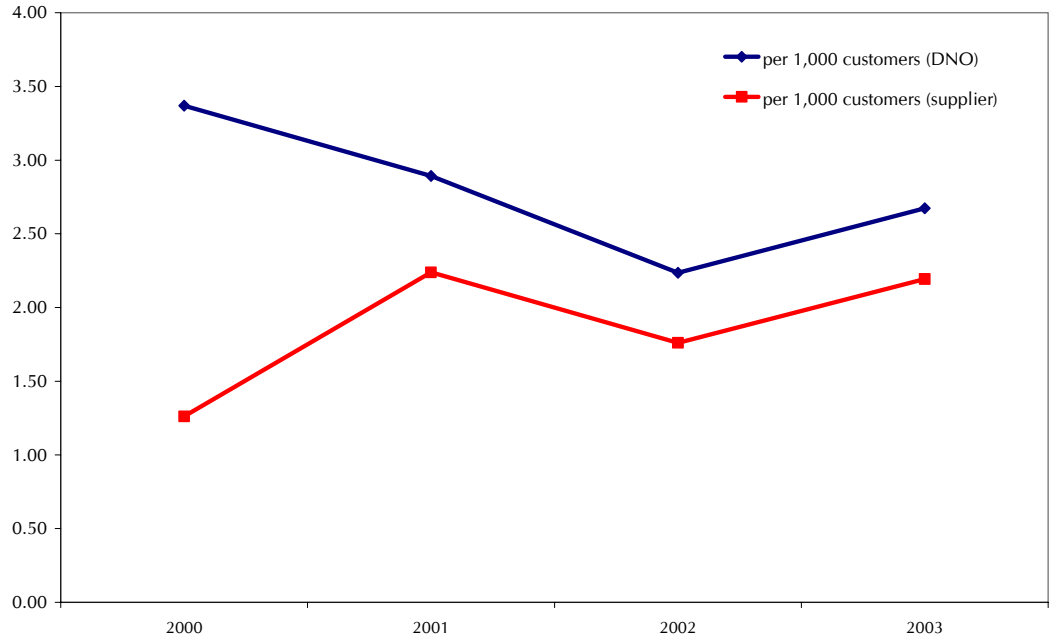

Figure 5 – Comparison of the Number of Suspected Cases (*data source: DNOs and electricity suppliers*)

Actual Cases

1.A.10 Similar analysis was carried out on the data submitted for the number of cases which were determined, following investigation, as *actual cases* of illegal abstraction. Again, the quality of the data received makes it difficult to identify any strong trends.

1.A.11 The number of *actual cases* submitted by DNOs is displayed in Figure 6.

1.A.12 This data shows some fluctuation, particularly in the year 2000 in the number of actual cases identified per 1,000 customers and a general increase in the absolute numbers identified over the period. The peak shown in the number of cases *per 1,000 customers* in 2000 could be caused by the lower number of respondents for that year and the comparatively high numbers they reported.

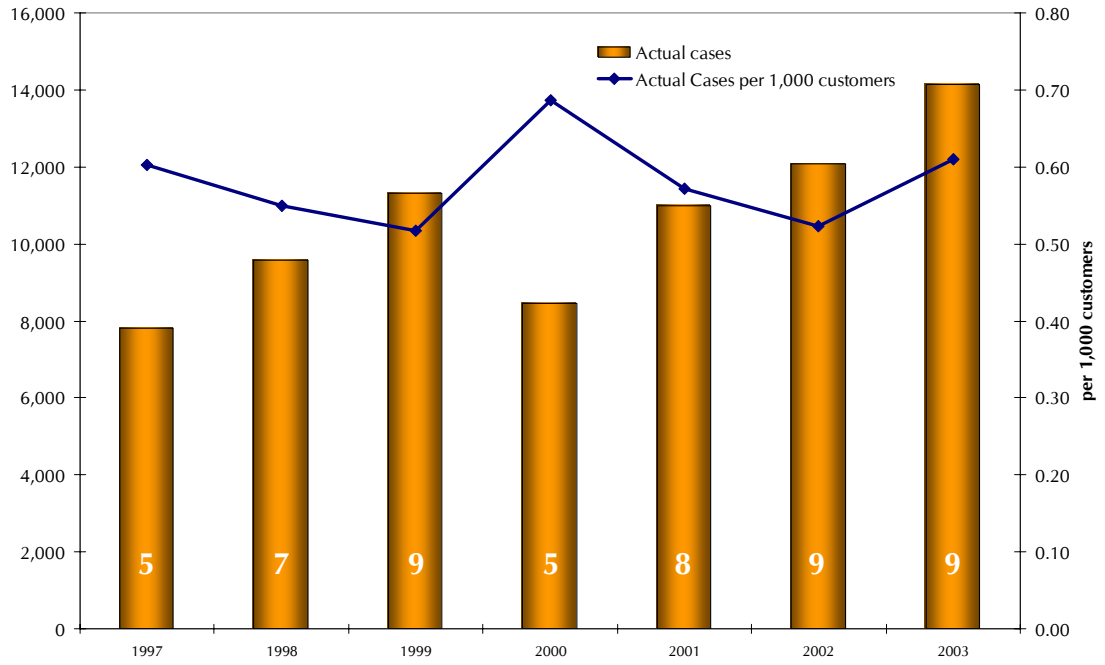

Figure 6 – Actual Cases (*data source: DNOs*)

1.A.13 As with the number of *suspected cases*, similar analysis was carried out with the data provided by suppliers. The supplier data is set out in Figure 7.

