SMETS 2 consultation questions

Chapter 4 – SMETS 2 Development	
1.	**Do you have any comments on the criteria used in the evaluation of the application layer standards?**
	BEAMA members believe the criteria used are appropriate.
2.	**Do you agree with the proposal to adopt ZigBee SEP / DLMS as the HAN application layer standards for GB?**
	BEAMA members have been deeply involved in the discussions with Government and other stakeholders and believe that the proposals as outlined in the consultation are the correct ones for the GB market.
3.	**Do you agree that equipment should be required to comply with SMETS and a GB Companion specification for ZigBee SEP / DLMS?**
	Yes in relation to SMETS2.
4.	**Do you agree with the overall approach proposed in relation to the HAN physical layer? If not, please provide a rationale and evidence for your position.**
	BEAMA members believe that the overall approach is appropriate and the broad conclusion reached good and relevant for the GB market. BEAMA members see no alternative to the use of 2.4GHz if the programme timetable is to be met. On completion of the technical development and when appropriate product is available, then 868MHz can be introduced as an infill option. BEAMA IHD manufacturers have a concern that there will require to be on-going work to ensure that bandwidth for 868MHz is adequate for the data load , as there is a compromise between range and bandwidth. Achieving the necessary range may require a reduction in bandwidth with concomitant effects on the amount of data that can be transmitted and made available to the IHD/CAD. As part of the 868MHz development, it may be necessary to consider options for managing the available bandwidth.
5.	**Do you have any comments on the criteria used in the evaluation of the physical layer of the HAN?**
	The criteria used were appropriate, but it must be recognized that the physical test of radio performance was based on a small sample, did not reflect the impact of modulation schemes, and for limited functionality may not fully represent 'real life' situations.
6.	**What are your views on the compatibility of the reserved spectrum 870-876MHz with 868 MHz and the value of considering the use of this band?**
	BEAMA members recognize that there needs to be an additional band used for HAN communications in addition to the established 2.4GHz band. 868MHz is recognized as an appropriate alternative band, but as recognized in the consultation, the technologies to use this band for the GB requirements are not yet developed and significant time will be required before equipment will be available. BEAMA members and members of SSWG are in constant dialogue with Government on the timescales required. Our understanding is that 868MHz will work, subject to the concerns expressed in Q4 and can be delivered in an acceptable time frame. It is noted that 870-876MHz band would provide greater performance opportunities but gaining access to the bandwidth and developing the necessary hardware and standards will incur significant delay. Our belief is that the programme should stay with 868MHz and focus on making the most of this option.

7.	**Do you consider that additional measures should be taken to encourage the development of an 868 MHz solution?**
	BEAMA metering, CEDIG members, SSWG members and the ZigBee Alliance are committed to the development of 868MHz equipment in realistic timescales. They do not believe that additional measures are needed.
8.	**Do you agree with the approach to allow the market to determine the balance between 2.4 GHz and 868 MHz? If not, please provide rationale and evidence.**
	Yes. This approach is the only way to ensure that there are appropriate technologies avails for ALL GB households. CEDIG members currently supply equipment using 2.4GHz but do not dispute the need for additional frequencies as 2.4GHz will not meet the need in all sites.
9.	**What are your views on the costs and benefits of the three options identified for deploying wireless solutions (i.e. 2.4 GHz as the default; dual-band Communications hubs; or market led)?**
	Early roll out will be based on 2.4GHz and at the point at which 868MHz becomes available the market will be well placed to decide on the most economic options. The market will decide whether to bear the additional cost of the dual band frequency communications hubs. BEAMA members do not believe that there are any economic benefits for components other than the communications hub to be dual frequency, but again, if there were an economic rationale for this, the market would be best placed to decide on the most economic solution.
10.	**Do you agree with the proposal for a 'fit for purpose' installation obligation on suppliers?**
	Yes
11.	**Do you have any views on the proposed approach to developing a wired HAN solution?**
	BEAMA members have co-operated and supported DECC in its work in this area and will continue to do so. BEAMA supports the proposed actions.
12.	**Do you agree with the proposed scope of functional requirements for a communications hub? Are there any other functions that should be included and what would be your rationale for including those functions (including estimated costs and benefits)?**
	The proposed scope covers most of the requirements that are required to deliver the programs requirements specified to date. BEAMA has established a Communications Hub Grouping with potential suppliers that will be working with DECC to further refine the Comms Hub requirements and bring forward appropriate technologies in the required timescales.. BEAMA notes that the Comms Hub represents a crucial component of the smart metering system with regard to delivering on-going benefits from smart metering. There are other potential functionalities including the measurement of micro-generation energy production, (as covered in page 51) and the two way communications required for smart grid applications in homes such as Electric vehicle charging and heat pumps as well as supporting the onward transmission of data to the consumer's own applications, 3rd party service providers and home energy management devices. The Comms Hub should provide the capability to support future services as this is relatively inexpensive. However, to provide design clarity to those developing the Hub and other components, there should be a limit on the maximum number of devices that the minimum specification Comms Hub can support. BEAMA would suggest a minimum of 4 meter connections and 6 CAD connections, including the IHD connection. For the CAD, there is relatively little hardware overhead required in the Comms Hub for each CAD connection so a higher limit would have little practical impact and this would support a range of new applications and services. Certainly for the early stages of the roll out of smart metering, these services and products are unlikely to be integrated so multiple individual connections will be needed.

