

October 13th, 2011

Smart Metering Implementation Programme – Roll Out Team  
Department of Energy & Climate Change  
3 Whitehall Place  
London  
SW1A 2AW

Dear Sir,

**Smart Metering Implementation Programme Consultation – Draft Licence Conditions and Technical Specifications for the Roll Out of Gas and Electricity Smart Metering Equipment**

Please find First Utility's responses below.

*Q1. The Government is seeking new evidence and views on the impacts of specifying a completion date that is in the earlier part of 2019.*

The view of First Utility is that an earlier implementation date can only be achieved by addressing the disincentives which currently exist in relation to early rollout of compliant smart metering technology. These include uncertainty over smart rental payments for compliant smart meters prior to DCC establishment and the issue of DCC communications contract adoption. The sooner DECC takes steps to address this uncertainty, the sooner widespread smart meter roll out will occur and the more likely the Government will be to meet its accelerated completion date.

*Q2. Do you think the licence conditions (AA1-2) as drafted effectively underpin the policy intention to complete roll out of Smart Metering Equipment by a specified date? Are there any areas where you consider further clarification is necessary?*

We agree that the inclusion in the supply licence of a specific date by which Smart Metering roll out must be completed will provide suppliers with a clear deadline to work towards. However, we feel that suppliers may need to be given the ability to apply for a warrant to gain access to a property for the purposes of Smart Meter installation once all other options have been exhausted, although perhaps this ability could take effect towards the end of the rollout in the situation that there are significant numbers of customers who have not yet had a Smart Meter installed.

*Q3. Do you agree that the licence conditions as drafted effectively underpin the policy intention to deliver Smart Metering Equipment with the functionality and interoperability required to meet the business case?*

We agree that the licence requirement to only install Smart Metering equipment compliant with the SMETS should assist in achieving this aim.

*Q4. Do you agree that Smart Metering Equipment should be compliant with the SMETS extant at the time of installation and that it should continue to be compliant with that version of the SMETS through the operational life of the equipment?*

Yes. Although already installed equipment may not be compliant with later versions of the SMETS, it seems logical to require that it be compliant with the current version of the SMETS at the time it was

installed. Any approach other than this could potentially undermine expected asset life and result in increased unit costs which would ultimately be passed on to the consumer.

*Q5. Do you agree that in some exceptional circumstances suppliers should be required to retrofit Smart Metering Equipment that has already been installed?*

The potential for such a requirement represents a potential risk to suppliers and is likely to disincentivise early technology rollout and expected asset life. We therefore do not agree that retrofitting of Smart Metering Equipment should be a requirement.

*Q6. Do you think that the licence conditions (AA3-6) as drafted effectively underpin the policy intention for the new and replacement installation of Smart Metering Equipment?*

We agree that a requirement for domestic properties similar to that which already applies in the non domestic sector for sites above a certain size requiring installation of smart technology in a new property or in the case that a meter is replaced would be appropriate.

*Q7. What period of notice do you think would be appropriate before the new and replacement obligation comes into effect?*

This will largely depend on how widespread and easily available compliant smart metering technology is. If it is the case that suppliers of whatever size should have no difficulty in accessing this technology, First Utility feels that a six month period of notice should be sufficient.

*Q8. What contribution do you think the interoperability licence condition as drafted could play in ensuring that suppliers work together to ensure Smart Metering Equipment is interoperable?*

We feel that an obligation of this kind would be likely to incentivise early roll out of domestic smart metering technology (as the risk of assets being replaced unnecessarily before the end of their economic life is reduced) and provide reassurance to consumers that their right to switch will not be restricted by potential interoperability issues.

*Q9. Do you think the licence conditions as drafted effectively underpin the policy intention to ensure Smart Metering Equipment is interoperable?*

Yes.

*Q10. What role could a dispute resolution mechanism have in ensuring interoperability? What key features should such a mechanism have?*

A dispute resolution mechanism of the type proposed could be very useful but it would need to be backed by the interoperability licence condition discussed above to be fully effective. The dispute resolution mechanism should be overseen by an independent third party to ensure impartiality and quick resolution of issues.

