DECC / Ofgem Consultation on the Smart Metering Spring Package

Response of Siemens Metering Services

12 April 2011

Statement of interest

You may know that Siemens, through its Metering Services division, is one of the largest independent providers of metering services to the electricity gas and water industries in the UK. It serves all segments from individual consumers through SME and commercial up to major energy users. Through its other divisions Siemens provides generation, grid, distribution, and connection solutions on a large scale. Its industry division also provides smart-home white-goods and smart building control solutions from a residential up to an industrial scale. Finally it provides Secure Data Management and IS services to government departments, local authorities, health services, and other major institutions. Siemens is active in these segments throughout Europe and much of the rest of the world.

Responses to individual questions

Question 1 (Chapter 2)

Do you agree with our proposal to issue guidance on "safe and reasonably practicable" and require suppliers to have regard to this guidance through a licence amendment? If not, what else is needed?

In general we support Ofgem's proposal to issue such guidance. In addition we believe that the smart rollout process offers opportunities to streamline this task, even during the Foundation phase.

As we have suggested in other places, (eg in answer to question 13 below, in our response to Prospectus Q17 in section 4, and in several of the accompanying companion documents) we believe it is both possible and desirable to start logging helpful and re-usable information immediately. Thus we believe it would be reasonable for all suppliers installing smart-ish[1] meters during the Foundation phase to be obliged to record whether or not it would be "safe and reasonable" on *installation* grounds to switch a meter to a more interactive mode (eg Pay-as-you-go[2]) at a later date. This installation

[1] We say "-ish" because the SMIP contemplates the deployment of meters before the definition of a "smart meter" is finalised.

[2] "Pay-as-you-go" or PAYG, describes much more accurately the actual service available from a smart meter. In particular "prepayment mode" is highly *mis*leading because (a) due to the long-

information should be available to an incoming supplier as part of the standardized switching process.

Please see also our comments on Registration, under Q13.

Question 2 (Chapter 2)

Do you agree with our proposal to require suppliers, where they know or have reason to believe that prepayment is no longer safe and reasonably practicable for a customer, to offer an alternative payment method or some other form of action?

We do agree with this proposal. However we believe that the terms in which this concept is expressed are already seriously outdated and the shortcomings will be exacerbated by the introduction of smart metering.

We welcome the spirit of section 2.24 which contemplates improved use of language in this respect but the solution offered for example in Appendix 2 - *Proposed amendments to the standard conditions of electricity and gas supply licences* would benefit greatly from some further improvement. There is a draft definition proposed for "Prepayment meter" that turns on the ideas that a Domestic Customer is "allowed" to pay "in advance", "through that meter". This is the language of coin meters, and is in our view not only completely obsolete but also actively confusing. The use of all three key phrases is entirely arbitrary.

There is also a lack of clarity over whether the proposed guidelines apply to

1. all PAYG customers
2. only PAYG customers who are "struggling to pay", as per section 2.14
3. only PAYG customers who are also using this process to repay a debt.

The new definitions should in our view take into account that the core differentiating concept between PAYG and other modes of supply, is that in PAYG contracts the consumer accepts that if he does not meet the necessary payment rules his supply will be interrupted via a *different process* (and probably a much more automatic one) compared to that which applies in other modes of supply. The nature of the interruption, too, is different in that in PAYG mode the consumer can restore the supply under his sole agency (by using the top-up process) and at his sole discretion.

There are many other factors that flow from this. In "pure PAYG" mode (ie not sub-group 3 above) a consumer need have no obligation (whether to maintain his credit rating, or for any other reason) to consume anything at all, or even to keep his supply "mostly on".

Our criticism over this issue underlies most of the questions in this section of the Spring Package, so for reasons of space we will refer back to *this* question throughout our response.

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standing but little-used facility of credit limits in PAYG meters, PAYG does not necessarily operate in advance and (b) due to the possible use of up-front deposits there is no guarantee that other tariffs operate in arrears. Smart metering completely de-couples the relationship between how people are metered and when they pay, regardless of notional modes of operation.