13.	**Do you have views on the specification for an 'intimate' interface between electricity meters and communications hubs?**
	BEAMA welcomes the proposal for industry to develop the specifications for intimate hubs. As indicated in Q12 above, BEAMA has established a new industry group which will provide further assistance in these areas. BEAMA has worked with DECC and Suppliers to suggested ways forward in this area, producing a paper in response to the requirement for a "form factor" for an intimate comms hub and a common interface between meter and hub. Our last communication on this subject was late February 2012. Further work is being done within this area but has not yet reached a conclusion. To provide what is required in para. 66 will require an agreement on standards for sizes and connections between individual meter manufacturers, DECC, individual Suppliers and their metering agents plus the chosen CSPs and their comms hub manufacturers. It may also require the manufacture of two types of standard meter – those with a HAN chip embedded and those without (in this case the meter would need the agreed connector for power and communications. This in itself may cause a further issue regarding logistics for MOPs. Whilst BEAMA believe that agreement is possible it is unlikely that this will be gained within the timescales dictated for the completion and publication of the SMETS 2 and the CHTS. With the commercial need for this requirement the industry will move to a solution but perhaps not in the timescales required for initial roll-out.
14.	**Do you agree with the Government's marginal preference for the CSP-led model for communications hub responsibilities, or do you prefer the supplier-led model? Please provide clear rationale for the advantages and risks associated with your preferred option.**
	BEAMA members have no firm opinions on the proposed ownership model. BEAMA believes that it is critical that both the Suppliers and the CSP/DSP bidders are involved in the specification as they both have legitimate interests in its operation.
15.	**Do you agree with the proposal that a CHTS-compliant communications hub should not be mandated for opted out non-domestic sites and that suppliers should be free to use whatever type of communications equipment best supports their processes and WAN service?**
	No comment
17.	**Do you agree that the design and implementation of outage reporting functionality should be assigned to CSPs, documented in the communications hub technical specification?**
	BEAMA believes that outage reporting functionality is best placed with the CSPs. They have the means of detecting loss of supply and communicating the situation on to the DCC for the benefit of the DNOs.
18.	**Do you agree that it would be inappropriate to require meters operated outside DCC to be required to implement outage reporting? Please provide rationale to support your views**
	BEAMA agrees that it is inappropriate to require meters operated outside DCC to have to implement outage reporting, it should be a commercial decisions between the Supplier and customer..
19.	**Do you agree that maximum demand registers should be included in SMETS? Please provide evidence to support your position and provide evidence on the cost implications of delivering this functionality via back office systems or via the meter.**

