

A consultation on the second version of the Smart Metering Equipment Technical Specifications - Response from Energy UK

Executive Summary

The consultation is the second publication of smart metering technical specifications. Energy UK members support the progress made under the DECC Smart Metering Implementation Programme to date and the publication of the proposed additional functions and features which the Government intend to implement through a wider regulatory framework is also welcomed.

There are a number of key themes that are highlighted in our response and these are summarised below.

- **Security** – Energy UK supports the need for the security regime to be suitably robust and cost effective and for there to be a firm design baseline for security. Whilst we agree with the current approach to security assurance in SMETS, assurance and testing cannot be planned and executed without an agreed v1.0 of security requirements baked into a design baseline. We have not commented in this document on the current discussions and options for the security architecture and trust model, as there are no specific questions on this. However it is essential that an optimum solution is agreed as soon as possible and we are working hard to support DECC in drawing this to a successful conclusion. It is essential for DECC to publish this as soon as possible as there are key dependencies on supplier development programmes.
- **Availability of Smart Metering Systems to all customers** – We believe there is a need for a complete solution to match the intentions and obligations to roll-out smart metering. For example, 100% WAN coverage and HAN technologies available that will work in every premises (i.e. 2.4 GHz, 868MHz and wired HAN options). Whilst we understand the need for prioritisation of work, we cannot have important parts of the solution neglected at the cost of customer experience and remaining non-smart installations.
- **HAN Trial** - Energy UK request that the trial for wired HAN to be initiated urgently, as set out in the consultation. We need the solution for wired HAN to be available for mass roll-out or earlier to avoid a negative customer experience and constraints on roll-out.
- **CSP Communications Hub Ownership** – Energy UK agrees with the preference for the CSP-led model, however we don't believe this should be a marginal preference. DECC have previously raised concerns that responsibility of the comms hub with the CSP will inhibit innovation. Energy UK members believe that this can be dealt with in the contracts between DCC and CSPs. Periodic benchmarking and the ability to reduce CSP prices from benchmarking activity, in addition to a general clause on ensuring cost effectiveness, can incentivise cost effective delivery. Any innovation or improved solution through the lifetime of the contract could have an impact on the assets deployed, therefore the CSP will need control of the assets being deployed and therefore we would think this as a driver for the CSP retaining ownership of the Communications Hub. We have set out rationale in previous submissions to DECC and provide that in this response.
- **Comms hub costs lie where they fall** - We are concerned at the impact of embedding this principle universally into smart metering arrangements. The costs associated with the first install of the smart metering systems should be treated differently from any replacement or upgrade. The decision to replace the comms hub may be made by the CSP (e.g. technology

refresh) or may be needed because of faults in the equipment that are no fault of the supplier (e.g. component failure). It is not appropriate for costs to fall onto suppliers over which they have no control.

- Firm Design Baseline – We believe that DECC needs to agree a firm baseline v1.0 as soon as possible and place this baseline under formal change control. Once this has been published there will be certainty which will support manufacture, supplier design programmes and a baseline for testing to be defined to. A lack of certainty in the End to End design is currently undermining industry confidence.
- Customer Identification Number – This has not been formally consulted on or included in the SMETS2 documentation. We have a concern that this issue is still outstanding and needs resolving with industry input to ensure there is an agreeable workable solution defined. We hope that this is not included in SMETS2 specifications without further development work.
- Supply chain challenge – There must be consideration of the impact on the supply chain of any significant changes to SMETS (e.g. security). There are already significant challenges in delivering the volume of equipment required to meet supplier Licence Condition obligations for 2019 and any material changes need to be impact assessed by industry in terms of cost and delivery.
- Intimate Comms Hub - Energy UK sees the option of an 'intimate' communication hub as to be an essential requirement as part of the solution and it will be the preferred and economical solution for most installations. We believe it is essential that the intimate connection of Communications Hubs and Electricity meters should be included by DECC as variants in SMETS as without this CSPs will not be mandated to provide them and suppliers will not have a standard from which to procure suitable electricity smart meters..
- Comms Hub Specification – we need more robustness in the definition of the Comms Hub Technical Specification and consideration of this alongside SMETS2. The CHTS is being developed in parallel with this consultation, rather than being part of it.

Response to Consultation Questions

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

Energy UK supports the criteria used and agrees that the criteria were appropriate for the exercise.