*Q11. For the smaller non domestic sector do you agree that where there is a Current Transformer meter then suppliers should be required to install Advanced rather than Smart Metering Equipment?*

Yes, as meters of this type are only very rarely found in the domestic sector and most will be used for non-domestic purposes. We agree that it would be uneconomic to develop a CT meter providing

the additional functionality proposed for domestic smart meters for this reason and that AMR technology should therefore be substituted in these instances.

*Q12. Do you think that the licence conditions as drafted effectively underpin the policy intention for Current Transformer meters?*

Yes.

*Q13. Do you think under the new and replacement obligation gas suppliers should be given the option to wait for the installation of electricity Smart Metering Equipment before installing the gas Smart Metering Equipment?*

We believe that gas suppliers should be given this option as long as this does not then lead to an unnecessary delay to the installation of electricity Smart Metering Equipment. Perhaps a period could be defined (possibly a month) in which the supplier would have this flexibility before being required to go ahead and install gas Smart Metering Equipment irrespective of whether or not electricity Smart Metering Equipment has already been installed.

*Q14. Do you think there are any other barriers to gas Smart Metering Equipment being installed before electricity Smart Metering Equipment?*

We are unable to think of any at this stage.

*Q15. What do you think the implications would be of extending the new and replacement obligations to the licences of other relevant parties in relation to installing Smart Metering Equipment in new developments without the involvement of a supplier? Do you think mechanisms other than licence conditions should be considered to achieve the policy objective?*

We feel that mirroring the licence requirements into the licences of any other parties who might potentially be involved in meter installation or replacement would provide reassurance to consumers and overcome potential questions relating to possible installation of non compliant technology.

*Q16. Do you think the roll out of Smart Metering Equipment has any specific implications for the provision of emergency metering services?*

We believe that the potential issue whereby an emergency meter replacement could result in a compliant smart meter being replaced with a dumb or non compliant smart meter could be addressed by mirroring the licence conditions on interoperability and AMR / smart metering provision dependent on the consumption and usage of the premises supplied in the gas and electricity DNO licences. These licence conditions should apply to all parties who could potentially be involved in meter installation although we note that this could require the creation of new categories of licence for parties involved in this function who do not currently hold one (e.g. ESCOs).

*Q17. What period of notice do you think would be appropriate before the obligation to provide an IHD comes into effect?*

This is largely related to how the Government feels the required information should be provided. In the case of a stand alone device, it would be impractical to mandate provision prior to the widespread availability of these. Therefore, a reasonably significant period of notice might be

required (e.g. six months). If the Government determines that it is reasonable for the information to be provided by any means capable of doing this (i.e. web portal, phone app etc.) then the required notice period could be significantly shorter (perhaps one month). However, we do not feel that there should be any requirement to provide an IHD prior to DCC establishment.

*Q18. Would the consumer changing their supplier raise any particular issues with regard to the approach set out for the provision of IHDs?*

In theory, a change of supplier should not make any difference to this. However, as stated above, we feel that a Government determination that the required information can be provided by means other than a stand alone device as long as the information can be delivered in the necessary format and with the necessary frequency, should make switching simpler and faster and enhance the overall consumer experience.

*Q19. Do you think the licence conditions as drafted effectively underpin the policy intentions set out for the provision of IHDs to domestic consumers?*

We feel that the licence condition is generally effective but would ask for further details relating to responsibility for the IHD where the customer has changed supplier in the 12 months since the IHD was provided.

*Q20. Do you agree that the Standard Licence Conditions identified above require consequential changes in light of the roll out licence conditions? Do you agree with the Government's proposed approach?*

We agree that the licence conditions in question will require consequential changes, particularly in relation to classification of premises. We agree with the Government's approach.

*Q21. Do you think there are any other consequential changes to existing licence conditions needed in order to make the proposed roll out obligations work as intended?*

We are unaware of any.

*Q22. Do you think there are any consequential changes to existing legislation needed in order to make the proposed roll out obligations work correctly?*

We are unaware of any.