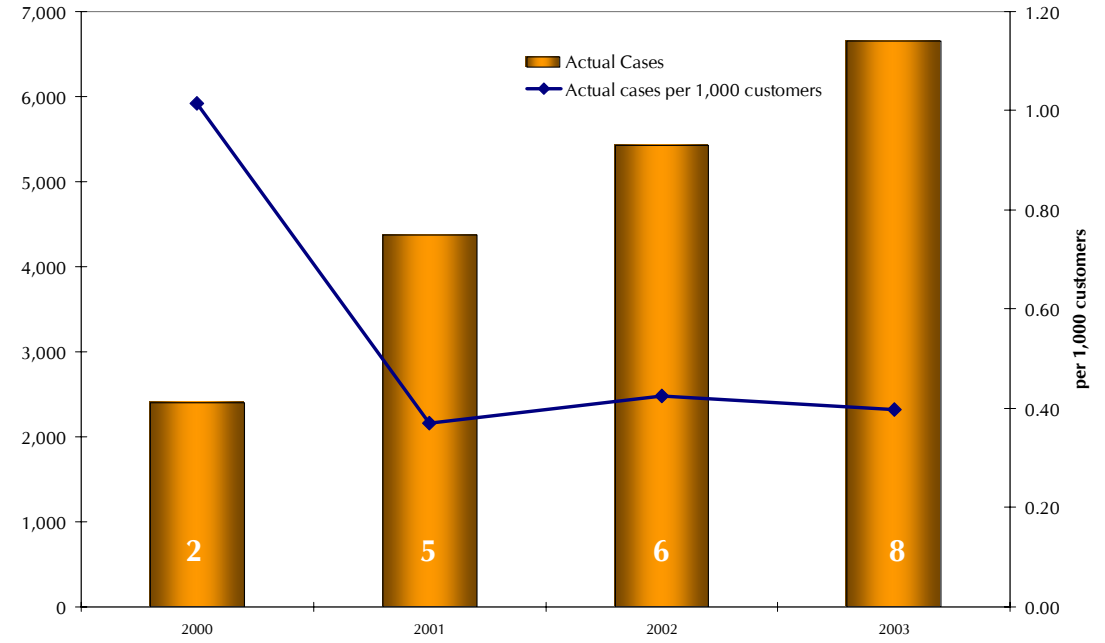

Figure 7 – Actual Cases (*data source: electricity suppliers*)

1.A.14 This shows a significant fall in the number of cases *per 1,000 customers* from 2000 to 2001. The number of cases then remains relatively constant at 0.4 *per 1,000 customers*. This initial fall could represent a consistent picture with the

DNO data. However, it is likely to be skewed by the very low number of respondents in 2000 and the high numbers they provided.

1.A.15 As before, in order to add greater confidence to the trends identified, Ofgem compared the numbers reported by DNOs with those submitted by suppliers. This comparison is shown in Figure 8. Again, it is expected that the trends should be similar.

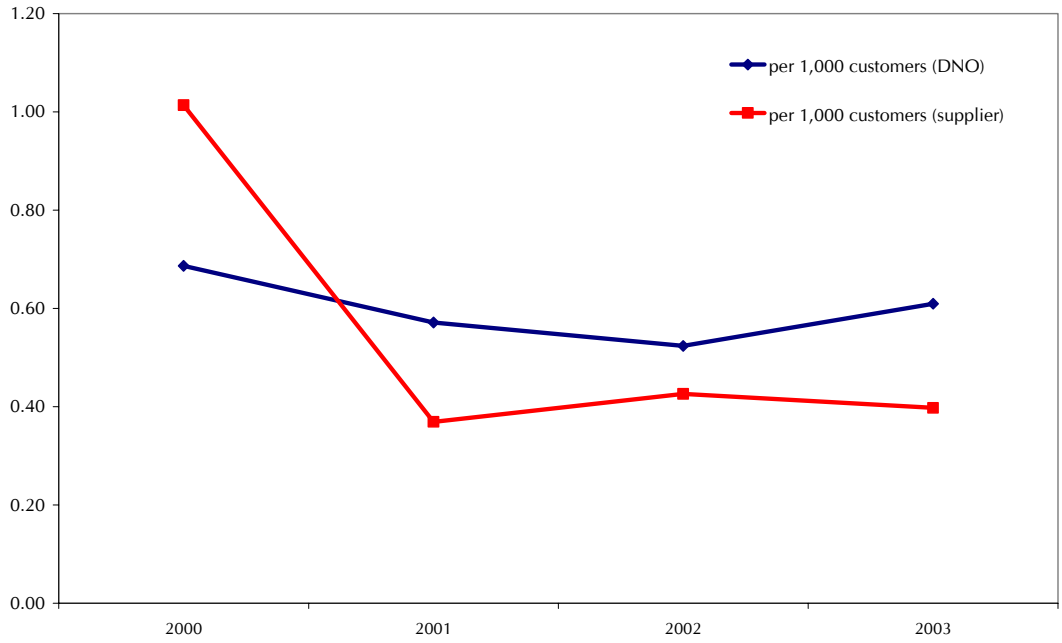

Figure 8 – Comparison of the Number of Actual Cases (*data source: DNOs and electricity suppliers*)

1.A.16 Figure 8 indicates a reasonable correlation between the market sectors between 2001 and 2003. As noted above the figure for 2000 is likely to be skewed by the low number of companies that reported data. Overall this analysis suggests a figure of between 0.4 and 0.6 actual cases of theft *per 1,000 customers* in 2001 to 2003.

1.A.17 The data for 2000 for both *suspected cases* and *actual cases* was reported by only a small number of suppliers and DNOs and so it is difficult to include these figures in identifying any trend. Without the 2000 figures, the overall picture illustrated by the above data is that the number of *suspected cases* has fallen from 2001 to 2002 before a rise in 2003. However, despite this fall in leads, the number of *actual cases* has not shown a decline to the same extent but has remained around the same level since 2001.

Source of leads

1.A.18 Suppliers were asked to provide information on the proportion of their leads that were notified to them by various sources. The information varies considerably between respondents, as highlighted by three example suppliers in Figure 9 below.

	Data Collector	Meter Operator	RPS	Supplier analysis of consumption	Other
Supplier 1	-	-	95%	5%	-
Supplier 2	6%	2%	1%	89%	2%
Supplier 3	20%	16%	4%	57%	3%

Figure 9 – Proportion of Leads from Various Sources (*data source: electricity suppliers*)

1.A.19 Further information would be needed from suppliers to determine why there is such variation. It is likely to be the result of different levels of pro-activity from the supplier and their agents and different contractual incentives on their sub-contractors to identify and report cases.