We naturally expect solutions, standards and requirements to evolve in a controlled way over time, so whilst these standards are appropriate now, that should not preclude standards changing over time.

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

Energy UK agrees with this proposal, although these may not be the only standards that are in use in the final solution. There is a need for a wired option which may best be met with different application layers. We believe a wired HAN trial should be initiated as a matter of urgency.

As for Question 1, we naturally expect solutions, standards and requirements to evolve over time.

Tunneling arrangements need to be appropriately catered for and we need to ensure that additional services and functions that may be identified by suppliers and ESCOs are supported by protocols.

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

Yes. However, we believe the details of how this compliance is to be realised will need to be elaborated by DECC. As with question 2, it is important to recognise that these may not be the only standards that are in use in the final solution and to recognise that future solutions will evolve over time. There is a need for a wired option and we believe a wired HAN trial should be initiated as a matter of urgency.

It is important to have clarity on the GB Companion Specification product being referred to here, as it means different things to different people. Please share the product description and responsibilities for drafting/management so there is no uncertainty in industry.

Tunneling arrangements need to be appropriately catered for and we need to ensure that additional services and functions that may be identified by suppliers and ESCOs are supported by protocols.

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.

Energy UK is concerned that there will not be a complete solution available for start of rollout and whilst we appreciate the availability of the 2.4 GHz solution, there is still considerable work required for the development of the 868 MHz and wired solutions. If a solution, to cover all scenarios, is not available for rollout, there will be regular instances where Smart Metering Installation visits will be completed without the installation of a Smart Meter. Energy UK is concerned that should this happen then the customer perception of the Smart Metering Programme will be significantly impaired, additional costs will be incurred on suppliers for re-visits and constraints will be placed on suppliers therefore impacting rollout. To re-iterate Energy UK believes a wired HAN trial should be initiated urgently.

Tunneling arrangements need to be appropriately catered for and we need to ensure that additional services and functions that may be identified by suppliers and ESCOs are supported by protocols.

We need to consider the impact of potential licensed spectrum availability.

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

Energy UK agrees with the criteria specified by DECC and also recognises that the target is for coverage of 100% of Smart Meters to have a HAN solution. Please refer to our response to question 4 for our concerns around the impacts on a 100% solution not being available on day 1 for rollout so the criteria may be reviewed for appropriateness for the wired HAN 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?

Energy UK has been advised that this band would be compatible in terms of chip set development but this needs to be thoroughly established.

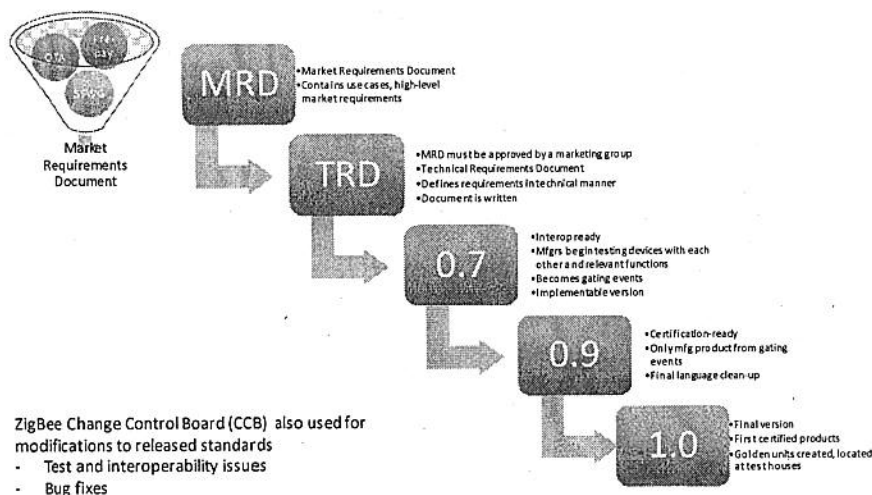
Whilst Energy UK agrees that it seems sensible to have a dedicated spectrum and a reserved band we believe there is a requirement for some technical advice in this area in order to reach conclusion. Energy UK believes there is a need for this analysis to reach a conclusion as a matter of urgency: a reserved band could potentially improve the viability of the solution massively but a successful reservation of a band for smart metering is far from a forgone conclusion. Reserving a band needs a case to be developed and may need that case to be succeed over other cases, it is essential that this work proceeds with urgency or an opportunity may be lost forever.