Question 3 (Chapter 2)

Do you have any comments on our proposed guidance regarding taking into account whether it is safe and reasonable practicable for a customer to pay by prepayment?

Broadly we support the proposed guidelines as summarised in Appendix 3. Please see also our comments on the language of PAYG in question 2.

Question 4 (Chapter 2)

Do you agree with our view that the current notification periods for switching to a prepayment meter are sufficient?

Yes, we agree with this view provided that the caveat added in 2.29 concerning the overall process context also applies. Please see also our comments on the language of PAYG in question 2.

Question 5 (Chapter 2)

Do you agree with our proposal to require suppliers to give customers information on using a prepayment meter ahead of switching them to prepayment?

Yes, we support this proposal. Please see also our comments on the language of PAYG in question 2.

Question 6 (Chapter 2)

Do you consider it necessary to explicitly require suppliers to provide the ability to top-up by cash where payment is made through a prepayment meter?

We believe that this is a matter for suppliers. However, given the long history of cash-based services that have been provided in this country we believe that a short-term option would be that suppliers should seek a consumer opt-in before installing any solution that was not capable of providing good quality cash-based service, especially for consumers who have come to prefer this approach. We believe that failure to offer *at least* all the benefits that smart-PAYG customers already enjoy will be seen as a retrograde step by a key customer segment where the vulnerable and fuel-poor are already statistically over-represented.

Please see also our comments on the language of PAYG in question 2.

Question 7 (Chapter 2)

Do you agree with our proposal to issue guidance on identifying vulnerability prior to disconnection and require suppliers to have regard to this guidance through a licence amendment? If not, what else is needed?

We believe that this is a matter for suppliers, and that best practice guidelines are likely to be helpful.

Question 8 (Chapter 2)

Do you have any comments on our proposed guidance regarding identifying vulnerability prior to disconnection ?

We believe it would be helpful to clarify in the context of the change-of-supplier process what information, if any, concerning vulnerability issues held by an outgoing supplier should be available to an incoming supplier. It is recognised that this may raise data protection issues.

Question 9 (Chapter 2)

Do you agree that suppliers should ensure rapid reconnection and provide compensation on a voluntary basis where customers have been disconnected in error?

We agree with this, although the details are a matter for suppliers. We would note however that the question of compensation can be expected to be quite different in a residential (domestic) and small business environment. While a residential customer may suffer increased health risk or other social inconvenience as a result of an unexpected power cut, some small businesses may suffer serious financial damage or other consequential loss.

Question 10 (Chapter 2)

Do you agree with our view that the current notification periods for disconnection are sufficient ?

We support this provided it is linked to the additional context outlined in section 2.56 and also to the issues with micro-generation and the fuel poor which we highlight in our answer to Q12.

Question 11 (Chapter 2)

Do you agree with our proposal to explicitly set out in the supply licences that load limiting and credit limiting amount to disconnection in certain circumstances ?

We agree with this proposal as far as it goes, but we also believe that section 2.58 to 2.64 could be much better structured in its descriptive analysis. Please see also our comments on the language of PAYG in answer to question 2.

In particular, in section 2.58 various "new approaches to disconnection for unpaid charges" are contemplated:

1. Load limiting. The implication here is that a customer has a restricted power limit set as a reaction to previous payment delinquency. It ignores the possibility that some customers might willingly engage in such a contract in order to secure a better tariff, and yet others will find[3] that the supposed sanction allows them to watch TV but not to prepare the baby's milk. It should also be noted that the continuous *average* consumption for a UK household[4] is under 500W – less than 3% of the nominal full power available.
2. Credit limiting. This has been a feature of good PAYG systems in GB for nearly 20 years, and is NOT introduced by smart metering. This is the very point we wished to make in our answer to Q2, and in our general comments on PAYG in question 17.
3. Time limiting. This *is* new, if you discount the introduction 15 years ago of no-disconnect times, and nearly 20 years ago of Budget Modes, where a consumer could *choose* locally and at his sole discretion to operate on, say, £1 per day.