RPS

1.A.20 Ofgem requested data from DNOs and suppliers regarding the provision or procurement of RPS. DNOs were asked to submit details on the cost of providing RPS and the benefits that they derived from it. These benefits included charges for the service and recovered DUoS billing. From suppliers, Ofgem requested information on the cost of sourcing RPS in each distribution area as a total and an average per investigation.

1.A.21 There were significant variations and gaps in the data submitted which again create difficulties in drawing conclusions.

1.A.22 The Discussion Document noted that some DNOs believed that there are benefits to them providing a RPS in terms of protecting their income. However, others considered that this should not be a distribution function and that they no longer wished (any in some cases had already ceased) to provide this service. In

the data collected by Ofgem, DNOs have varied in their ability to quantify benefits derived from providing a RPS on their networks. This has resulted in some DNOs reporting net benefits for provision of this service and others reporting a negative net position. While the figures across the whole data sample show a net loss for DNOs of £4 million across the market in 2003, discrepancies in the data make it difficult to conclude that this is a full reflection of the situation. An example of the inconsistencies in the data is that the average cost of providing RPS per investigation carried out varies from £75 by one DNO in 2002 to £1,684 by another in 2003. Further data and analysis would be needed to examine the basis for the costs and benefits submitted.

1.A.23 The data provided by suppliers also shows considerable variation, even within each supplier's data return. One supplier reported that the average cost per investigation varied between distribution areas from around £80 to over £600. Many suppliers were unable to provide figures for the cost of RPS or stated that they did not use DNO-provided RPS in certain areas. One national supplier stated that they did not use DNO-provided RPS in 10 of the 14 distribution areas. Another national supplier could not provide any information on RPS at all.

Estimate of volume

1.A.24 DNOs and suppliers were asked to provide the *identified volume* of illegally abstracted units per year as well as the *overall estimated volume* of theft (as defined in Appendix 1). These were key data items in order to assess the accuracy of the estimates of the extent of theft quoted in the Discussion Document which varied from £44m to £330m per year. The data from DNOs and suppliers was compared to provide comfort as to the accuracy of the data.

1.A.25 The majority of DNOs and suppliers did not attempt to provide an *overall estimated volume*. They instead reported just the *identified volume*. As with the data sample as a whole, there was considerable variation.

1.A.26 Full data was not received from all DNOs and suppliers in order to derive a value for the whole of the UK. Ofgem therefore took the *identified volume* and the number of customers of respondents who contributed to this total and *uplifted* the volume to give an estimate for the whole of Great Britain. A retail

monetary value of the identified stolen units was calculated using a median unit price of 8.24p/kWh. The results are shown in Figure 10.

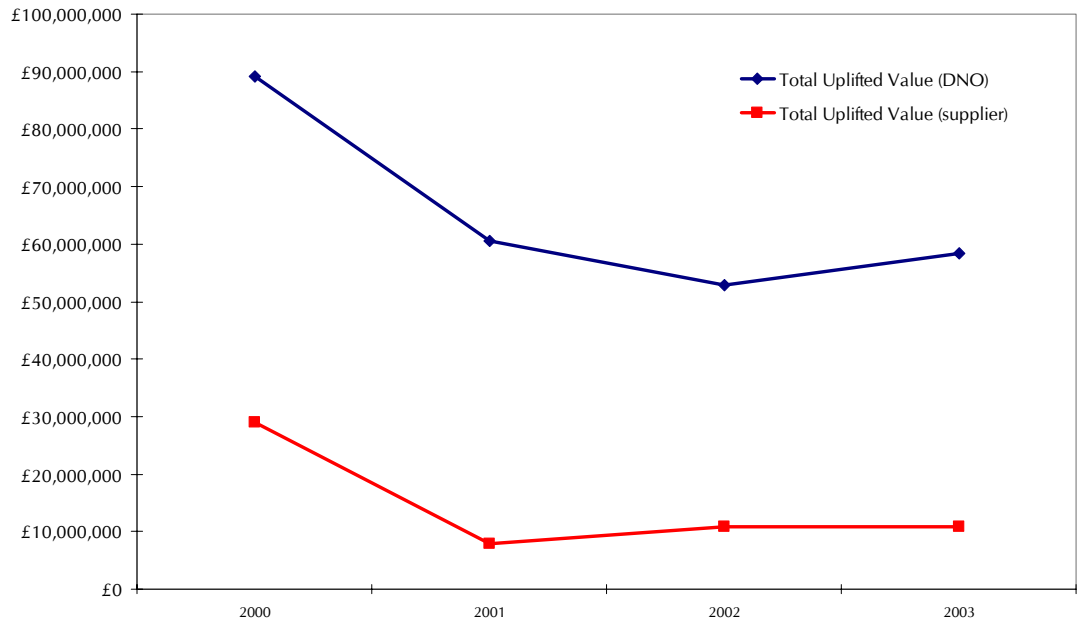

Figure 10 – National Estimate of the Value of Stolen Units (*data source: DNOs and electricity suppliers*)

1.A.27 This shows a significant difference between the data reported by suppliers and DNOs with suppliers reporting £10.9m in 2003 compared to £58.3m reported by DNOs. The overall figure has fallen from £29.1m and £89.1m respectively in 2000. However, the trend is similar to the trend of *actual cases* reported *per 1,000 customers* shown in Figure 8, although here there is greater separation between the supplier and DNO data.

1.A.28 Within the data sample, the results from market participants showed considerable variation. The actual value of the data reported by some DNOs individually gave a figure of up to £21.8m on their networks in 2003 while for others it was just £33k. The overall value in Figure 10 is significantly influenced by two DNOs who gave very high values. There was also significant variation in supplier data.

1.A.29 The significant variation between participants could indicate that different methodologies were used in calculating the volume of energy stolen.

1.A.30 This figure is for the *identified volume* of theft only and does not represent the *overall estimated volume* as was the case with the estimates reported in the Discussion Document. Without further work and more data, the scale of theft each year is therefore still unclear.

