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EUA Response

To

Smart Metering Implementation Programme:

Consultation on Second Version of the Smart Metering Equipment Technical Specification

Ref: 12D/258

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Contact Information:

– 8th October 2012

EUA

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The EUA Response

EUA is pleased to provide this response to DECC's Consultation o the Smart Metering Technical Specification Version 2

Energy & Utilities Alliance (EUA) (formerly SBGI Utility Networks) is a trade organisation representing over 200 UK-based companies in the energy and utilities sector supply chain. We represent several industry sectors; Metering and Data & Communications, Network Engineers, Distribution and Transmission Equipment Manufacturers and Gas Storage Operators. We work closely with trade associations within the sector.

Many of our members will have responded separately to this consultation. The response below highlights views held in common by our member companies. In cases where a common viewpoint has not been possible, this is clearly stated and our members' range of views has been documented for information.

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DIGEST OF CONSULTATION QUESTIONS:

1. Do you have any comments on the criteria used in the evaluation of the application layer standards?

Answer 1:
EUA support the criteria used and the decisions reached.

2. Do you agree with the proposal to adopt ZigBee SEP / DLMS as the HAN application layer standards for GB?

Answer 2:
EUA supports Zigbee SEP 1.X for the Gas Meter and IHD communications.

3. Do you agree that equipment should be required to comply with SMETS and a GB Companion specification for ZigBee SEP / DLMS?

Answer 3:
EUA support this view. This should only apply to the mandated SMETS v2 rollout and not be backdated to Foundation equipment.

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.

Answer 4:
EUA believe that the overall approach is sound as there is no single solution currently available.

5. Do you have any comments on the criteria used in the evaluation of the physical layer of the HAN?

Answer 5:
EUA supports the overall approach but we have concerns the lack of modulation schemes. We believe further testing with modulation schemes appropriate for the bandwidth and inter-network interference needs to be done before 868MHz is considered a reliable solution.

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?

Answer 6:
EUA support the consideration of this but any solution must be able to support the unlicensed section of spectrum as there is no guarantee of gaining the licensed element. We would support every attempt to secure this spectrum for HAN usage.

7. Do you consider that additional measures should be taken to encourage the development of an 868 MHz solution?

Answer 7:
EUA believe that this should be taken forward with meter manufacturers and silicon providers with effective reporting to DECC and associated industry advisory groups.

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.

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Answer 8:
EUA agree with this approach.

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)?

Answer 9:
EUA view is that this should be market led. There is insufficient data to properly assess this at this stage.

10. Do you agree with the proposal for a 'fit for purpose' installation obligation on suppliers?

Answer 10:
EUA agree that suppliers must have an obligation to install "fit for purpose" smart systems end to end.

11. Do you have any views on the proposed approach to developing a wired HAN solution?

Answer 11:
EUA would fully support this proposal and believe PLC trials should be progressed as soon as possible.

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)?

Answer 12:
EUA have previously made extensive comment on this via the DECC Industry Advisory group SSAG. We support the main proposals in the consultation and would like to expand on the following points:
- Provision of the gas meter mirror is essential to support the battery powered gas meter and the responsive provision of data to the DCC Users and the In Home Display.
- As previously reviewed through Industry the Gas meter mirror is the most appropriate place for access reasons and minimising cost impacts to store the bulk of the historic data required by IHD/CAD devices. Previous industry review has proposed 13 months half hourly data on the Gas meter mirror, with a limit e.g. 3 months on the gas meter.
- The specification needs to avoid excessive data and going from the Comms Hub to the gas meter and back again where data from the DCC user is needed both by the Gas meter and IHD, we will be happy to advise on this as part of the industry work,
- The Comms Hub should support buffering of data for firmware updates at a minimum to the Gas meter and one In Home Display.
- We support the requirements for both an intimate and stand alone Comms Hub to be included in SMETS2.
- We have concerns on 2 classes of HAN device and how this could be realised in a secure design with existing HAN technology avoiding a second HAN modem. This requires further industry work to assess.
- Further work is required with the Security architecture to ensure the Comms Hub is a trusted device, define the process options for installation and the interfaces with a Hand Held terminal.

EUA welcome the opportunity to support DECC in assessing these points via the industry advisory group.

13. Do you have views on the specification for an 'intimate' interface between electricity meters and communications hubs?

Answer 13:
EUA believe that this should be market led and should include both stand alone and intimate hubs. There should be a standardised interface to allow for interchangebility and interoperability.

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.

Answer 14:
EUA do not have strong views on this issue but we do believe that a decision must be given to the industry after this consultation.

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?

Answer 15:
EUA agree with this proposal.

16. Do you agree that the gaining supplier should bear the costs of installing an appropriate communications hub if they decide to switch between opted in and opted out?

Answer 16:
EUA agree with this approach.

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?