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

Yes, Energy UK supports additional measures to encourage the development of the 868 MHz solution or Sub GHz around 868MHz. Energy UK believe this is a critical path activity and DECC should be prioritising this work accordingly. We will continue to actively engage with stakeholders, including critically the Zigbee Alliance, to promote this solution.

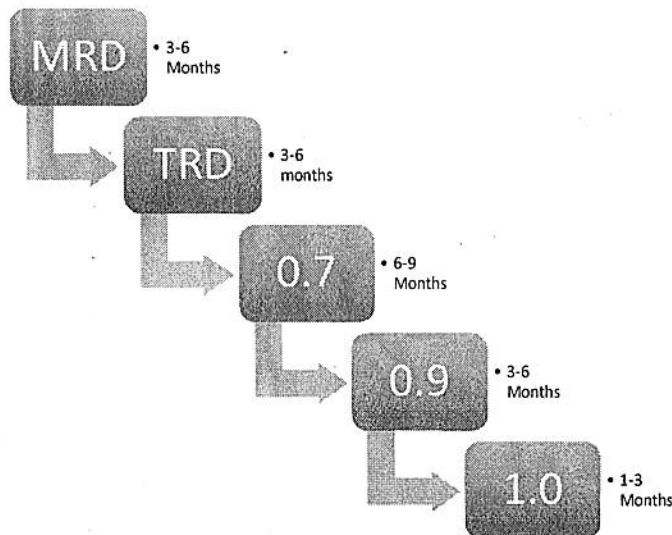
Below is a draft timeline provided by the Zigbee Alliance which shows the timing implications of development of an 868 MHz solution:

ZigBee Standards Development



Typical Standards Timelines

(timing will vary)

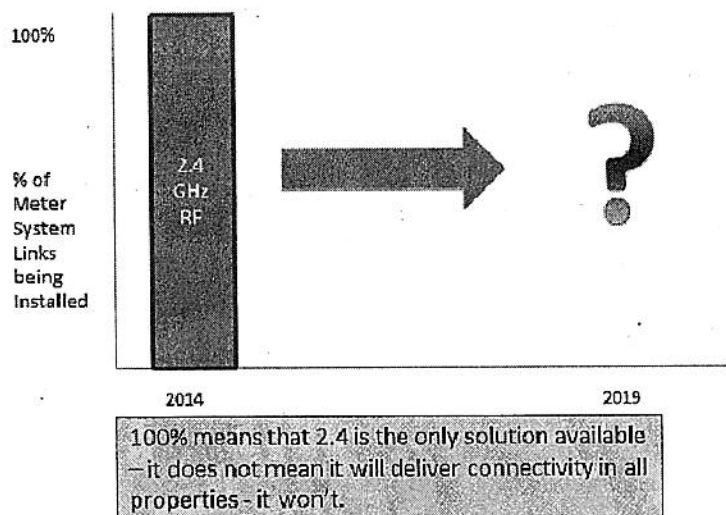


8. Do you agree with the approach to allow the market to determine the balance between 2.4 GHz and 868 MHz? If not, please provide rationale and evidence.

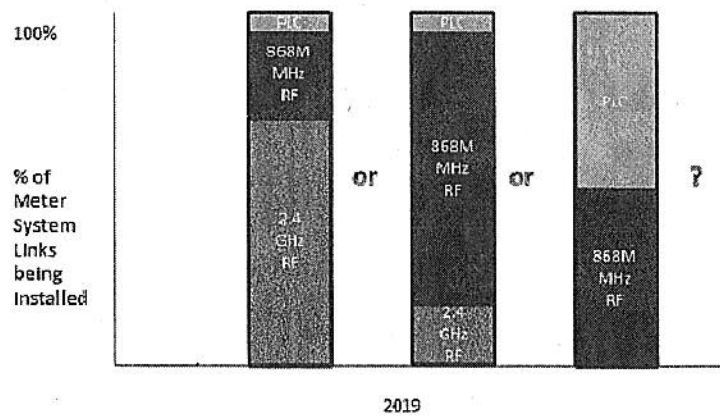
Energy UK believes that suppliers can determine the balance as the appropriate solution will need to be deployed for the premises being visited, but this must be dependent on having the full set of solutions available for deployment (2.4GHz, 868MHz and a wired HAN solution). We cannot allow the market to decide the availability of 868MHz or wired or, for that matter, 2.4 GHz.