Ability to recover money and prosecute

1.A.31 Ofgem has been informed by suppliers that, where a case of theft has been identified, it is very difficult to recover money and that the expense of undertaking investigations and debt collection outweighs the likely return. Ofgem therefore requested data from suppliers on the number of cases per year where they were successful at recovering money and the amount of money they were able to reclaim.

1.A.32 The data received shows that suppliers were able to recover money in a high proportion of *actual cases* of theft. Overall, the proportion of cases where money was successfully recovered, as reported by suppliers, is between 86% and 96% from 2000 to 2003. One supplier reported recovering money in 100% of cases for every year in the sample. However, data was only received from two suppliers and this number is unlikely to be representative of the industry as a whole.

1.A.33 Ofgem also requested data on the amount of money recovered from customers found to be stealing. This suggested that an average of between £452 and £621 was recovered per *actual case* of theft from 2000 to 2003. Again, this estimate is based on a very small data sample.

1.A.34 It is therefore not clear how easy it is for suppliers to recover money from customers found to be stealing electricity. However, Ofgem notes the high proportion of cases in which money appears to have been recovered in this data sample and the significant amount of money recovered. Further data and analysis is required to ascertain the success of suppliers in pursuing offenders for unpaid charges.

1.A.35 Ofgem also requested data on the number of prosecutions attempted and the number that were successful. Only two suppliers were able to provide data for this. Their data indicates that criminal convictions were attempted in between 6.1% and 10.3% of cases and were successful in around 0.1% of cases.

1.A.36 Many respondents commented that they refer cases to the police but then do not hear whether they have been pursued or if charges have been brought.

1.A.37 Again, the small number of respondents makes it difficult to judge if this data is representative. However, it does support the assertion that successful prosecution is very difficult.

Meter inspections

1.A.38 Data was requested from suppliers about the number of meters that had not been inspected every two years where they have been continuously the supplier, in accordance with the licence requirement.

1.A.39 The data submitted shows that around 2.8% of meters were not inspected in accordance with this requirement.

Conclusion

1.A.40 Conclusions are hampered by the quality of the data Ofgem has received. The analysis suggests that the number of *suspected cases* fell from 2001-2 before rising in 2002-3. The number of *actual cases* has remained fairly constant, with some fluctuation, over the same period. The *identified volume* of theft, as one might expect, has followed a similar trend to the number of *actual cases*. In summary, there were fewer leads reported in 2003 than in 2001 but a similar number of *actual cases* and a similar volume of theft was identified. Data received from suppliers (in the limited cases where it was available) gives the impression that recovery of money from those identified as having illegally abstracted electricity is possible in the majority of cases. There is little consistency between suppliers on the main sources of leads for *suspected cases*.

1.A.41 Ofgem is concerned that the industry was unable to provide full, and in many cases any, information in response to the data request. Ofgem would expect that licensees should be monitoring this data to allow them to manage their regulatory obligations.

Appendix 1B Gas Data

1.B.1 As with electricity, many of the data items requested from gas suppliers and GTs were the same in order to compare activity in both market sectors. Like DNOs, GT data was available from data request 1 and this was added and compared to that of data request 2 so that data is available from 1996 to 2003. Again, little data was available from suppliers in data request 1.

Suspected cases

1.B.2 Ofgem requested information about the number of *suspected cases* that had been notified to GTs or identified by them. This data is presented in Figure 11. As with the electricity data, the number of cases is shown as an absolute number and *per 1,000 customers* to account for where responses were incomplete and to allow for comparison with the electricity industry.

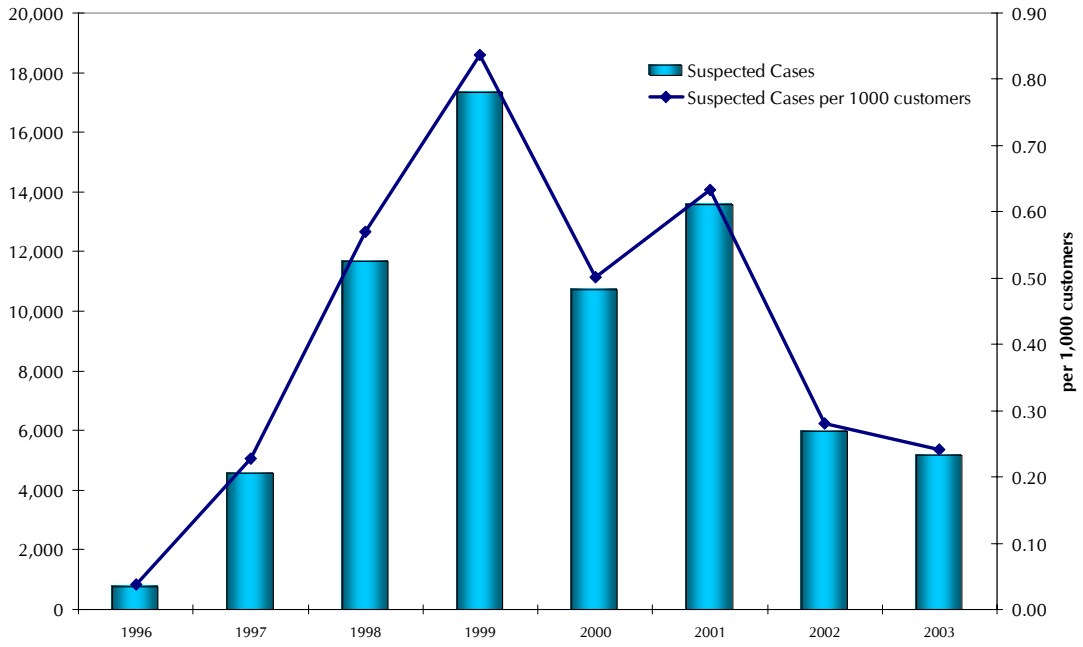

Figure 11 – Suspected Cases (*data source: GTs*)

1.B.3 Following a peak of over 17,000 cases in 1999, the number of *suspected cases* reported to or identified by GTs has fallen to just over 5,000 by the end of the period. It is not clear whether this peak in the number of cases was caused by different definitions or reporting by GTs or whether it represents a genuine

increase in cases. Overall, this data suggests that the number of *suspected cases* of theft in the gas market has declined considerably over the past few years.