	BEAMA agrees with the inclusion of maximum demand registers in SMETS. A definition of this has been agreed with DNO and incorporated into SSWG specification. The SMETS requirement must be consistent with the DNO, SSWG specification.
20.	**Do you agree with the proposal not to include the capability to generate additional voltage alerts based on counter thresholds in SMETS 2? Do you have any evidence that could justify including this functionality in SMETS 2?**
	The work done by BEAMA in conjunction with ENA, mentioned in the answer to Question 19, also looked at generating additional voltage alerts. A paper from this work recommended that voltage alerts, as described above, should not be included since the benefits gained from providing such data were "small" compared to cost and delay.
21.	**If DNOs were permitted to access remote disablement functions, should control logic be built into DCC systems or meters? If the logic should be built into meters, should the logic be specified in SMETS 2? Please provide rationale to support your position including estimates of the cost of delivering this functionality under the different options being considered and any evidence relating to safety issues associated with each option.**
	Decision logic should be centralized and communicated within the DCC. The logic should not sit in the meter.
22.	**Do you agree that variant smart electricity meters should be specified in SMETS 2 and that the cost uplift for variant smart meters is similar to that for variant traditional meters? Please provide evidence of costs to support your views on cost uplifts.**
	BEAMA agree that variant meters should and could be specified in SMETS 2. The cost uplifts would be similar to those for similar variants today.
23.	**Do you agree that randomisation offset capability should be included for auxiliary load control switches and registers as described above? Do you have views on the proposed range of the randomisation offset (i.e. 0 – 1799 seconds)? Please provide evidence on the cost of introducing this functionality.**
	For meter manufacturers no comment, but IHD manufacturers feel that if randomisation periods of this magnitude are allowed then it makes it very difficult to calculate accurate energy cost values on the IHD and these would have to be performed on the meter.
24.	**Do you support Option 1 or Option 2 for 'pairing' a CAD to the HAN? Please present the rationale for your choice and your views on the implications that these options have for the technical design of the solution.**
	The ability to pair CADs to the SM HAN is crucial to future development of this market and the delivery of many of the benefits of smart metering. In practice, the requirements for pairing the IHD and the CAD are very similar as they need to be connected by the consumer with no local support and they have equal requirements to protect privacy and system security. Thus it follows that they should be dealt with in a similar manner. BEAMA CEDIG members have supplied a paper to DECC (BEAMA CEDIG White Paper: A Security Model for binding Consumer Devices, 1st Oct 2012) and this sets out a number of scenarios that meet the need to deliver privacy, security and an acceptable user experience for binding IHDs and CADs. BEAMA is willing to work with DECC and other stakeholders to further refine these models and develop an acceptable solution for this issue.
25.	**If Option 2 were adopted, do you agree that obligations should be placed on energy suppliers to support this process by submitting 'pairing requests' to the DCC on request from their consumers?**
	The answer to this question depends on the final agreed solution from the range of scenarios set out in the BEAMA CEDIG paper. The need for obligations will depend on which parties take responsibility for

	the various roles within the process.
26.	**Do you consider that other CAD installation options should be pursued? If yes, please explain the approach you favour and your reasons.**
	BEAMA CEDIG members have supplied a paper explaining their view on CAD installation options as described in Q24.
27.	**Do you agree with the proposal to include in SMETS 2 a specification for a PPMID, connected via the HAN, as described above?**
	BEAMA members agree with this proposal. Today there is an obligation on Suppliers to install meters in positions accessible for consumers. This is especially required for those provided with prepayment meters. It is known, however, that there are currently many meters that are not in convenient locations for prepayment use and it will not be convenient to relocate all of these. Since changing from credit to prepayment will be much simpler in a smart metered world, and there will be payment tariffs needing interaction with the meter, each property needs to be considered as a potential prepayment consumer and it must be assumed that not all meters will be in convenient locations after the roll out. For this reason a PPMID needs to be part of SMETS 2. BEAMA SMA believes that the PPMID can only be connected to the SM HAN since 2-way communication with meters is required. Given the significantly increased functionality of a PPMID IHD, then it should be offered as a variant within SMETS2 and supplied to customers as required. A PPMID IHD may not be so good for delivering energy savings as an equivalent display only IHD if both must meet the same price point.
28.	**Would including the capability to enable gas and electricity supply through a PPMID connected via (a) a wireless HAN or (b) a wired HAN meet GB safety requirements? What impact would including this capability have on the cost of smart metering equipment? Please provide evidence to support your answers.**
	This is a question for HSE, and BEAMA will be prepared to engage in any discussions on this matter.
29.	**Do you agree with the proposal that the communications hub should be specified such that it can support multiple smart electricity meters? How many smart electricity meters should be supported by each communications hub?**
	This question links to Q12. BEAMA members believe that the design of the communication hubs should support multiple electricity meters. With the current technologies that are likely to require a separate meter, or services that require two way communications with the network, it is unclear if more than the 2 meter suggestion would be sufficient. There are options for additional logical connections to the Communications hub, as and when the new electricity meters are installed into homes (for example, resulting from the installation of microgen, electric vehicle charging and heat pumps). There is a question of where the costs of these functionalities lie: at time of mass roll out, or at time of installation of the low carbon technology. Either way the proposed new communication group in BEAMA would be in a position to provide technical advice. BEAMA believes that a minimum of 4 meter connections would provide a good balance of additional cost against future need. It should be noted that this response only applies to single premises.
30.	**Do you agree that a specification for a HHT interface to the HAN should be defined? If yes, please identify the functions that this interface would need to support and the scenarios in which such functionality could be required.**
	BEAMA believe that if a HHT can be used with the SM HAN, without breaching the end to end security of the whole system, then the functionality requirements for the device should be specified in SMETS 2. The main purpose of the HHT would be to provide installation and maintenance of smart metering installations and hence BEAMA SMA would wish to be part of any future work with stakeholders to decide the functions required.
Chapter 5 - Governance and Assurance of Security and Interoperability	