The following diagrams illustrate how little is known of the mix of HAN technologies that will be used for new installations as rollout progresses.

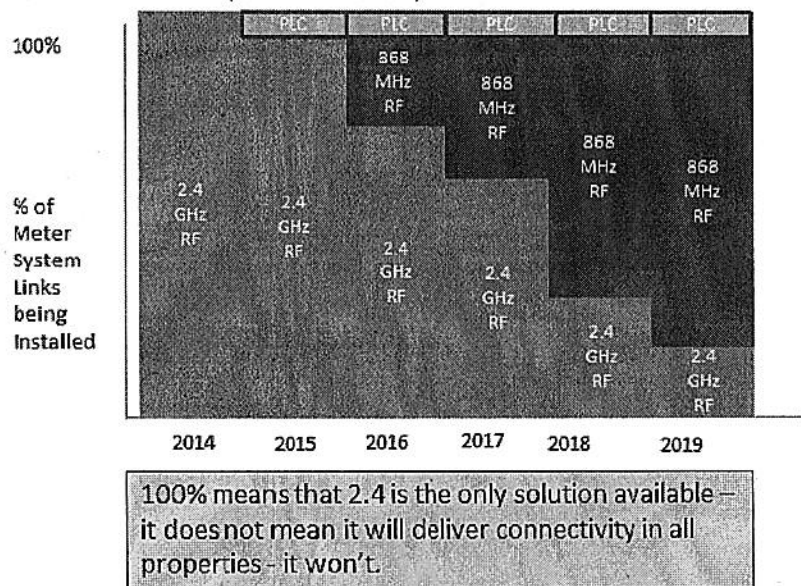
We have a known starting point in that 2.4GHz radio will be the first HAN technology available for SMETS compliant meters. When 2.4GHz is available, all the successful HAN links between devices will be 2.4GHz and where this does not work, there will be no complaint solution available, therefore the supplier has a choice of deploying non-compliant equipment that will subsequently need replacing or aborting the installation.



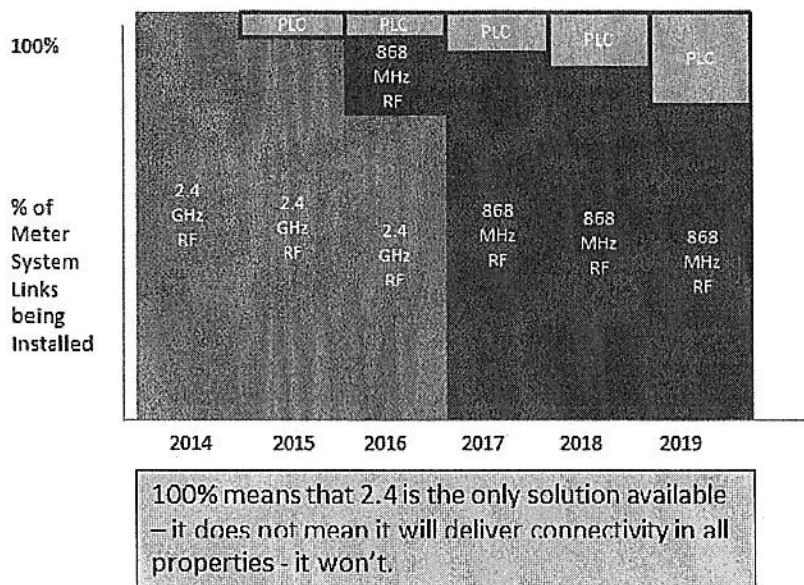
As more compliant HAN solutions become available, there will be more options available to suppliers for deployment, but we don't know if the later technologies (i.e. 868 MHz or PLC) will be used as infill when they are available or whether they will become preferred/default solutions.



In addition, we don't know the path that the technology mix being used for new installations will take. Will there be a gradual move to 868 MHz as it is first used to infill, then over time becoming the chosen solution (as shown below)?



Or will there be a rapid swap of technology with 868MHz being used as the primary HAN solution as soon as it is available?