1.B.4 As before, Ofgem compared this data with that received from suppliers in order to gain confidence about the numbers presented. Suppliers were asked to provide information on the number of cases that they identified or that the GT notified to them. The figures received are shown in Figure 12.

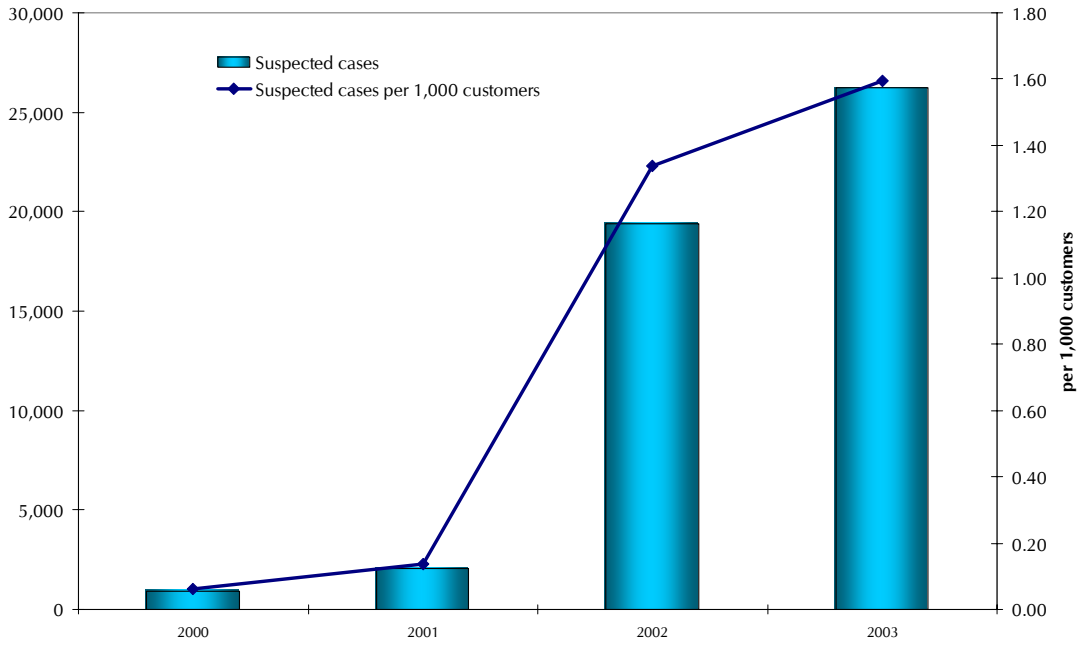

Figure 12 – Suspected Cases (*data source: gas suppliers*)

1.B.5 Several suppliers, including many large suppliers, were unable to provide any data at all. The data summarised above is strongly influenced by the figures reported by one supplier. Identifying a trend from this data is complicated by that supplier being unable to report the number of cases reported to them by GTs for 2000 and 2001. However, the number of cases that they identified themselves has however shown a significant increase from 2002 onwards and they reported that they have been more proactive in dealing with theft from that date.

1.B.6 This proactive approach has yielded a massive increase in the number of *suspected cases*. This implies that there is a high level of potential leads in the market if suppliers were to take the initiative to detect them.

1.B.7 Gas suppliers have an obligation to report all *suspected cases* of theft to the GT. However, whilst the GT may inform the supplier of *suspected cases*, they are not obliged to do so. For example, where Transco is informed of a *suspected case* by a third party and, having attended the site, has concluded that no theft has taken place, the supplier may not be informed. It is therefore expected that the GT figures should be higher than those reported by suppliers. The absolute number of cases in 2003 reported by the comparatively few suppliers that provided data shows over 26,000 *suspected cases*. The absolute number as reported by GTs is just 5,128.

1.B.8 The number of *suspected cases per 1,000 customers* reported by GTs and suppliers were compared to try to give greater confidence in the figures. This comparison is shown in Figure 13.

1.B.9 This shows no correlation in the two sets of data. The GT numbers show a decline to a fraction of the numbers reported by DNOs in the electricity market (0.24 *per 1,000 customers* compared to 2.76 *per 1,000 customers* in 2003). However, the supplier data, strongly influenced by the more proactive efforts by one supplier who submitted data, shows a significant increase in *suspected cases* to 1.6 cases *per 1,000 customers*. This is still below the figure reported in the electricity industry.

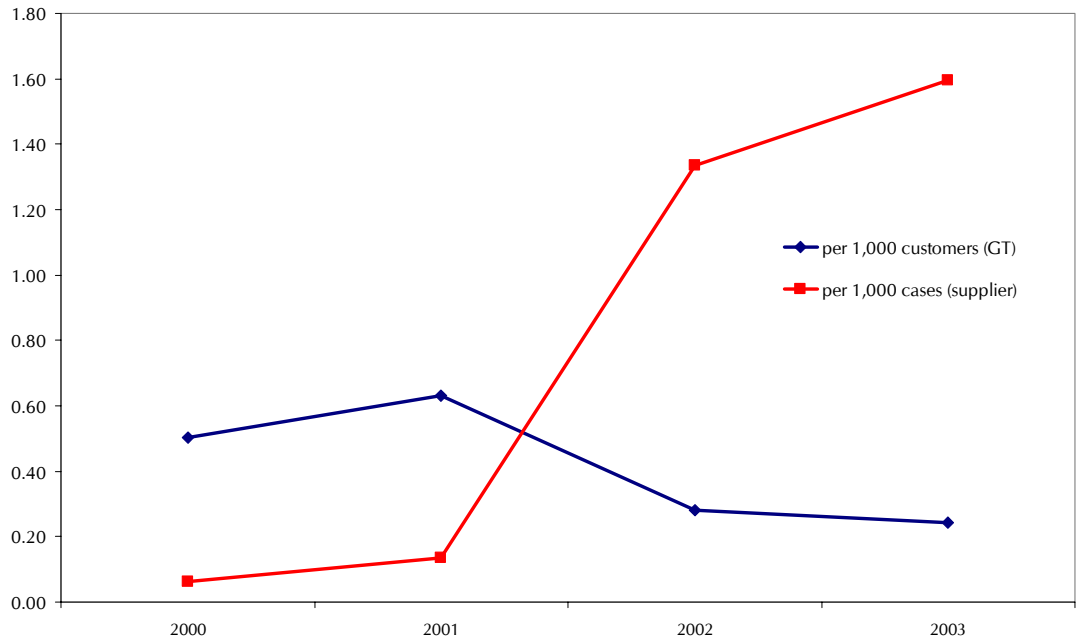

Figure 13 – Comparison of the Number of Suspected Cases (*data source GTs and gas suppliers*)