Answer 17:
EUA agree with this approach.

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

Answer18:
EUA agree that it would be inappropriate as we believe that it is out of scope..

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.

Answer 19:
EUA 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 SMETS2?

Answer 20:
The work done by meter manufacturers 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.

Answer 21:
EUA believes that 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.

Answer 22:
EUA agrees 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.

Answer 23:
For meter manufacturers no comment, but we believe that IHD manufacturers would 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.

Answer 24:
As stated in our answer to question 12 we believe there are issues with realising the DECC proposals for CADs with existing technology and this requires further work if we are to avoid a delay.
We believe CAD devices will need to be authorised by the DCC in a similar way to IHDs, hence option 2 is preferred to meet the expected security requirements.

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?

Answer 25:
EUA agree with this but, the actual process needs full consideration and evaluation around the ESCO processes.

26. Do you consider that other CAD installation options should be pursued? If yes, please explain the approach you favour and your reasons.

Answer 26:
EUA agree that other options must be explored for the same reasons as given in answer 25..

27. Do you agree with the proposal to include in SMETS 2 a specification for a PPMID, connected via the HAN, as described above?

Answer 27:
Subject to the answer to 28 (below) EUA would support this approach.

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.

Answer 28:
The Gas(Connection and Disconnection) Regulations should be considered. As long as the three devices involved (PPMID, G Meter, Hub) meet a SIL of 2 according to EN 61508 when working together then the solution should meet ALARP requirements. This will incur significant work in the development and test of the products. IGEM SR/15 should be considered as a method of compliance for EN61508. The coding and radio requirements can't be accurately costed in isolation, and interoperability in this scenario adds to the complexity of achieving the SIL. It should be noted that the consumer must have access to the ECV (and/or an AECV) in gas, and if this is not the case then it may be necessary to relocate the metering installation anyway.

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?

Answer 29:
EUA believes 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 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. We believe that a limit 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.

Answer 30:
EUA agree that the specification of the HHT needs to be defined. The costs borne by the installers associated with the enduring stage are significant but this can be mitigated to some extent if there is a common spec for the HHT

that will ensure that they can be purchased competitively and in sufficient numbers to ensure you can realise the benefits of scale. They specification needs to encompass activities relating to installation and initial commissioning, de-commissioning & removal and on-going maintenance. Installers do not want to purchase one tool for the enduring phase and another to deal with maintenance issues. It is expected that the tool would be used for confirming connection across the WAN, proving that all components on the HAN are married and subsequently where necessary enabling divorce and longer term being able to assist with fault finding procedures.

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.

Answer 31:
While EUA support the proposal that the maintenance is best achieved through a technical sub-committee to the SEC panel we have 2 concerns on this

1) We need to ensure the technical sub-committee needs effective representation from manufacturers via EUA and BEAMA and that may require manufacturer trade association representation in the SEC panel where the sub-committee reports are discussed.

2) We need to quickly establish something to cover the evolving security requirements that could affect enrolment of Foundation SMETS1 equipment as an urgent priority, Please see our answer to question 34 which expands on this point.

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.

Answer 32:
EUA has no position on this.

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.

Answer 33:
EUA has no position on this.

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?

Answer 34:
EUA would support an independent security certification scheme. However, we have significant concerns on this as there is insufficient detail to allow proper assessment of the approach. If these criteria are to be applied to systems then they need to be defined earlier rather than later.

At this stage the impact of the proposals to use the CPA scheme are not clear. Our understanding is that these have yet to be developed for Smart Metering, and we have only had some outline information on requirements to fulfil these, the likely timescales to set up the scheme and test houses as well as the timescales and costs for approvals. Based on the information available so far we believe it will have a significant impact on the programme timeline for approved SMETS2 equipment availability – indeed this could well become the critical path for equipment.

We have major concerns with the proposals in clause 187 where the same criteria are proposed to assess whether SMETS1 meters are eligible for enrolment. This could have significant impact on Foundation volumes as it would not be clear whether equipment being provided now and in the next 18 months could be enrolled until they are all installed in consumer premises.

We fully support the enrolment criteria including strong evidence of compliance with defined security requirements. However we believe an alternative approach needs to be taken forward urgently with DECC, their security advisors and manufacturer representatives to determine appropriate criteria for enrolment. This is something EUA and BEAMA have been pressing for throughout the last year with the work on SMETS1 and security.

The next steps should be that DECC meeting with manufacturers and CESG to assess how manufacturers could implement an early self-assessment for Foundation enrolment. This could be based and clarifications regarding the current DECC STEG security requirements together with an assessment of target protocols being used with Foundation deployments.

With reference to paragraph 186, EUA agrees that security certification should be a one off process and that re-certification should only be required if the products design or firmware is changed. If the expiry date of the security certificate is reached, EUA feels that a valid certificate should be automatically re-issued, unless there is a good reason not to, and that no re-certification testing should be required, if no changes have been made to the product

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?