Each diagram illustrates possible mix of HAN technologies being installed, not the mix of HAN technologies in the metering devices installed population.

These different options for deployment point to a market-driven balance.

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)?

Energy UK believes economic analysis is required to drive this solution and would welcome being involved to understand the output to conclude on our position. This analysis should provide sufficient analysis and justifications of the options to enable participants to form a clear position.

The diagrams included in answer to Question 8 illustrate the complexities that would need to be considered in this analysis. The analysis has to weigh the costs of redundant parts of the solution against the value of flexibility at installation and over time.

Economic analysis needs to consider the full range of costs and benefits to all participants, e.g.:

- Benefits of aborted visits avoided with dual-band comms hub – supplier cost saving but also not to underestimate the potential impact of negative customer experience
- Portability of CADs for consumers
- Cost of dual band redundancy could be significantly lower at volume
- What is the CSP community view of the costs/benefits and potential optimum solution?
- What is the supply chain availability? Will suitable comms hubs be available for the start of mass roll-out (and including at least variants that cover all HAN solutions: 2.4 GHz, 868 MHz and wired).

There are some members who strongly believe that the benefits of a dual band comms will outweigh the costs.

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

The majority of Energy UK members do not support a further obligation as there is already an obligation to fit compliant metering systems using all reasonable steps by the end of 2019. The proposed obligation could lead to perverse outcomes where suppliers were obliged to fit metering where there is no available solution (e.g. 868 MHz or wired HAN) or walk away where the best solution at the time meets their needs and those of their customer but falls short of the obligation.

The first diagram in answer to Question 8 illustrates that at the start of rollout we expect to have a single HAN solution that will not work between all metering equipment; 2.4 GHz will not reach gas meters or IHDs that are a long way from the Communications Hub.

Energy UK foresees difficulties in the administration of any proposed obligation and significant risk of introducing unintended complexities and issues. We foresee challenges in how this could be enforced by Ofgem. For example, how would this be ensured for single fuel suppliers at customers with both fuels?

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

We agree with the sentiment of the consultation statements that the programme will work with industry to urgently undertake the wired HAN solution trial. We are dismayed that this urgency is not apparent and are offering our support to DECC to make this happen.

Energy UK believes this is an urgent requirement as we are concerned with the effect of a new and replacement obligation without the tools to comply with it. If a complete solution is not available for rollout, there will be regular instances where Smart Metering Installation visits will be aborted following all reasonable steps without the installation of a Smart Meter. Energy UK is concerned that should this happen then the customer perception of the Smart Metering Programme will be significantly impacted, additional costs will be incurred on suppliers for re-visits and constraints will be placed on suppliers therefore impacting rollout.

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)?

Energy UK broadly agrees with the proposal, we believe it is essential that the communications hub is properly defined in the context of the other devices - all other smart metering devices depend on it. For example:

- The nature of the Gas meter 'mirror' needs to be clarified as the scope of the gas meter depends on it.
- The communications hub is expected to provide a bridge between different HAN solutions.
- The communications hub must support firmware upgrades to other smart metering system devices.

Whilst there may be scope for additional functionality to be deployed in various ways, we can't have room for doubt as to where a minimum functionality is provided - i.e. which device provides that functionality.

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

Energy UK sees the option of an 'intimate' communication hub as an essential requirement as part of the solution and it will be the preferred and economical solution for most installations. We acknowledge that there is currently work in progress to create working specifications within the industry and that it is essential that SMETS allows the link to this work. Although the intimate communications hub is perhaps more novel than most parts of the smart metering system, this approach is in keeping with how the other parts of the smart metering system are being specified. We believe it is essential that the intimate connection of Communications Hubs and Electricity meters should be included by DECC as variants in SMETS.

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.

Energy UK agrees with the preference for the CSP-led model and has previously provided rationale to DECC in support of this. However, we don't believe this should be a marginal preference. DECC have previously raised concerns that responsibility of the comms hub with the CSP will inhibit innovation. Energy UK members believe that this can be dealt with in the contracts between DCC and CSPs. Periodic benchmarking and the ability to reduce CSP prices from

benchmarking activity, in addition to a general clause on ensuring cost effectiveness, can incentivise cost effective delivery. There is expected to be a general clause on DCC to innovate services and we would expect DCC and its service providers to retain control of its services. Any innovation or improved solution through the lifetime of the contract could have an impact on the assets deployed, therefore the CSP will need control of the assets being deployed and therefore we would think this as a driver for the CSP retaining ownership of the Communications Hub.

