

# ***Consultation to Tackle Gas Theft***

Issued by Ofgem, August 2011

## ***IBM Response to Consultation Questions***

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## Contact Information

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## 1 Introduction

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### 1.1 IBM relevant experience

IBM United Kingdom Ltd is pleased to respond to the “Tackling Gas Theft Consultation” issued by Ofgem in August 2011.

Our response has been produced by our UK Energy & Utilities team and draws upon our experience from:

- Delivering revenue protection capabilities to the utilities industry in the UK and worldwide;
- Participating in the National Revenue Protection Service industry meetings during early 2011;
- Providing theft analytics solutions to market participants and to centralised service providers, in industries including insurance, banking, and law enforcement; and
- Operating outsourced analytical and business services for clients worldwide.

### 1.2 Summary of IBM response

We agree with the view of industry and Ofgem that there is both need and opportunity to improve the management of gas theft in the GB market.

We believe that all three proposals made in the consultation paper to improve theft detection would result in an improvement over current arrangements. On balance we believe that centralisation of theft detection as outlined in the NRPS proposal offers the greatest benefit to industry and consumers, and as such should be implemented. The salient reasons for this being that NRPS should:

1. Be more effective in detecting theft;
2. Reduce differentials in theft management performance across the industry;
3. Reduce costs and risks for new market entrants and smaller suppliers; and
4. Provide a platform for future innovations in theft management.

Whilst we believe that the NRPS proposal should be selected, we also consider that it does require more development, and that additionally there are opportunities to enhance it further. We would be happy to continue to provide input and support to this process through industry working groups.

We believe it is important for Government and Ofgem to provide clear guidance as to whether the objective of the proposed changes are just to minimise the financial impact on consumers, or whether it is also to maintain the rule of law. If it is the latter, it must be recognised that in the short-term law enforcement may represent a net cost, and clear guidance should be given as to the level of expenditure which is considered reasonable for enforcing gas theft legislation, irrespective of the monies recovered. Such guidance may have a material impact on the suitability and scale of solutions to be implemented.

We believe that effective management of gas theft requires three key elements:

1. Disruption and difficulty of committing theft;
2. Detection and investigation of theft; and
3. Deterrence and recovery through enforcement and legal action.

Whilst this consultation and the options presented within it have focused on detection and investigation, we believe it is equally important that Government, Ofgem and industry also consider the other elements of effective theft management. In particular, our experience from theft management work throughout the world is that the level of penalties imposed on consumers in the GB market who steal energy are low. Making better use of existing powers, and potentially making additional changes here could help recover more funds and greater deter repeat and potential new offenders.

## 2 Responses to consultation questions

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In this section we have provided answers to the questions posed in the consultation paper. We have only answered those questions where we have appropriate experience and information, and where we are qualified to provide an informed point of view.

### 2.1 Main Consultation

**Q1: Do you agree with our proposals to introduce new gas supply licence obligations in relation to theft?**

Yes. The evidence presented in the consultation paper and our experience shows that the level of effort expended on tackling gas theft and associated detection and recovery rates are disproportionately low when compared to the level of theft believed to be occurring. We believe that without changes and improvements to the incentives and obligations placed on energy companies, the deterrence, detection and resolution of gas theft is unlikely to improve.

**Q2: Do you agree that our drafting proposals set out in Appendix 3 meet the policy intent described in this chapter?**

No response.

**Q3: Do you consider that our proposal for gas suppliers to make reasonable efforts not to disconnect vulnerable customers should apply throughout the year or be restricted to the winter months?**

A framework should be put in place which aims to balance the needs of protecting vulnerable individuals, with protecting the financial interests of the energy industry and law abiding consumers. Such a framework should provide a set of interventions which energy companies are permitted to take which deter theft and encourage repayment of debts. One such intervention is disconnection.

Within this framework we believe that the default position should be that restrictions on the use of disconnection should apply throughout the year. Certain vulnerability cases are linked to the need for hot water as well as heat, and as such the availability of gas throughout the summer months is appropriate to protect such consumers.