31.	**Do you agree with the proposed approach to the governance of security requirements? If you propose alternative arrangements please provide evidence to support your views.**
	The security requirements have been developed with inputs from many stakeholders including BEAMA and SSWG. The approach is a reasonable one, and is considered to be appropriate for the GB.
32.	**Do you agree with the proposal to establish independent assurance procedures for DCC and DCC users? Please explain your views and provide evidence, including cost estimates where applicable, to support your position. Comments would also be welcome in relation to the impacts and benefits of the proposed approach with regard to small suppliers.**
	No BEAMA comment
33.	**Do you agree with the proposal that re-testing should occur at least at set intervals and more frequently when significant changes to systems or security requirements are introduced? Please explain your views.**
	BEAMA disagree with the proposal. If there have been no relevant changes then there is no reason why the device should be retested. The requirement for re-testing should be necessitated by agreed and identifiable triggers; for example, a change to the product, a change to security requirements.
34.	**Do you agree with the proposal to establish an independent security certification scheme for smart metering equipment? Do you have any views on the proposed approach to establishing a certification scheme or evidence of the costs or timelines for setting up such a scheme or submitting products for certification?**
	BEAMA members consider that DECC's requirement for an independent security certification scheme is a sensible approach. The suggestion seems similar to past certification schemes for metering where manufacturers have presented meters to Ofgem for approval and then carried out self certification of their products. This process will also need to include firmware update certification. BEAMA does have concerns that there could well be a delay due to many companies trying to present their products for certification/approval to the seemingly few independent test houses available at the moment. This could of course be alleviated by CESG recruiting more test houses or expanding facilities. Obviously, at this stage we are unaware of what charges would be made for such certification/approval and the ongoing costs related to the ability to self certify. These costs were not factored into our original cost estimates for products.
35.	**Do you agree that sanctions for non-compliance with security requirements should be included in the SEC? Do you have views on the nature of the sanctions that might be imposed?**
	It is important that such sanctions should not have an impact on consumer access to data. Consumers should not be disenfranchised by failings of Suppliers or other parties.
36.	**Do you agree with the proposal to, in effect, extend the arrangements already proposed for SMETS installations prior to DCC operation, to all installations being operated outside DCC? Please provide evidence of the costs that might be incurred and the impact of this approach on small suppliers.**
	No Comment
37.	**Do you agree that interoperability is central to the development of a successful smart metering solution and that activities related to the assurance of SMETS equipment should be governed by SEC? Please provide views on the governance arrangements that would be appropriate for assuring interoperability of smart metering equipment.**