We expect innovation to be largely delivered through trusted devices connected to the comms hub, rather than in the comms hub itself. This will ensure a level playing field for ESCOs and other parties that will not have responsibility for deployment of assets. Access to the HAN and connectivity to the smart metering system can be provided on an equitable basis and available to all.

Our paper also provides a proposed process for CSP ownership and this is shown below:

1. The CSP owns the asset and charges an annual rental which includes an allowance for anticipated installation and maintenance costs. This rental would also include any replacement. The CSP may choose to have a relationship with an asset financier (MAP equivalent) or fund the comms hub purchase directly.
2. The CSP or appointed financier charges comms hub rental (which the DCC may choose to pass on to Suppliers) as either a separate rental or as part of the comms charges. There is an opportunity to apply this charge on a postage stamp basis.
3. The CSP appoints the Supplier as installation and maintenance agent and provides the appropriate comms hub free of charge.

We have set out the proposed Commercial Arrangements between CSPs and Suppliers for the Installation, and maintenance including replacement of faulty comms hubs. These also considered similar arrangements currently in place for Post-Emergency Metering Services (PEMS) and with meter asset maintainers (MAM Contracts).

We are very concerned at the potential implications of the "costs lie where they fall" approach and we have highlighted this in our response to question 45. We are concerned at the impact of embedding this principle universally into smart metering arrangements. The costs associated with the first install of the smart metering systems should be treated differently from any replacement or upgrade. The decision to replace the comms hub may be made by the CSP (e.g. technology refresh) or may be needed because of faults in the equipment that are no fault of the supplier (e.g. component failure). It is not appropriate for costs to fall onto suppliers over which they have no control.

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?

Energy UK believes this is dependent on economic analysis. Allowing non-domestic sites to opt out should not introduce any further difficulties for later introduction of a CHTS-compliant communications hub. In addition, Energy UK is concerned that opting out will introduce additional costs. However, if a supplier takes over premises which already has a CHTS-compliant communications hub and wishes to replace it, then on CoS, they should be prepared to reinstate a compliant hub, at their cost, if required to do so by the new supplier.

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?

Yes, we agree with the question, but this is not what is described in paragraph 91 and we believe there are further arrangements required. Energy UK believes that as a principle in opting out a supplier should do nothing to cause costs for a supplier subsequently opting in for that customer or an opting out supplier should bear the cost of the opting back in, i.e. the cost of an installed and maintained communications hub and ensure this is maintained and compliant with SMETS.

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?

Yes – Energy UK agrees.

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

Energy UK has no comments to add.

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.

Yes – Energy UK agrees, but we do not have further evidence and this requirement may be met by the provision of other data to DNOs.

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?

Energy UK agrees to not include this functionality. It would require robust evidence to change this view, as manufacturers have said to date that this increases complexity and cost.

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.

The majority of Energy UK members do not believe DNOs should have access to remote disablement functions and would suggest that there would need to be considerable cost benefit analysis to suggest anything else. We have concerns that multiple parties having access to remote disablement is complex, with risks to both safety and security. We do not believe that this needs to be built in now to give future flexibility either, as this can be developed as a change to the baseline when it is necessary, which we do not expect to be within the mass roll-out timescales of this programme.

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.

Energy UK agrees that variants should be specified in SMETS 2 but these should be limited to the current defined level as too many variants will add cost. Energy UK is unable to comment on the cost uplift.

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.

Energy UK agrees that this should be included. We do not have evidence on costs to introduce the functionality.

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.

Energy UK generally favour Option 2 but consider that this and variations within it need to be robustly worked through, including how the customer is identified.

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?

This needs to be worked through in detail to understand the implications. For example, are there differences if the device has been provided by a SEC Party (who has access to the DCC) or a non-SEC Party, who does not? This is likely to depend on the trust model defined as an outcome from security developments, as it may be that the trust centre should have responsibility for pairing.

