CHAMELEON

Attention: Smart Metering Implementation Programme- Roll-Out Team
Department of Energy & Climate Change
3 Whitehall Place
London
SW1A2AW

Email: smartmetering@decc.gsi.gov.uk

Consultation reference: URN 110/836

13 October 2011

Dear Sir / Madam,

RE: DECC Smart Metering Implementation Programme, August 2011.

Chameleon Technology (UK) Ltd (Chameleon) welcomes the opportunity to provide feedback to the Department of Energy & Climate Change on the smart metering implementation programme.

Chameleon designs and manufactures in-home displays and energy management product solutions for the smart metering market. We are committed to playing a proactive role within the industry to make the smart metering implementation a success for the nation and we have a natural close regard for ensuring that consumers benefit materially from the roll-out.

To this end, please find below our responses where appropriate to the consulatation questions under reference URN 11D/836. These have been summarised in a table format for ease of reference.

Yours faithfully,

Chameleon Response to URN 11D/836

No.	Question	Response
1.	*The Government is seeking new evidence and views on the impacts of specifying a completion date that is in the earlier part of 2019.*	
2.	*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? Please explain your reasoning.*	
3.	*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? Please explain your reasoning.*	
4.	*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? Please explain your reasoning.*	
5.	*Do you agree that in some exceptional circumstances suppliers should be required to retrofit Smart Metering Equipment that has already been installed? Please explain your reasoning.*	What might constitute an „exceptional circumstance“ would need to be defined to be able to reply more fully. But, generally, suppliers should not be required to retrofit SME because this will serve as a significant disincentive to run necessary larger trials and pre-mandate deployments. This will increase risk when mass roll-out occurs.
6.	*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? Please explain your reasoning.*	
7.	*What period of notice do you think would be appropriate before the new and replacement obligation comes into effect? Please explain your reasoning.*	
8.	*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? Please explain your reasoning.*	We see the interoperability licence condition as being an effective measure to ensure that suppliers work together with all other industry stakeholders to deliver smart metering equipment that is in line with the SMETS. This will be of particular relevance to the HAN element of the SMETS where continued impetus is required to ensure that the most effective protocols are defined, Continued support should be given to

		the work already completed to this end by industry working groups and associations where consensus on the preferred approach has already been largely reached.
9.	*Do you think the licence conditions as drafted effectively underpin the policy intention to ensure Smart Metering Equipment is interoperable? Please explain your reasoning?*	See response to 8 above.
10.	*What role could a dispute resolution mechanism have a role in ensuring interoperability? What key features should such a mechanism have?*	Whilst we agree with the principle and the objectives behind a dispute resolution mechanism to facilitate the establishment of a truly interoperable smart metering system, we would advocate a high degree of pragmatism in how such a mechanism is applied – especially within the earlier phases of roll-out. Central to this is an acknowledgement that industry is clearly taking all reasonable steps to ensure interoperability from inception and there will be a continued desire to do so with learnings from early deployments. The dispute resolution mechanism should therefore be supportive of this.
11.	*For the smaller non-domestic sector do you agree that where there is a Current Transformer meter then suppliers should be required to install an advanced rather than Smart Metering Equipment? Please explain your reasoning.*	
12.	*Do you think that the licence conditions as drafted effectively underpin the policy intention for Current Transformer meters? Please explain your reasoning.*	
13.	*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? Please explain your reasoning.*	
14.	*Do you think there are any other barriers to gas Smart Metering Equipment being installed before electricity Smart Metering Equipment? Please explain your reasoning.*	

15.	*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? Please explain your reasoning.*	
16.	*Do you think the roll-out of Smart Metering Equipment has any specific implications for the provision of emergency metering services? Please explain your reasoning.*	
17.	*What period of notice do you think would be appropriate before the obligation to provide an IHD comes into effect? Please explain your reasoning.*	This is dependent upon confirmation of the minimum specification requirements and of the compliance process to be employed. If these could be confirmed by December 2011, then obligation to provide an IHD could become effective within six to nine months hence.
18.	*Would the consumer changing their supplier raise any particular issues with regard to the approach set out for the provision of IHDs? Please explain your reasoning.*	If the consumer changes supplier then the IHD should still be operable in respect of minimum mandate functionality, though certain additional functionality may no longer be present, since it may not be fully supported by the new end to end system or be particular to the original supplier.
19.	*Do you think the licence conditions as drafted effectively underpin the policy intentions set out for the provision of IHDs to domestic consumers? Please explain your reasoning.*	
20.	*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? Please explain your reasoning.*	
21.	*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? Please explain your reasoning.*	
22.	*Do you think there are any consequential changes to existing legislation needed in order to make the proposed roll-out obligations work correctly? Please explain your reasoning.*	