Additionally, we observe that new smart meters introduce additional options, such as part-time disconnection or (in the case of electricity) load limitation. Such options should be considered within the theft framework, providing new options to balance the equally valid requirements to protect the health of consumers and to deter and recover theft.

**Q4: Do you consider that gas suppliers should be required to offer vulnerable customers and customers that would have genuine difficulty paying, a wide range of methods for the repayment of charges associated with gas theft as an alternative to disconnection?**

Yes. Where theft has been discovered it is in the interests of the industry and consumers to recover as much money as possible. As wide a range of repayment options as possible should be adopted to achieve this, whilst minimising instances of disconnection and avoidable hardship.

However, we believe disconnection is, in certain circumstances, an appropriate intervention, and one which energy companies should have available to them to use in clearly defined circumstances. We believe measures such as disconnection are important in helping to deter theft.

We believe that standards which the energy industry should operate to with respect to protecting consumers and recovering monies is independent of whether SETS or NRPS is the chosen approach for detecting theft.

**Q5: Do you consider that Ofgem should include a licence requirement on all suppliers to establish a code of practice on, among other things, theft investigations and the detailed arrangements for compliance with our proposed consumer protection measures?**

Yes. We believe a code of practice is an appropriate means of ensuring consistency of customer experience and protection across all suppliers. Additionally, this would help ensure that instances of theft are equally likely to be detected and appropriately acted upon, irrespective of who is the registered supplier. We believe this is critical in ensuring that criminals do not view particular suppliers as 'easy pickings', with the result of crime being focused on specific suppliers. Such a situation would not be in the interests of the industry, society or gas consumers.

**Q6: Do you agree that our proposed new gas supply licence should be introduced as soon as reasonably practical?**

Yes. We do not believe there is any reason to delay the planning and implementation of improvements in gas theft.

In making such changes we believe it is important to consider the end-state which the industry wishes to achieve, and to ensure that actions taken today do not preclude additional benefits tomorrow. For example, it is our experience and belief that the use of both electricity and gas information, and network and supplier information together would identify instances of theft more effectively and efficiently. We should ensure that the changes we make now do not unnecessarily preclude such innovations in the future.

**Q7: Have we correctly assessed the main impacts in the accompanying IA? Are there additional, material impacts that we should also consider?**

We believe that the impacts considered are appropriate, but not exhaustive. The main area we believe is not adequately considered is effectiveness in deterring theft, and the associated impact on criminal behaviour.

If there is not a consistent level of detection, investigation and prosecution across the industry, then we consider it likely that criminals could, instead of being deterred, be displaced to those suppliers with lower levels of theft management performance. We believe it is critical to ensure that criminals do not view particular suppliers as 'easy pickings', with the result of crime being focused on specific suppliers. Such a situation would not be in the interests of the industry, society or gas consumers. Therefore, we believe that proposals, such as NRPS, which act to provide a consistent level of theft management, are more appropriate.

**Q8: Do you agree with the assumptions that we have made and the outcome of our analysis in Appendix 2 of the accompanying IA?**

Of those variables which we are qualified to evaluate, we believe that the assumptions made are appropriate, with the exception of theft detection rate.

We believe that NRPS, and, but to a lesser extent, Enhanced SETS, would have a better rate of theft detection than SETS. This is due to having a greater pool of data, which enables more effective use of analytical techniques to identify theft. We expand on this point of view further in our answer to Question 9.

**Q9: Which, if any, of the three proposals to increase theft detection should be implemented and why?**

We believe that all of the industry proposals would result in an improvement over current arrangements. On balance we believe that centralisation of theft detection as outlined in the NRPS proposal should be implemented. The salient reasons for this being that NRPS should:

1. Be more effective in detecting theft;
2. Reduce differentials in theft management performance across the industry;
3. Reduce costs and risks for new market entrants and smaller suppliers; and
4. Provide a platform for future innovations in theft management.

**Effectiveness of theft detection**

We believe that a solution which has access to information from across the industry will be better placed to detect specific types of theft which extend beyond the remit of one market participant. For example, thefts associated with stolen equipment, and thefts / losses associated with shipperless sites.