*Q23. Do you think there are any consequential changes to existing codes needed in order to make the proposed roll out obligations work correctly?*

Although it may not be, strictly speaking, a consequential change we feel that much greater benefit would derive to both domestic consumers and the market if it were possible for gas SSPs (smaller supply points, i.e. primarily domestic sites) to be individually reconciled. Although we understand that discussions are taking place around this issue as part of Project Nexus, the sooner this is put in place the sooner the associated benefits will derive to the UK market and consumers.

*Q24. Do you think that there are other requirements that the Government should adopt in the SMETS?*

We believe that the existing requirements are sufficiently comprehensive.

*Q25. Do you agree that all the requirements recommended in the IDTS should be adopted by the Government in the SMETS?*

Again, these seem comprehensive.

*Q26. Do you agree that the security requirements recommended in the IDTS are proportionate to the level of risk that the end to end Smart Metering System faces?*

We agree that security is an important area but we do not believe that the security requirements should be so prescriptive that unnecessary cost is placed on smaller players as this may have undesirable consequences for competition. For example, the proposed requirement for ISO 27001 accreditation for each supplier using smart metering may be disproportionate.

*Q27. Do you agree that the process outlined above is a suitable way forward to develop the SMETS?*

The overall process seems reasonable, however, we would request that the Government gives consideration during any further development as to the likelihood of any potential impacts on competition that might result from this. We would also like to reiterate our view that this should be progressed as soon as possible so that the resulting certainty over SMETS will incentivise widespread smart meter rollout.

*Q28. Do you think that the SMETS should ultimately be governed as part of the Smart Energy Code? What alternative arrangements could be adopted for the ongoing governance of the SMETS?*

It would seem logical for the SMETS to be governed as part of the Smart Energy Code in order to ensure efficiency in administration and avoid any unnecessary duplication.

*Q29. What unit manufacturing cost reduction do you think can be achieved for Smart Metering Equipment over the next 20 years?*

It seems likely that a significant decrease in unit manufacturing costs for Smart Metering Equipment will be achieved over the next 20 years. We would agree with general industry views that the Government's assumption of a 13% cost reduction over this period is low and feel that something in the region of 25 – 30% might be more appropriate. 20 years is a very long time in technology terms and it may be that our estimate is also too low, however we prefer to err on the side of caution.

*Q30. Do you agree that the Government should include a requirement for a Communications Hub in the SMETS?*

This is likely to increase the unit cost for Smart Metering technology. However, if the utilisation of a Communications Hub means that it is less likely that the meters themselves will have to be replaced before the end of their economic life then we agree that this will provide a definite benefit to both consumers and earlier roll out of technology.

*Q31. Do you agree with the estimated costs and benefits for outage detection and the Government proposal to require the Communications Hub to include the equipment necessary to provide electricity outage detection?*

We agree that this would provide benefit to both network operators (as this information would provide a better view of what is happening on those networks for balancing purposes) and to suppliers and customers as suppliers will be able to react more quickly to outage situations and provide those customers who require it with extra assistance in these circumstances.

*Q32. Do you agree that the DCC Communication Service Providers should specify the requirements for outage detections as part of their general role in specifying the WAN technology?*

Yes.

*Q33. Do you think that the Communications Hub should also have the functionality to send a communication to DCC when power is restored?*

This will provide benefit in line with our answer to Question 31 above.

*Q34. Do you agree with the Government's proposal that fully integrated electricity meters and Communications Hubs will not comply with the SMETS?*

We agree that this would not be appropriate as the integration of meter and Communications Hub in this way could lead to a reduced asset life and thus higher unit costs if a failure of the Communications Hub meant that the meter also had to be removed.

*Q35. Do you think the Smart Metering Implementation Programme objectives would be better met by:*

*a) Using the SMETS to mandate a separate Communications Hub with a fixed WAN transceiver?*

Or

*b) Giving suppliers flexibility over options for configuration of the Communications Hub?*

In line with our answer to Question 34 above, option b) is preferable as this will allow scope for innovation which should facilitate competition between suppliers and energy service companies as a result.