Answer 35:
EUA support this approach and via proper process the ultimate sanction would have to be removal from DCC.

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.

Answer 36:
EUA does not agree with this approach. We believe it is too early at this point and we recommend this is reviewed as the security certification process matures. For domestic installations in Foundation, applying this would reinforce any supplier concerns as any Foundation meters installed could then retrospectively have to comply with the new security certification and therefore limit volumes (see our response to the question above regarding foundation and enrolment criteria). For non -domestic meters the risk profile is significantly different for gas as the gas valve is not mandated and there is unlikely to be a consumer HAN. Therefore different metering protocols could be used with equivalent but different security mechanisms and the CNI risk is significantly reduced (or removed). Including this requirement today would delay SME deployments which would in turn adversely affect the Impact assessment. However we would welcome work with DECC to assess the extent of "comparable level of security" for these meters to ensure the meters deployed do not add risk to the programme. It would be more appropriate to have defined criteria for self assessment initially then re-assess once the new domestic meter certification scheme is operational.

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.

Answer 37:
Interoperability is central to the successful roll out of technologies. The work carried out by SSWG with EUA and BEAMA 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. SSWG, EUA and BEAMA believe that industry should manage the governance in the future, with other stakeholders including potentially BSI and a compliance and testing company. The industry believes that Meter manufacturers represented by EUA and BEAMA should be a member of the SEC sub group covering this area.

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?

Answer 38:
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. Significant work is required to achieve this while ensuring there is appropriate access to all market entrants and avoid unnecessary red-tape but in principle EUA support the approach.

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.

Answer 39:
Yes EUA agree the GB companion specification should provide the reference point for protocol certification to a level required to test interoperability between the components.
This need should to be a critical part of the GB companion specification work to ensure it provides clear testable outputs as the reference for device interoperability.

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.

Answer 40:
EUA fully support this proposal.

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?

Answer 41:
Micro businesses should be offered the option to select whether to be treated as domestic or not in this regard. Retailers should comply with this decision.

42. Do you agree that the licence conditions as drafted effectively underpin the Government's policy intentions for consumer operational requirements?

Answer 42:
EUA have no strong views on this question.

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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?

Answer 43:
EUA would fully support this proposal.

44. Do you agree with the Government's proposals for the timing of the introduction of operational requirements? Please explain your reasoning.

Answer 44:
EUA support this approach in that DCC should be capable of providing these operational requirements for enrolled smart systems and to appropriately authorised parties.

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?

Answer 45:
EUA agree with the changes. However, the owner of the hub and manufacturers of equipment will need a mechanism to manage clarification of specifications and the companion specification for the interim period before SEC Panel is formalised.

46. Do you agree that the equipment development and availability timelines are realistic? Please give evidence.

Answer 46:
There is a need for a companion specification (as a matter of urgency) to bring together SMETS1/2, SSWG HAN/WAN, security considerations etc together into one place. This should include fit criteria which then allow a testing regime to be developed. A defined 'user group' (SSWG + x?) would then typically appoint test house(s) to provide services built around these testing regimes – similar to DLMS/Zigbee accreditation but all encompassing.

- The size of this task should not be underestimated. Estimates suggest that it might take 3-6 months for the companion spec, another 3 months at least to formalise the testing regimes.
- Test houses need to be appointed, working to the agreed regime and develop tools and processes etc. As far as hardware is involved this is relatively quick to sort out (less than 3 months) but software could take 3-6 months (and much longer for those starting from scratch).
- Some of the previous bullet could be done in parallel with the regime development (but only if the environment is appealing enough for certain companies to invest), but all in, you are looking at a year (if you move quickly).
- Once testing commences, experience would suggest, it will become apparent that the spec will need to be modified on an iterative basis as problems are identified. The DSMR (Dutch) is currently on version 4, so whilst DECC might not be directly concerned with SMETS after version 2, other stakeholders should be aware that there will need to be iterations of the 'user group spec' once testing commences. Maybe this would be part of the remit for (SSWG + x?) and the test house(s).
- Consideration needs to be given to retailer/CSP product procurement process, manufacturing lead times (some of which will overlap slightly perhaps)

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?

Answer 47:
EUA 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?

Answer 48:
EUA agree with the stated proposals.

49. Which of the options (standing sub-committee or non-standing sub-committee) would you prefer in relation to modifications to the SMETS?

Answer 49:
Standing committee with seats and voting rights by appropriate trade bodies such as EUA.

50. Are there any particular areas of expertise that the sub-committee will need to fulfil its role, in terms of membership composition?

Answer 50:
The committee will need expertise from equipment manufacturers, suppliers, Security experts and test experts, DSP's, and CSPs to ensure that requirements are efficiently implemented.