Furthermore, thefts which might be detected through any of the proposed solutions could be detected more quickly and with greater accuracy (i.e. with a reduced number of false leads) by a solution which has centralisation of data and analytics. For example, a common technique in fraud analytics is clustering – identifying groups of people / sites with patterns of similar consumption considered to be anomalous. Clustering as a technique is more effective with larger volumes of data.

Of the proposed solutions it is NRPS which makes the largest dataset available to one party to perform fraud analytics, and as such should yield the highest level of performance at accurately identifying suspected instances of theft in as timely a manner as possible.

**Consistency of theft management performance**

If there is not a consistent level of detection, investigation and prosecution across the industry, then we consider it likely that criminals could, instead of being deterred, be displaced to those suppliers with lower levels of theft management performance. We believe it is critical to ensure that criminals do not view particular suppliers as 'easy pickings', with the result of crime being focused on specific suppliers. Such a situation would not be in the interests of the industry, society or gas consumers. We believe that the NRPS proposal provides the greatest level of consistency in theft management.

**Costs and risks for new entrants**

All of the proposals will result in suppliers incurring some degree of fixed costs, and as such all favour larger suppliers. However, we believe that the fixed costs for suppliers are least under NRPS, and greatest under SETS.

Additionally, we believe that small suppliers (irrespective of age) and new suppliers (irrespective of scale) are disadvantaged under market models whereby they are responsible for theft identification. With only a small amount of historical data, small and/or new suppliers will be less effective at identifying theft, and as such will incur additional costs in proportion to their revenue base, and could be disproportionately targeted by criminals. We believe that the NRPS proposal is the most consistent with Government aspirations to encourage new and smaller suppliers to the market.

The Enhanced SETS proposal, through the introduction of a CRPU, would go some way to mitigate these issues. However, we believe it would only be effective if it is operated at scale and with a per-customer-based pricing (or similar). Both of these objectives would be challenging to achieve, at tolerable commercial risk to the provider, given there is no obligation on any supplier to use the services of the CRPU. Without a commitment from



suppliers to use the CRPU, we do not see it offering any advantages over commercial offerings available from fraud analytics vendors already.

### **Future extensibility**

We believe that there are innovations and options to further enhance the effectiveness of theft detection beyond those made in the proposals. Most notably:

1. The use of both electricity and gas information together; and
2. The use of both network and supplier information together.

For example, a common form of energy theft detection is reconciliation of network (e.g. sub-station or pumping station) data and meter point data. Such a technique is only possible in a market model which enables all appropriate datasets to be analysed together. We believe that the NRPS proposal best enables such innovations in the future.

#### **Q10: Do you consider that there are any alternative proposals, or variations on existing proposals to improve theft detection that should be considered?**

We believe that all theft responsibilities could be moved to the gas transporters. This would offer the advantage that theft in conveyancing and in consumers' homes would be the responsibility of one party. However, given the GB market model whereby suppliers are responsible for metering and the relationship with the customer, rather than network operators, we do not believe such an approach would offer a net advantage over the proposals being made. Accordingly we believe this option should be recognised, but not considered further.

## **2.2 Draft Impact Assessment**

#### **IA Q1: What do you consider to be the scale of theft in the GB gas market? Do you consider that there is a material difference in the prevalence of gas theft between suppliers' customer portfolios? What factors drive any considered difference in theft distribution?**

We have no further information as to the scale of gas theft in the GB market. It is our belief and experience from other industries that rates of criminality vary across different customer groups. As energy suppliers have different mixes of customers to each other (e.g. suppliers without domestic customers, different lengths of customer tenure), we would logical expect rates of theft to vary between suppliers.

As expanded upon further in our responses to earlier questions, if there is not a consistent level of detection, investigation and prosecution across the industry, then we consider it possible that a variation in theft rates between suppliers could occur, and that such variations would not be in the interests of the industry or consumers.

#### **IA Q2: Where theft has been detected, how long on average would you expect future revenues from a customer to fully reflect their consumption, ie what is the expected reoffending rate over time. Do you expect there to be a material difference under each of the three proposals?**

We have no information as to re-offending rates. We would suggest that information rather than opinion should be sought to answer this important point.