*Q36. Do you agree there should be no restrictions on the HAN standards adopted by suppliers, provided they are available as a European (CEN, CENELEC or ETSI) or International (IEC or ISO) standard?*

Yes, as this will then provide scope for innovation and differentiation which should assist competition.

*Q37. The IDTS has recommended that all standards should be recognised or be in the process of being recognised by 31 December 2014; do you agree with this recommendation?*

Yes. The earlier standards are agreed, the earlier involved parties will have the necessary certainty in this area. This will then encourage roll out of compliant technology as soon as possible.

*Q38. Do you think that regulatory obligations are needed to underpin a systematic approach to testing of HAN standards during the Foundation phase?*

Yes, we believe that both energy suppliers and metering suppliers should be obligated to provide a homogenous HAN environment that is open and promotes innovative energy management and awareness solutions. Ultimately this needs to be proven by participants prior to the beginning of volume roll out.

*Q39. Do you agree with industry's recommendation that DLMS should be adopted as the application layer for communications with the DCC? Do you believe there are any consumer, economic or technical issues with this solution which could be circumvented by an alternative approach? Do you have any economic, technical or consumer evidence to assist Government in evaluating industry's proposal?*

Yes, DLMS seems to provide a mature and widely adopted technical specification that can be adapted for GB requirements.

*Q40. Do you agree with industry's recommendation that DLMS and Zigbee SEP 1.x should be adopted as the application layer for communications within the consumer premises, provided they install the necessary translation equipment? Do you believe there are any consumer, economic or technical issues with this solution which could be resolved by an alternative approach? Do you have any economic, technical or consumer evidence to assist Government in evaluating industry's proposal?*

Yes. Zigbee in particular provides a commercially proven and widely adopted technology that will enable more rapid development and roll out of suitable solutions. It also benefits from being supported by sufficient experience and competition in the device supply chain thereby ensuring competitive volume supplies of suitable components and solution options.

*Q41. Do you think the Smart Metering Implementation Programme objectives would be best met by the proposed approach above? Or should a single, network layer technology standard such as IPv6 be mandated?*

DCC should be responsible for defining, building and operating the WAN that delivers on the requirements of the programme and market participants. It is essential that as well as robust security the installation, replacement and operational processes are both robust and minimise cost to serve. It therefore makes sense for the organisation responsible for delivering the services to have a large say in the details of the implementation assuming that all mandatory requirements are delivered.

*Q42. Is the provision of a single network layer address for each Communications Hub a reasonable and sufficient functional requirement for the Smart Meter WAN? Will this requirement limit potential future capability or present challenges, for example, in multi occupancy buildings?*

As above, this implementation detail should be managed by DCC as long as the solution delivers on the requirements of the programme and market participants.

*Q43. Do you think that maximum and minimum demand functionality should be included in the SMETS?*

We believe that the costs resulting from the inclusion of this functionality would considerably outweigh any benefit which might be provided.



*Q44. Do you think that network registers should be included in the SMETS?*

While we agree that potential benefit would derive from including network registers in the SMETS, there is no doubt that this will add to the cost of the Equipment and we strongly believe that the DNOs, as they will benefit from this, should defray at least part of this increased cost.

*Q45. Do you think that the prepayment meter contactor switch should be utilised to protect consumer premises from “floating neutral” network faults?*

Again, it seems likely that the inclusion of this functionality would be likely to result in increased cost of Smart Metering Equipment and we believe that our view presented in our answer to Question 44 above applies equally here.

*Q46. Do you agree with the proposed approach for consumer to access data and transfer it from the HAN via a separate “bridging” device?*

Yes, it is imperative that the data within the HAN is available to the consumer for syndication to other downstream systems. This enables innovation across the industry and across a range of energy management applications.

*Q47. Do you have any views on the option presented to ensure that electrical contractors can work safely and efficiently between the electricity meter and the consumer unit/fuse box?*

We do not believe that the benefit deriving from this would outweigh the extra cost of providing this functionality. The rules relating to this as they currently stand seem appropriate and we see no need for them to be changed.