	Interoperability is central to the successful roll out of technologies. The work carried out by BEAMA and SSWG members has established the basis for this interoperable system, and is well placed to complete the work required to deliver the end-to-end interoperable solutions required. BEAMA and its members, who are also members of SSWG, believe that industry should manage the governance in the future, with other stakeholders including potentially BSI and a compliance and testing company. Given the vital role of BEAMA members in delivering the equipment for the UK roll out, BEAMA believes that it should be a member of an SEC sub group covering this area with other appropriate stakeholders.
38.	**Do you agree with the creation of an 'approved products' list and the requirement on suppliers and CSPs to obtain, retain and provide evidence of appropriate certification should apply regardless of whether they intend to enrol the equipment in DCC?**
	The planned industry led initiative to cover all smart metering products mandated by the program would allow products to be approved and placed on a list. There are many question to be answered on how this system would work, but in principle BEAMA would support this approach. The BEAMA CEDIG paper on options for binding the CAD implies the need for some such sort of list.
39.	**Do you agree that protocol certification (against a GB Companion Specification) should provide adequate assurance that a product will meet interoperability requirements? Please explain your views and identify any additional assurance testing that you consider to be necessary and the rationale for including such testing.**
	The planned industry led initiative to cover all smart metering products mandated by the program would be designed and managed to provide sufficient assurance on interoperability and other compatibility issues. The development of the initiative will be open to many stakeholders including Government.
Chapter 6 - Operational licence conditions	
40.	**Do you agree with the Government's proposals to require energy suppliers to operate specific aspects of smart metering equipment functionality for domestic consumers? Please provide rationale to support your position.**
	BEAMA agrees that all functionality, including the option to connect a CAD interface, must be made available to the consumer. The consumers also need to be aware of the functionality and it is not clear from the SMICoP Draft Smart Metering Installation CoP that there is any requirement to inform the customer of the CAD during installation (2.4.4). It is accepted that too much attention to the CAD when it is not being installed may be confusing to consumers. However, it is also possible that a failure to reference the CAD during installation may leave the consumer uncertain as to their right for obtaining and connecting a CAD. There should be an agreed statement with regard to the potential services provided by the CAD at installation and consumers should be left with documentation setting out the options for services available via a CAD to the meter. This would equate to the digital switchover which explained the advantage of subscription services.
41.	**What are your views on the Government's proposals to require energy suppliers to operate specific aspects of smart meter equipment functionality for micro-business, but not other non-domestic, customers?**
	No Comment
42.	**Do you agree that the licence conditions as drafted effectively underpin the Government's policy intentions for consumer operational requirements?**
	No Comment
43.	**What are your views on the Government's proposals for obligations to be included in the SEC for information to be made available to Network Operators and ESCOs via the DCC?**

	No comment
44.	**Do you agree with the Government's proposals for the timing of the introduction of operational requirements? Please explain your reasoning.**
	BEAMA would like to see it mandatory for suppliers to use the data from the smart meter installation within one billing period of the smart meter installation. Paragraph 220 as written appears to mean that a meter installed today need not be used for accurate billing until December 2019.
Chapter 7 – Next Steps	
45.	**Do you agree with the proposed changes to the smart metering regulatory framework to reflect the CSP-led model for communications hub responsibilities? Are any other changes necessary?**
	BEAMA members agree with this proposal as they believe that it will help to bring more innovation into the area.
46.	**Do you agree that the equipment development and availability timelines are realistic? Please give evidence.**
	The timescales outlined have been developed in conjunction with BEAMA members and are largely achievable. However there are a number of potential issues that could cause there to be delays. The timeline for product delivery paper attached to this response gives a view as to the planned timescales and the potential delays that could occur. Industry needs confidence to make substantial investments. With regard to the supply of SMETS2 compliant equipment although there is confidence in industry that the timetable can be met, there is a high risk that the necessary supporting specifications and standards won't be available on time. Interoperability is the key question and ensuring wide engagement in deployment of Foundation product will bring forward learning and help accelerate the process.
47.	**Do you agree that SMETS 2 should only be designated when the Government has confidence that equipment to satisfy the new requirements is available at scale? Should a further period of notice be applied to ensure suppliers can manage their transition from SMETS 1 to SMETS 2 meters?**
	BEAMA members agree with this. However, there must be a definition of 'at scale'; it is not 10 meters but when a significant number have been delivered and installed. 'At scale' should also require seamless switching between Suppliers had been demonstrated on a regular basis. From the point that designation occurs there should be an overlap period of 12 months between SMETS 1 and SMETS2 to allow training and logistics and avoid stranding of products in the supply chain.
48.	**What are your views on when responsibility for the SMETS modifications process should transfer from the Government to the SEC?**
	When SMETS2 is designated.
49.	**Which of the options (standing sub-committee or non-standing sub-committee) would you prefer in relation to modifications to the SMETS?**
	No comment. Manufacturers need stability in the specifications to ensure that products can be designed, developed, tested and deployed. However it is recognised that the companion specification is required to clarify functionality and implementation. Keep SMETS stable and use the companion spec to deal with initial learning.
50.	**Are there any particular areas of expertise that the sub-committee will need to fulfill its role, in terms of membership composition?**
	Manufacturers must be represented in this at an early stage to better inform the group of the impact of potential changes to specifications. There must be a range of expertise from a technical understanding of the equipment, and the opportunities and barrier for amending and changing specification,

	representation of the end consumers to ensure that amended specifications are appropriate and from the energy supplier and network companies. In addition the equipment installers need to be involved.