#### **IA Q3: For each industry proposal, are the proposed compliance measures sufficient to ensure suppliers conduct investigations to satisfactory standards and thereby protect customer interests? Are there any further measures that should be introduced to help address any perceived weakness?**

No. We agree that audits of suppliers and/or the NRPS are necessary and appropriate to ensure standards are met. However we do not believe that the level of penalties being proposed is sufficient to guarantee market participants meet the required standards, or proportionate to the benefit a participant may gain from not meeting standards.

We believe that:

- The charge levied under the NRPS proposal for non-compliance should be greater than just covering the cost of the audit, and
- The reductions in incentives payments made to suppliers under SETS for non-compliance must be sufficient to discourage poor performance.

**IA Q4: Are there any material differences between suppliers' ability to compete for incentive payments between UNC277 and UNC346? Would Enhanced SETS address any potential concerns raised about suppliers' ability to compete?**

No response.

**IA Q5: Do you consider that the current NRPS proposal is likely to establish and realise targets for theft detection that are proportionate to the potential customer benefits? If not, what additional measures do you think are needed to meet this aim?**

Yes. We believe that NRPS can contribute towards an improvement in the gas theft detection rate greater than either SETS or Enhanced SETS. Our reasoning for this is provided in our response to Question 9.

In determining if the benefits of NRPS (or SETS or Enhanced SETS) are greater than the cost to consumers, we believe it is important to consider both the direct and indirect costs to the consumer. For example, the value of improved health and safety, and the value society places on maintaining the rule of law should not be ignored.

We believe it is important for Government and Ofgem to provide clear guidance as to whether the objective of the proposed changes are just to minimise the financial impact on consumers, or whether it is also to maintain the rule of law. If it is the latter, it must be recognised that in the short-term law enforcement may represent a net cost, and clear guidance should be given as to the level of expenditure which is considered reasonable for enforcing gas theft legislation, irrespective of the monies recovered.

**IA Q6: Would the NRPS prevent some suppliers from realising additional commercial benefits from theft detection that may be available to them, eg by going further than the NRPS mandated investigation requirements? Would the focus of the NRPS proposals on data analysis reduce the overall efficiency of the market in theft detection by excluding investment in other sources of detection?**

No. We do not consider there to be anything within the outline NRPS proposals which would prevent suppliers from choosing to undertake additional work should they choose.

We do not believe that the NRPS proposal will reduce overall efficiency of the market in theft detection. As explained further in our answer to Question 9, we believe that the NRPS would be more effective than SETS in identifying instances of theft. We do not believe that NRPS, (or SETS or Enhanced SETS), precludes or discourages the use of alternative means of detection, for example use of customer tip-offs or feedback from metering field staff.

**IA Q7: For each of the three industry proposals, is a scheme necessary to compensate a supplier when it is not able to recover its costs from theft?**

We believe that such a compensation scheme is beneficial as it ensures that there is no disincentive on suppliers or other parties to investigate theft. However, such an objective could also be met through enforcement of license conditions and codes of practice.

Any compensation scheme should be designed and operated in a manner which does not discourage suppliers or other parties from undertaking reasonable endeavours to recovery money from criminals.

**IA Q8: Do you consider that cost and availability of services to support theft detection and investigation is a material issue for small suppliers?**

We believe that there are a wide number of energy theft service providers available in the market. We would expect these service providers commercial models to contain a degree of fixed cost, and as such the costs incurred by smaller suppliers will be proportionately higher than for larger suppliers.

All of the proposals made in this consultation will also result in suppliers incurring some degree of fixed costs, and as such all favour larger suppliers. However, we believe that the fixed costs for suppliers are least under NRPS.

Additionally, we believe that small suppliers (irrespective of age) and new suppliers (irrespective of scale) are disadvantaged under market models whereby they are responsible for theft identification. With only a small amount of historical data, small and/or new suppliers will be less effective at identifying theft, and as such will incur additional costs in proportion to their revenue base, and could be disproportionately targeted by criminals. We believe that the NRPS proposal is the most consistent with Government aspirations to encourage new and smaller suppliers to the market.

**IA Q9: What percentage reduction in consumption would you expect customers to make when an illegal gas supply is detected? To what extent do you consider that this would result from a response to increased costs and/or an increased propensity to invest in energy efficiency measures?**

No response.