Actual Cases

1.B.10 Again, similar analysis was carried out on the data submitted for the number of cases which were determined to be *actual cases* of theft, following investigation. Trend analysis is compromised by the poor quality of the reporting by suppliers in particular.

1.B.11 The number of *actual cases* reported to or identified by GTs is shown in Figure 14.

1.B.12 In general there appears to be an increase in the number of actual cases of theft across the period with the exception of a significant fall in numbers in 2000 to 2001.

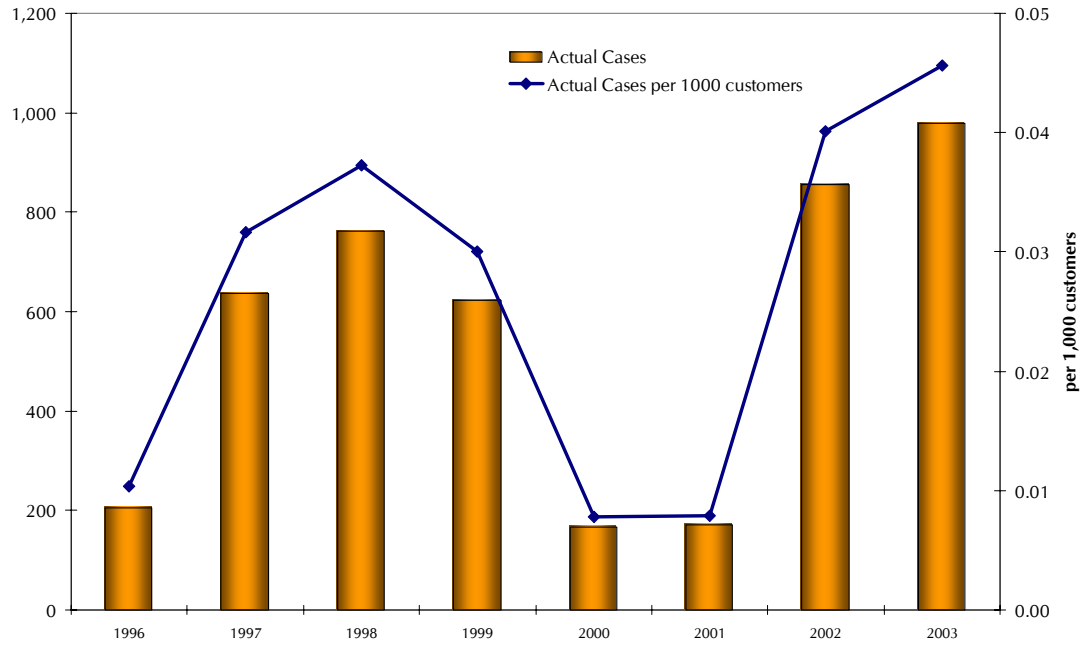

Figure 14 – Actual Cases (*data source: GTs*)

1.B.13 The absolute increase in reported *actual cases* contrasts with the significant fall in the number of *suspected cases* as seen in the GT data from 1999 onwards.

1.B.14 The number of *actual cases* reported by gas suppliers is displayed in Figure 15. This shows a very similar pattern to the data for *suspected cases* in Figure 13 and is again heavily influenced by one supplier's reported performance as most others were unable to submit data.

1.B.15 As with *suspected cases*, the number of *actual cases* of theft identified has increased significantly from 2002, coinciding with the more proactive efforts reported by the supplier from which this data mostly originates.

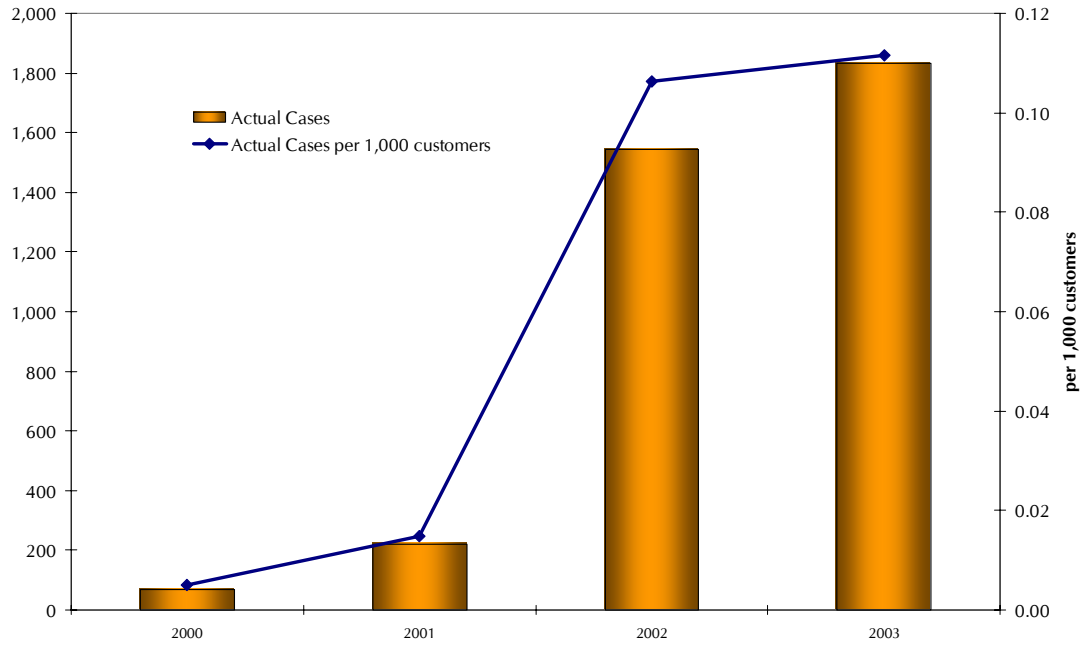

Figure 15 – Actual Cases (*data source: gas suppliers*)

1.B.16 From this it appears that a significant proportion of theft may go undetected without proactive work by suppliers.