We believe that the crucial distinction to be made (and which must not be imposed on the consumer without prior counselling) is that in some modes there is a repercussion that occurs more or less automatically (supply interruption, load limit, time limit, price penalty, whatever) while in others, this does not happen. PAYG normally falls in the former category with supply interruption being the automatic repercussion, while "unrestricted" falls in the latter.

Question 12 (Chapter 2)

Are there any potential protections that should be considered regarding disconnection and prepayment for non-domestic customers? If so, what are these? Please provide evidence to support your views.

We are concerned that there is no recognition in the proposed Spring Package of some of the issues that arise for customers that have smart meters operating in PAYG mode One technical issue is that if such a meter disconnects the supply, due perhaps to debt or fixed charge recovery rather than energy consumption, then any local micro-generation will automatically disconnect due to the Safety requirements (unless a full changeover scheme is installed which would enable stand alone generation). This is likely to be a very real issue as social landlords roll-out solar PV, fuel cells or Sterling engine microgen solutions in properties where there will be a statistically high representation of fuel poor and PAYG customers who may rely on these as a prime electricity source. To cover these situations suppliers should be obliged to provide a "trickle disconnect feature" and in this mode consideration should be given to suspending debt recovery, particularly for fuel poor customers.

[3] See for example Ofgem, *Consumer research on disconnection methods – Report by FDS*, Feb 11, p50. The TV figure is from David MacKay – *Sustainable energy without the hot air*.
[4] Unrestricted, Profile Class 1 (ie all except Economy 7) Source – Ofgem.

As raised in our response to Q9, we would note with reference to section 2.67 that the question of compensation can be expected to be quite different in a residential (domestic) and small business environment. While a residential customer may suffer increased health risk or other social inconvenience as a result of an unexpected power cut, some businesses may argue that they would suffered real financial damage and other consequential losses because they depend operationally on energy supply. Given that the installation of the new technology *introduces* the new problem, these customers will want to know who is liable and to what extent if there is a failure.

We also believe that the assumption made in section 2.70, to the effect that SMEs seeking an energy supply can be expected to have bank accounts, is a fair one.

Questions in Section 4

We take note of the statement in the opening paragraphs that "the focus of these proposals is on the immediate issues raised by suppliers who are installing smart meters now" and that further measures may be taken in due course to cover the mandated rollout.

Question 13 (Chapter 4)

Do you agree that there should be an obligation on the original supplier to offer terms for the use of the meter?

If "the original supplier" includes both such suppliers and their agents, then this seems unavoidable unless *all* suppliers can agree to contribute their investments to a common, independent, pool which will then offer the same terms to all users. Please see also our reply to question 16 where we offer a solution based on the assignment of independent agents' contracts.

There appear to be other inescapable principles that arise predictably and inevitably due to the effects of customer switching. These are:

- due to the long-term randomizing effects of switching there is no necessary correspondence between a supplier's rollout base and its base at a later date
- all suppliers must be able to work with all meters
- for any given new customer, no supplier can depend on the presence of any metering feature that falls outside the minimum requirement
- no supplier can deliver a tariff offering unless (a) it is viable within the minimum requirement or (b) the supplier is willing to contemplate fitting new meters or comms to deliver it.

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We believe that the barriers identified in sections 4.17 to 4.20 are real and serious. On the final point, we believe that basing successive contracts on the model set up by the original supplier and his agents is highly questionable as some or all of these parties may cease to trade. It is better, for clarity, that the baton should move with the supplier.

We would add that although Registration (as a function of the DCC) has now been delayed until 2 – 3 years *after* the DCC is operational[5] (which would place it in 2015/16), there is nevertheless much that can be done both during the Foundation and other interim phases to facilitate the transfer when it is implemented. We would strongly advise that the core data fields that make up a Registration record should be agreed among Suppliers at the earliest possible opportunity, and certainly not later than when the "'Smart' change of supplier arrangements become standard" in Q4 2012[6].