**IA Q10: Do you have any further information on safety incidents where harm has directly resulted from theft of gas.**

No response.

**IA Q11: Do you consider that any of the proposals are likely to reduce the health and safety of any particular individuals?**

We believe that the health and safety of individuals is impacted in two main ways in relation to gas theft:

1. Risks and issues associated with theft of gas; and
2. Risks and issues associated with protection of vulnerable customers when industry addresses an identified theft.

With regard to (1), we believe that a solution which has the greatest theft detection rate is likely to lead to the greatest resolution of dangerous activities. As outlined in our answer to Question 9, we believe that the NRPS proposal will offer a higher theft detection rate, and as such improve health and safety risks the most.

We believe that the proposals made can all operate under the same guidelines for protection of vulnerable customers, and as such do not see a differentiation between the proposals with respect to point (2).

**IA Q12: Which proposal do you consider will have the greatest overall benefit on health and safety?**

NRPS. This is explained further in our answer to IA Question 11.

**IA Q13: Do you consider that the proposed implementation timescales for each proposal are realistic and achievable. If not, what do you consider to be a realistic timeframe? What additional measures, if any, do you consider should be undertaken to secure implementation within a reasonable timeframe?**

Overall, we consider that the implementation timescales presented are optimistic. In particular, we believe that experience from the smart metering programme provides evidence that the length of time to consult on and agree changes can be significant, and that procurement of centralised / monopoly service providers can take many months to be compliant with appropriate procurement legislation and guidelines.

Additionally, as both NRPS and Enhanced SETS are implementing similar forms of centralised monopoly services and data sharing arrangements, we would expect their implementation durations to be comparable, not different, as indicated in the impact assessment.

We also highlight that ‘implementation’ of NRPS and ‘implementation’ of SETS result in different outcomes. Implementation of NRPS entails framework / policy changes, and also creation of a service provider. Implementation of SETS entails only framework / policy changes. To ensure fair comparison of the proposals it should be considered that for SETS, in addition to this policy implementation, we believe most suppliers would also need to implement enhanced theft management solutions in their businesses to respond effectively to the new proposals. This additional work should be considered when assessing the length of time each proposal will take before improvements in theft detection are realised.

Under the NRPS proposals it is possible to deliver capabilities through a phased approach. For example, some theft analytics could be implemented in shorter timeframes through non-industrialised data transfer and offline analytics, with later work to scale out the sophistication of the analytics and data flows. This would help accelerate benefits and also prototype some of the enduring functionality which may be required.

**IA Q14: Do you consider that gas transporters should be required to adhere to a code of practice on the conduct of theft investigations?**

We believe that if Ofgem have evidence that standards of service from gas transporters in relation to gas theft investigation are not sufficient or consistent, clear codes of practice should be introduced and enforced.

**IA Q15: What impact will either of the three industry proposals have on the annual number of investigations of theft in conveyance that gas transporters undertake and the total cost of undertaking these?**

It should be considered that analytics undertaken by the NRPS, or by suppliers under the SETS proposals, actually identifies anomalous consumption, not theft. Anomalous consumption could be theft, network faults, meter faults or a number of other issues or circumstances.

As we explain in detail in our answer to Question 9, we believe that the NRPS proposal will be more effective at identifying anomalous consumption, and hence is the proposal most likely to identify instances of theft in conveyancing.

None of the proposals are likely to have a material impact on the cost of performing a theft site investigation. However, we believe (as explained further in our answer to Question 9) that NRPS would be the most effective solution at accurately identifying theft; that is to say minimising instances of false leads being generated, and hence is the best at minimising costs associated with investigating false leads.

It is our experience that a large proportion of energy theft analytic solutions elsewhere in the world include reconciliation of meter data to network data, and that such an approach would likely lead to a significant improvement in effectiveness of identifying theft from networks. We believe NRPS provides a more extensible platform for performing such analytics in the future.

**IA Q16: What, if any, changes to the regulatory arrangements need to be made to enable gas transporters to adhere fully to their requirements to conduct theft investigations?**

No response.