1.B.17 Suppliers are required to notify the GT where an *actual case* of theft has been identified. GTs may additionally identify theft in conveyance and are therefore expected to be aware of more cases. In their data sample, a GT representing the considerable majority of the market reported 979 cases in 2003. The data from gas suppliers, which included just one of the major supply companies, reports 1,831 *actual cases*. Again therefore it would appear that cases may not be reported effectively by suppliers to GTs or recorded effectively by GTs.

1.B.18 Again, the numbers of cases from the two data sources were compared and are shown in Figure 16 below. This shows an increase in the number of *actual cases per 1,000 customers* reported by both GTs and suppliers from 2002. The more significant increase shown in the supplier data results from a smaller data sample and the comparatively high number of cases reported by one large and proactive supplier.

1.B.19 At between 0.05 and 0.11 cases per 1,000 customers in 2003, the number of *actual cases* in the gas market is significantly lower than in electricity. This may lend weight to the view expressed in the Discussion Document that it is easier to take illegal supplies of electricity than gas.

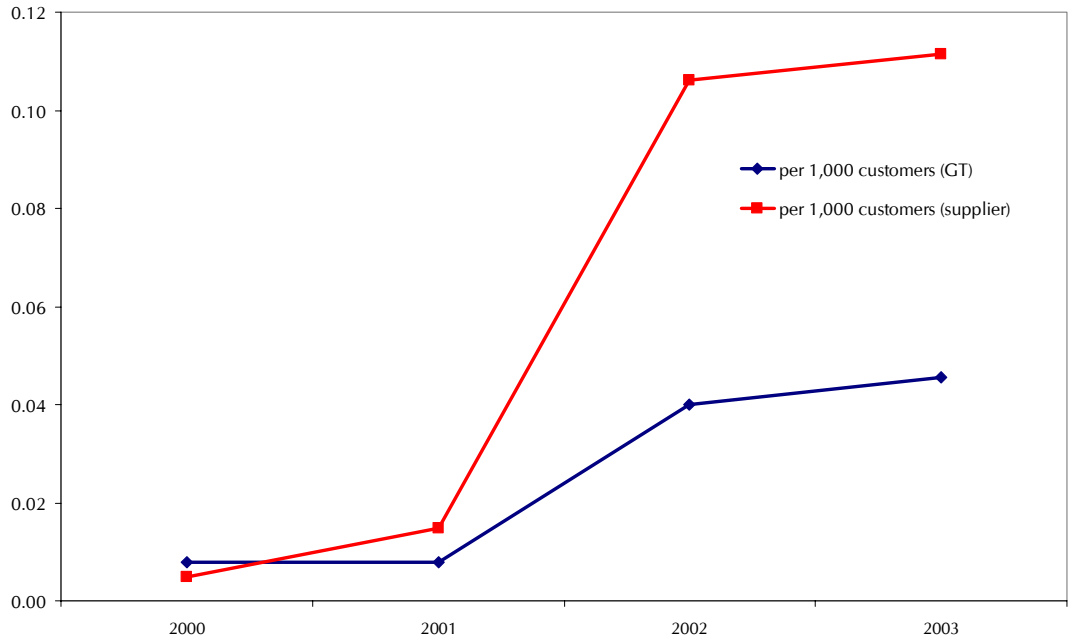

Figure 16 – Comparison of the Number of Actual Cases (*data source: GTs and gas suppliers*)

Source of leads

1.B.20 Gas suppliers were asked to provide information about the proportion of their theft leads that they receive from various sources. Examples of data received from three suppliers are shown in Figure 17 below.

1.B.21 Like the electricity data, this shows considerable variation between suppliers.

	Data Collector	Metering Agent (MAM/MAP)	RPS	Supplier analysis of consumption	Other[15]
Supplier 1	5%	-	26%	8%	60%
Supplier 2	72%	-	15%	3%	10%
Supplier 3	-	-	90%	-	10%

Figure 17 – Proportion of Leads from Various Sources (*data source: gas suppliers*)

Reasonable Endeavours Scheme

1.B.22 Data was requested from GTs and suppliers on the Transco-administered Reasonable Endeavours Scheme. A number of suppliers have indicated, including at the Theft Seminar in June 2004, that the Reasonable Endeavours Scheme was not well understood by many and that the number of claims made is very low.

1.B.23 In total, Transco reported 386 claims made by suppliers in the years 2001 to 2003. This represents just 3.4% of all cases that suppliers were asked to investigate by GTs in that period.

1.B.24 Data reported by suppliers shows a similar picture. They report 448 claims in 2002 to 2003, representing just 1.1% of investigations carried out by suppliers in that time[16].

1.B.25 When claims are made, the GT data reported a different view of the likelihood of recovering money compared to the supplier data. Data reported by GTs indicates that payments were made in 45.9% of claims. Data from suppliers puts this figure at 17.2%. Again, it should be noted that there was incomplete reporting of data by suppliers.

1.B.26 The average amount of money paid for each successful claim, as reported by suppliers and GTs was £250.

[15] includes Revenue Protection Services
[16] NB: the total number of investigations reported by suppliers differs from that reported by GTs.

Estimate of volume

1.B.27 GTs and suppliers were asked to report the *identified volume* of gas stolen each year, as well as provide an *overall estimated volume* of theft. An estimate based on shrinkage calculations that Ofgem reported in the Discussion Document was that gas worth a retail value of £37m was stolen each year. Data was requested from the industry in order to support or amend this estimate.