One of the outstanding issues has been the process for any third party to verify that services that have been requested have been made by an individual living at the premises in question. An option for a Customer Identification Number has been discussed, but the Energy UK view is that whilst a CIN/PIN process would achieve the objective to demonstrate verification, there were other simpler options that could meet this objective, and Energy UK members have proposals. The current Detailed Design Specification for SMETS v1 and SMETS v2 does not include functionality or capability for an IHD to display a CIN/PIN. Much more work is required in this area before Government is able to make any firm decisions and we want to ensure that there is no additional requirement on Customer Identification Number introduced.

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

See answer to the questions 24 and 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?

Energy UK agrees with the proposal.

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.

Energy UK agree that the safety case needs to be proven and a full risk assessment undertaken. It is also worth noting that the cases for gas and electricity should not be dependent on each other.

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?

Energy UK agrees with this proposal and we see no reason to introduce artificial constraints on the number of meters that should be supported by each hub.

There could be reason to support multiple gas meters also and, whilst we appreciate there may be additional complexities to gas, this should not be ruled out.

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.

Yes and Energy UK believes this is a critical activity.

We understand that the HHT group is assessing the requirements in context of security. It is unfortunate that the consultation is running in parallel with the development. We expect this exercise to produce sound results, but we will respond if need be depending on those results. If this is not defined, then industry will need to assess the impact.

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.

Yes, Energy UK agrees with the current approach to the governance of security requirements. However it must be recognised that this cannot be done without a baseline of architecture and an agreed v1.0 of security requirements baked into a design baseline.

Energy UK believes it is essential for DECC to publish this as soon as possible as there are key dependencies on supplier development programmes for security and this is a key delivery risk for the programme.

Energy UK members are concerned at the proposed architecture and trust model with key management and command message formatting sitting at suppliers. The full impact of this change needs to be assessed and shared.

We believe that there should be an operational sub-committee of the SEC Panel dedicated to security in the same way there should be for technical. This should not operate like STEG – it needs to operate in a much more open and transparent way as an industry change board.

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.

Energy UK agrees with the proposal.

There have to be proportional solutions that take account of small suppliers and do not compromise security – these must take account of their resources but should not favour unduly.

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.

Energy UK believes these arrangements should be subject to an appropriate security regime and risk assessment. There will be security measures some of which will have their own refresh intervals – e.g. assurance of compliance with standards does not last indefinitely – so some of the security measures will naturally have their own cycle. Energy UK believes that retesting will need to be carried out when there is good reason to do so: when there are significant changes or subject to risk assessment and we do not believe that set intervals will mitigate risk. Risk assessment and developments could sit with the SEC sub-committee suggested in the response to Q31.

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?

Energy UK agrees, but it needs to be clear what the baseline will be against, which equipment will be tested and this should sit under SEC in the sub-committee that is suggested in Q31 and 33 above.

Solutions must be in place in a timely manner and there is a need to appreciate the effect through the whole supply chain. Such certification could be a bottleneck that needs to be understood.

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?

Energy UK believes that including the sanctions within SEC seems appropriate and these need to be proportionate to the non-compliance and enforceable. The process should be sufficiently proportionate that it does not discourage self-disclosure. Any sanctions must reflect, as a minimum, the impacts on other participants, the severity of the non-compliance, the number of occasions, appropriate escalation routes and include an option for controlled expulsion.

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.

Energy UK agrees with the proposal in principle however as these arrangements are not known in detail it is not possible provide a definitive response. Costs will be provided separately by members as and where appropriate.

We also believe there are additional consequences when DCC exists that installations operated outside DCC may be opted in to DCC. At the point of these installations opting in they should fully comply with a set of criteria to ensure these are appropriate for DCC. We don't believe this criterion has been defined and would recommend that DECC define this.

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.

Energy UK fully supports this. We believe appropriate governance arrangements need to include clearly defined criteria; defined specifications; a certification assurance scheme, robust testing and an appropriate change control process.

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 enroll the equipment in DCC?

Energy UK agrees with the creation of an approved products list. However in creating this, DECC must ensure that there are appropriate rules in place to maintain this set. Our understanding is that the products need to include all the equipment that is to be deployed and include versions (e.g. versions of firmware). The effort in setting this up should not be underestimated.

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.

Energy UK believes that protocol certification is necessary part of assurance, we should not underestimate the incentives to achieve appropriate devices throughout the supply chain with manufacturers, CSPs and suppliers testing products – but this is not enough on its own. We would need to understand exactly what is meant by protocol certification (against a GB Companion Specification, which in itself needs to be clearly defined, as highlighted in Q3 above). This needs to cover tunneling.