Question 14 (Chapter 4)

Do you have any comments on the requirements for terms to be reasonable and non-discriminatory and factors we would propose to take into account?

We believe that commercial interoperability is fraught with difficulty, not least because there are many rental models that have been and could be developed, and both risks and costs will vary significantly depending on a number of variables such as:

- meter prices, which should fall over time but are also dependent on volume commitments made by purchasers.
- installation costs, which are dependent on a number of factors that are not fully predictable (eg labour costs, densities, dual fuel exchanges in one visit, access rates and success rates) and that are likely to be influenced by the quality of data held relating to dumb meter installations.
- the period over which the meter installation is depreciated and the expected technical and commercial life of the metering system.
- whether labour costs as well as metering system equipment costs are amortised over the expected life of the meter.
- the approach taken to the treatment of specific installed metering system costs, which may involve differentiating particular types of meter point or years of installation versus pooling all installed meters in an average price as was the previous practice of Transco before meter competition was introduced, and of the DNOs (although the latter have never included an amortised installation cost).

We suggest that the least bad solution is that an independent "pool" is required. In addition to the issues raised above some of the difficulties related to contracting and determining what is fair and reasonable are:

1. What is fair and reasonable to one buyer, or one seller, may not be so to another. Thus neither providers nor procurers of services can assume that they can negotiate the same terms from all counterparts.
2. Buyers could (will) find they are buying the same service at different prices, due to the contract history.
3. Due to normal diligent negotiating procedures some terms of some contracts will end up much more favourable than others. Aggrieved parties will, of course, be quickest to spot the *downside* of their treatment by others.

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[5] See for example Ofgem/DECC ~ *SMIP Response to Prospectus Consultation, Central Communications and Data Management,* March 2011, section 2.14.

[6] As reported in the table on P2 of Ofgem/DECC ~ *SMIP Response to Prospectus Consultation, Implementation Strategy,* March 2011.

4. It is hard to imagine a lawful process whereby differences could be identified, discussed and resolved.

We therefore support the proposition as far as it goes, viz that terms should be reasonable and non-discriminatory, but we have serious difficulty in envisaging how this could ever be validated. The proposal seems to lead towards the old JPW model, except in this instance none of the parties is supposed to be regulated.

Question 15 (Chapter 4)

Do you agree with the proposed obligation that terms should be transparent?

We believe "visible" is a better term, as it draws attention to what exactly is to be made known, and to whom.

Transparency (visibility) implies cost reflectivity relating to any specific meter installation. The problems with the direct cost-reflective approach (of which we have direct experience as we were early participants in the market from 2003 onwards) are that:

- It can encourage meters to be removed by incoming suppliers if the costs of an installed meter have fallen significantly during the rollout (either from increased purchasing power as volumes increase or from lower costs as densities increase and efficiencies are delivered). In addition increased life expectancies will also significantly reduce rentals and thus encourage early meter replacements. This creates a perverse investment incentive, because the *belief* that future tranches will be cheaper places higher risk and higher costs on the earlier tranches, establishing a self-fulfilling prophecy.
- Suppliers and agents are faced with a significant administration task as there will be many different meter rental charges created over, say, a seven year rollout which will reflect the various purchase and installation costs.

As a minimum, we believe it would be beneficial if outgoing suppliers were obliged to offer incoming suppliers both a buyout and a rental option for installed hardware. This will help the in-coming supplier to maintain a consistent business model for asset provision if he really wants to. However, it is recognised that the administration and financial issues to support this may be high.

An important issue for both incoming suppliers and Meter Asset Providers (MAPs) is that both parties should have early visibility of the other party during the change of supplier event. The current industry processes do not facilitate this and suppliers do not have prior knowledge before appointing their MOP of who owns the metering system and therefore what the commercial terms associated with it are likely to be. It would be very timely to include in the Spring Package an obligation on the industry to improve this visibility, particularly for the Gas industry process.