23.	*Do you think there are any consequential changes to existing codes needed in order to make the proposed roll-out obligations work correctly? Please explain your reasoning.*	
24.	*Do you think that there are other requirements that the Government should adopt in the SMETS? Please explain your reasoning.*	
25.	*Do you agree that all the requirements recommended in the IDTS should be adopted by the Government in the SMETS? Please explain your reasoning.*	Evolution of the IHD due to progress in consumer electronics and experience gained with deployments should not be unnecessarily held back by too much prescription.
26.	*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? Please explain your reasoning.*	Yes. We believe that the security requirements in the IDTS are proportionate to the level of risk.
27.	*Do you agree that the process outlined above is a suitable way forward to develop the SMETS? Please explain your reasoning.*	Yes.
28.	*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? Please explain your reasoning.*	We would advocate the creation of a cross-industry technical panel to provide ongoing guidance on the evolution of SMETS from Foundation through to the Enduring stages of roll-out.
29.	*What unit manufacturing cost reduction do you think can be achieved for Smart Metering Equipment over the next 20 years? Please explain your reasoning. Please also provide any other comments (accompanied by evidence) on the estimated costs of the Smart Metering Equipment as set out in the Impact Assessment.*	It is expected that reductions in unit process can be achieved as a result of cost reductions in the electronics field, however these will have limits (there is not for example large amounts of memory which will follow a cost erosion curve). Reducing costs to the bare minimum may lead to products that whilst they meet the specification do not engage the householder.
30.	*Do you agree that the Government should include a requirement for a Communications Hub in the SMETS? Please explain your reasoning.*	Yes. This is an absolute requirement. The communications hub is a critical part of the SMETS and will allow for the IHD and releted HAN solutions to be widened and thus offer opportunities for greater customer value to be derived from the programme.
31.	*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? Please explain your reasoning.*	
32.	*Do you agree that the DCC Communication Service Providers should specify the requirements for*	

	outage detection as part of their general role in specifying the WAN technology? Please explain your reasoning	
33.	*Do you think that the Communications Hub should also have the functionality to send a communication to the DCC when power is restored? Please explain your reasoning.*	
34.	*Do you agree with the Government's proposal that fully integrated electricity meters and Communications Hubs will not comply with the SMETS? Please explain your reasoning.*	
35.	*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 Hub33?* *Please explain your reasoning.*	
36.	*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? Please provide evidence to support your position.*	Yes. We believe that standards will be established quickly.
37.	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? Please explain your reasoning.	Yes.
38.	Do you think that regulatory obligations are needed to underpin a systematic approach to testing of HAN standards during the Foundation phase? Please explain your reasoning.	No. We believe the industry is already working towards this in a systematic and timely fashion.
39.	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?	
40.	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	Yes. We agree that ZigBee SEP 1.x is a sensible applications layer for communications within the customer premises

	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?	
41.	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? Please explain your reasoning.	
42.	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?	
43.	Do you think that maximum and minimum demand functionality should be included in the SMETS? Please provide supporting evidence for your response	
44.	Do you think that network registers should be included in the SMETS? Please provide supporting evidence for your response (including the cost implications for Smart Metering Equipment, and any alternative approaches that would provide this functionality).	
45.	Do you think that the prepayment meter contactor switch should be utilised to protect consumer premises from "floating neutral" network faults? Please provide evidence on the costs and benefits to support your reasoning.	
46.	Do you agree with the proposed approach for consumers to access data and transfer it from the HAN via a separate "bridging" device? Please explain your reasoning.	Yes. We agree with the proposed approach in this respect. It upholds the principle that the customer's data is their own.
47.	Do you have any views on the options presented to ensure that electrical contractors can work safely and efficiently between the electricity meter and the consumer unit/fuse box? Please provide evidence to support your reasoning.	
48.	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? Do you believe there	

	are any consumer, economic or technical issues	
49.	Where do you believe that translation is best managed: a) At the Communications Hub; Or b) At the DCC? Do you have any economic, technical or consumer evidence to assist Government in evaluating the options?	
50.	Do you agree that the IHD should only be required to display ambient feedback based on energy usage? Please explain your answer.	It might only be required to give ambient feedback based on instant use – but should not be restricted to this. There are other uses that can be applied which the householder may find more useful – for example, tariff guidance, a longer term view of how the consumer is using their energy and low pre-pay credit.
51.	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 initially be mandated to invoke such functionality for credit customers?	The IHD cannot in itself calculate account balances for credit customers as key information resides in the billing function at the utilities (e.g. payments being cleared). But if all such required data inputs are to be provided via the meter then the IHD can be easily configured to reflect this information to customers.
52.	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?	This is not a significant cost and should therefore be included.
53.	Do you agree with or have any comments on the Government's proposals for the outstanding issues from the Response? Please explain your reasoning.	
54.	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? Please explain your reasoning.	
55.	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? Please explain your reasoning	Yes. This seems like a logical and necessary requirement.
56.	What are your views on the options outlined for a testing regime? Are there other options that should be considered?	
57.	Do you think that a different approach to assurance is necessary for the	The approach to assurance will be different between Foundation and Endurance phases because not all

	Foundation and enduring phases? Please explain your answer.	steps may be available in the Foundation stage as these will be being concurrently established and additionally learnings from the foundation stage will influence the Assurance that will be adopted for the long term.
58.	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?	
59.	Do you agree that cryptographic/ key management is necessary to secure the End-to-end Smart Metering System? Please explain your reasoning	
60.	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? Please explain your reasoning	
61.	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? Please explain your reasoning.	
62.	How do you believe the security approach should be applied to opted-out non-domestic consumers? Do you see any issues with the approach? Please explain your reasoning.	