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.

The majority of Energy UK members agree with the proposals, subject to drafting improvements, but there is at least one member who does not.

41. What are your views on the Government's proposals to require energy suppliers to operate specific aspects of smart meter equipment functionality for microbusiness, but not other non-domestic, customers?

Energy UK agrees the proposal seem reasonable, subject to drafting.

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

Energy UK does not support the current set of licence conditions, it appears that they may have some unintended consequences. There are specific elements that we do not support in the drafting, such as:

- potential obligations on CAD (3 b & 4 in the electricity LCs). What are the implications if the consumer wants a CAD in a place that might be out of range? Is this covered by "reasonable steps"?
- potential obligations on IHD connection (3 b) where the customer may have refused an IHD
- there is no definition of "Head End System" as this is referenced to the SMETS specifications and this LC is misleading. We are not expecting suppliers to have Head End Systems as such in enduring (although this may be subject to security architecture changes). Licence condition 3a) needs to reflect that Suppliers are dependent on the DCC providing this service in enduring

Are there potential issues with meeting these Licence Conditions for SMETS1 meters (e.g. different security requirements)? How will these be enforced by Ofgem? What are the implications of security requirements?

The box on page 71 highlights that "suppliers take all reasonable steps to establish and maintain a WAN connection between the meter and the 'head-end system'" but this really should be contingent on the DCC providing ubiquitous connection to all properties in the enduring arrangements. The supplier cannot be held responsible for this in the enduring arrangements.

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?

Energy UK broadly agrees with this proposal but believes this needs tightening as it reads in an open ended way. We believe that appropriate restrictions to use need to be included and SEC operational requirements need to be defined.

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

Energy UK agrees with the proposals subject to appropriate conditions being reached. We believe that all conditions need to be available and to appreciate the impacts on the supply chain to avoid putting conditions in place that cannot be met (e.g. all HAN solutions available, DCC connectivity for WAN).

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?

CSPs need to be appropriately incentivised to provide appropriate cost effective services and robust equipment.

We are concerned at the impact of embedding the principle of "comms hub costs lie where they fall" universally into smart metering arrangements. The costs associated with the first install of the smart metering systems should be treated differently from any replacement or upgrade. The decision to replace the comms hub may be made by the CSP (e.g. technology refresh) or may be needed because of faults in the equipment that are no fault of the supplier (e.g. component failure). It is not appropriate for costs to fall onto suppliers over which they have no control.

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

Energy UK understands from SSWG that the timescales are believed to be realistic as long as significant changes are not introduced – for example the introduction of a requirement for a security hardware module would compromise timescales, to SMETS or security reports.

However without a defined design baseline under formal change management, then this has to be considered at risk and we understand from SSWG that there are still a lot of unknown factors that will need to be satisfied.

There is no clarity as to what happens if there is slippage. We believe that these timelines may neglect supplier testing which is essential.

Industry (suppliers, manufacturers etc.) needs to review the revised DECC plan to be sure of hitting key milestones. It is difficult to provide evidence without more information from DECC.

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?

Energy UK believes that SMETS 2 should only be designated when the Government has confidence that equipment is available and is available from multiple manufacturers. We also believe that there should be a notice period to allow the transition between SMETS 1 and SMETS 2 meters to ensure that the supply chain has sufficient time to adapt.

There is a potential issue if there is a new/replacement obligation set on suppliers before CSP comms hubs are made available.

48. What are your views on when responsibility for the SMETS modifications process should transfer from the Government to the SEC?

Energy UK supports this transfer and we believe that appropriate pre-conditions and criteria need to be agreed. Potentially the criteria could include; SEC and SEC Panel in place; Change management process and resource in place and clear design baseline defined to hand over.

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

Energy UK believes it is too early to agree an option. There are arguments that favour a non standing committee – innovation and enthusiasm and arguments that favour a standing committee – knowledge of the context and history. However it is made up, the result should look very much like the current SSAG.

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

Energy UK believes that the group needs to include expertise in the development of; functional requirements; non-functional requirements and, importantly, the history. The history is needed so that assessment of proposed changes does not tend to revisit and potentially undo previous work and we would recommend this to be a follow-on from SSAG.