We believe it would be useful to convene a workshop to discuss these issues between all interested parties with a view to:

- Ensuring that commercial complexities do not negatively affect customer service
- Providing a reasonable commercial environment for competition and innovation
- Providing a reasonable investment incentive to support mainstream operational volumes

- Minimising wasted investment that will eventually flow through as higher prices to consumers.

With this complexity in mind, we believe that some engagement would be helpful from Ofgem to create an effective market capable of serving consumer interests over the medium to long term.

Question 16 (Chapter 4)

Do you agree with our proposed approach around an obligation to offer terms for use of communications services as part of the Spring Package, and the timeframe for any such obligation?

Independent agents are now emerging in the smart metering communications domain and we believe Suppliers could achieve commercial interoperability and overcome many of the inherent security and privacy issues of the Foundation market if they were encouraged to use these competitive specialists (either independent , or arms-length in-house[7]) via *assignable contracts* that transfer the non supplier specific services and contractual terms to incoming suppliers. This solution would also allow prepayment services to be transferable.

We believe this is a more practical solution than requiring on-going operational and critical security/encryption data to be continually transferred between service providers, whether suppliers or agents, on Change of Supplier events: an issue that will be addressed presently by the DCC. It would also provide, as an option, a clear and ready-made structure for the eventual assignment of all such contracts to the DCC.

Question 17 (Chapter 4)

Do you have any comments on our proposed approach for dealing with prepayment?

We repeat here our observations under question 2.

"Pay-as-you-go" or PAYG describes much more accurately than "Prepayment" the actual service available from a smart meter. In particular the expression "prepayment mode" is highly *mis*leading because (a) due to the long-standing but little-used facility of credit limits in PAYG meters, PAYG does not necessarily operate in advance and (b) due to the possible use of up-front deposits there is no guarantee that other tariffs operate in arrears. Smart metering completely de-couples the relationship between how people are metered and when they pay regardless of notional modes of operation and we believe that language that is inclined to institutionalize old practices should wherever possible be avoided.

We welcome the spirit of section 2.24 which contemplates improved use of language in this respect but the solution offered for example in Appendix 2 - *Proposed amendments to the standard conditions of electricity and gas supply licences* would benefit greatly

[7] The test for "arm's length" should be that an out-going supplier should not have continued access to either the security keys or the meter data of a switching customer.

from some further improvement. There is a draft definition proposed for “Prepayment meter” that turns on the ideas that a Domestic Customer is “allowed” to pay “in advance”, “through that meter”. This is the language of coin meters, and is in our view not only completely obsolete but also actively confusing. The use of all three key phrases is entirely arbitrary.

There is also a lack of clarity over whether the proposed guidelines apply to

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5. only PAYG customers who are “struggling to pay”, as per section 2.14
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The new definitions should in our view take into account that the core differentiating concept between PAYG and other modes of supply, is that in PAYG contracts the consumer accepts that if he does not meet the necessary payment rules his supply will be interrupted via a *different process* (and probably a much more automatic one) compared to that which applies in other modes of supply. The nature of the interruption, too, is different in that in PAYG mode the consumer can restore the supply under his sole agency (by using the top-up process) and at his sole discretion.

There are many other factors that flow from this. In “pure PAYG” mode (ie not sub-group 3 above) a consumer need have no obligation (whether to maintain his credit rating, or for any other reason) to consume anything at all, or even to keep his supply “mostly on”.

Our criticism over this issue underlies many of the questions in the Spring Package.

Question 18 (Chapter 4)

Do you believe there should be a *de minimis* threshhold before commercial interoperability obligations apply and if so, at what level should it be set?

There may be an argument for a de mimimis threshold but we would wish Ofgem to encourage the use of independent agents who could deliver interoperability post change of supplier, as described for example in our answer to question 16. This could be applied to all smart installations.

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