*Q48. Do you agree with industry’s proposals for an overall architecture of an application layer standard with translation through a Communications Hub to a HAN?*

Yes.

*Q49. Where do you believe that translation is best managed:*

*a) At the Communications Hub*

*or*

*b) At the DCC?*

We believe that this is best managed at the Communications Hub.

*Q50. Do you agree that the IHD should only be required to display ambient feedback based on energy usage?*

We believe that any IHD should provide concise and clear information that the consumer can influence. The Government should resist over specifying the IHD device and creating complexity that increases the cost. We believe that more complex applications and analytics will be better and more economically supported using devices such as smart phones, tablets and PCs.



*Q51. Do you agree that Smart Metering Equipment should be designed to support the calculation and/or display of account balances as described above, even though suppliers may not be initially mandated to invoke such functionality for credit customers?*

No, we do not believe that the smart meter design should be complicated with the concepts related to account balances beyond what is required for the support of prepayment services.

*Q52. What do you think the costs and benefits are of mandating suppliers to display an account balance (over and above those arising from display of information on cumulative cost of consumption) for credit customers on their IHD?*

We believe that the cost of providing an accurate account balance across the range of products, services and payment types has many challenges for suppliers. We believe that this information should be available to the consumer via many other channels and that the IHD's purpose is primarily to make the consumer aware of their energy consumption over the immediate and recent past. Given the availability of this information through many other channels the value derived is low compared to the additional complexity to the device and back office systems.

*Q53. Do you agree with or have any comments on the Government's proposals for the outstanding issues from the Response?*

These seem appropriate.

*Q54. Do you think that an assurance framework, underpinned by regulatory obligations, is needed to support the delivery of the required functionality, interconnectivity, interoperability, and security of Smart Metering Equipment?*

Yes, the competitive nature of the UK market is enabled by a consumer's ability to switch supplier. Any technology roll out must be accompanied by suitable controls to ensure interoperability so that consumers do not lose capability or incur additional costs when moving between suppliers. Further, controls on interoperability and conformance to standards should drive improved economies of scale and promote innovation within the marketplace.

*Q55. Do you agree that as part of any assurance framework adopted, there should be a testing regime in place to support the delivery of the required functionality, interoperability and security?*

Yes, see above, equipment manufacturers need to ensure that all technical, safety and interoperability standards are met and all suppliers should have an obligation to deploy only compliant devices. In the early stages of a roll out, such conformance is only likely to be achieved via a testing or certification programme. Potentially at a later stage when the technologies are more mature, less emphasis on testing and conformance may be required.

*Q56. What are your views on the options outlined for a testing regime? Are there other options that should be considered?*

A certification scheme is preferred.

*Q57. Do you think that a different approach to assurance is necessary for the Foundation and enduring phases?*

Yes, there is a potential need for more emphasis on certification and accreditation in the early stages of the programme roll out until the technologies mature.

*Q58. Do you think that the activities outlined above are a suitable way for achieving interoperability across Smart Metering Equipment cryptographic functionality? How else could this be achieved?*

We agree that further development is required and would urge that the Government ensures that as many stakeholders as possible are given the opportunity to provide input into this process.

*Q59. Do you agree that cryptographic / key management is necessary to secure the end to end Smart Metering System?*

We agree that some kind of encryption is required in order to prevent unauthorised access to the end to end system.

*Q60. Do you agree with the Government's assessment of the advantages and disadvantages of the cryptographic solutions identified above? What other options should the Government consider?*

These seem comprehensive.

*Q61. Do you think that it would be appropriate for the DCC to be responsible for cryptographic key management for the end to end Smart Metering System? What other options should the Government consider?*

Yes. DCC should be responsible for operating the end to end network provisioning of smart metering devices down to the Communications Hub.

*Q62. How do you believe the security approach should be applied to opted out non domestic consumers? Do you see any issues with the approach?*

We do not believe that there should be any requirement to apply the security approach to opted out non domestic consumers. If they then decide to opt in at a later stage they should be required to accept the security approach as part of this decision.