1.B.28 As with electricity, very few respondents attempted to provide information on the *overall estimated volume* of theft. The figures received were therefore purely based on the *identified volume*.

1.B.29 As full responses were not received from all participants, Ofgem again produced a national estimate through extrapolation based on respondents' customer numbers (an *uplift* calculation). The retail monetary value of the stolen units was then calculated using an assumed median unit price of 1.917 p/kWh and data received from suppliers and GTs was then compared. The results are shown in Figure 18.

1.B.30 This shows that until 2003 there was a reasonably close correlation in the *identified volume* of theft in the gas market, before diverging at the end of the reporting period. This could be caused by the incomplete reporting by suppliers in particular or could indicate that estimated volumes of stolen units are not in all cases being reported to the GT. In 2003 the *uplifted* figures derived from the data indicate that stolen gas worth between £474k and £848k was identified. While this estimate is an extrapolation based on an incomplete set of data, it is significantly lower than the £37m estimate and, if both estimates could be relied on, could indicate that a large proportion of theft in the market is going undetected.

1.B.31 As with the electricity data, it is not clear what methodologies have been used by respondents in calculating this figure. Further data and analysis would be needed to increase the level of confidence in the amount of gas stolen annually.

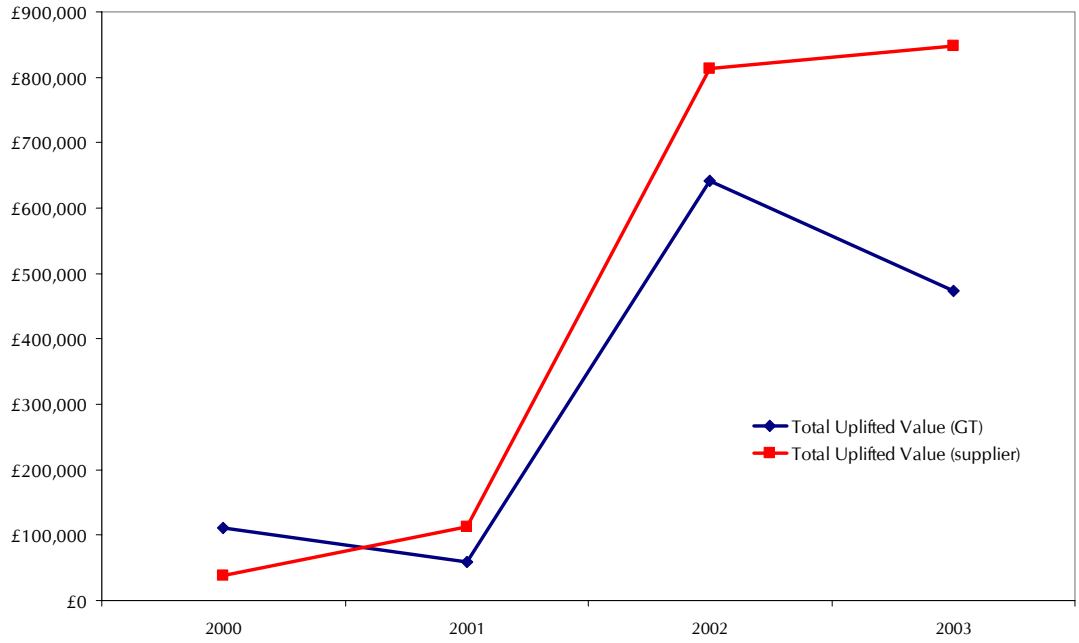

Figure 18 – National Estimate of the Value of Stolen Units (*data source: GTs and gas suppliers*)

Ability to recover money and prosecute

1.B.32 Ofgem has been informed by suppliers that it is difficult to recover money from individuals who have taken an illegal gas supply. Data was requested from gas suppliers to show the number of cases where they were able to recover money, and the total amount recovered.

1.B.33 Ofgem has particular concerns about the accuracy of the data submitted in this area. The proportion of cases reported where suppliers have been able to recover money ranges from 0.00% in some years to 0.55%. Only two suppliers were able to report the number of cases where they had recovered money and only 11 cases were reported in total. One large supplier commented that it was difficult to determine this number as they did not differentiate between money being recovered where theft has occurred and their normal debt recovery processes.

1.B.34 Suppliers were asked to provide data on the amount of money they were able to recover. This indicated that an average of £119 and £142 was recovered per case of actual theft in 2002 and 2003 respectively.

1.B.35 This data, compared with that from the electricity market, could suggest that suppliers are less able to recover money in gas. However, as neither set of data is complete this makes drawing such conclusions problematic.

1.B.36 Ofgem also requested data on the number of cases where prosecutions were attempted and how many were successful. Only one case was reported, in 2001, and this was not successful. Many suppliers commented, as with the electricity market, that they do not regularly hear the results of police action against those they report as taking an illegal supply and therefore they were unable to report and data on prosecutions.

Meter inspections

1.B.37 Ofgem requested data from gas suppliers on the number of meters that had not been inspected every two years in accordance with the licence requirement. Suppliers reported that 0.6% of meters were not inspected as required in 2003.

Conclusion

1.B.38 Again, the quality of the data available prevents definitive conclusions. The supplier figures are mostly made up of one respondent's data, and indicate that a more proactive effort to detect and investigate cases of theft leads to a significant increase in the number of cases detected. It is not possible to tell whether the number of cases detected in the industry as a whole experienced a similar increase. Data from GTs implies that the number of *suspected cases* reported has actually declined, but that the number of *actual cases* has increased. It may be, as implied by the figures, that not all *suspected cases* are being correctly reported by suppliers to GTs or subsequently recorded by GTs. In line with the increase in actual cases, the *identified volume* of stolen gas has increased from 2001 to 2003. However, some problems appear to exist in the ability to recover money where theft has been identified. As with the electricity data, there was little consistency between suppliers on the main sources of leads for *suspected cases*.

1.B.39 As reported in Appendix 1A, Ofgem is very concerned at the inability of most industry participants to be able to provide full, or in some cases any, data in response to Ofgem's two data requests. Ofgem considers that the collection of

such data by suppliers and GTs is essential to allow them to manage their regulatory obligations.