

**Smart Metering Implementation Programme: Consultation on the second version
of the Smart Metering Equipment Technical Specifications
(URN 12D/258)**

To: Smart Metering Implementation Programme
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Consultation reference: URN 12D/258

From: Panasonic Corporation

Dear Sir/Madam,

Please find below Panasonic's response to the SMETS 2 consultation.

Best regards,

Chapter 4 – SMETS 2 Development

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| 1 Do you have any comments on the criteria used in the evaluation of the application layer standards? | We believe that as there has not been sufficient time spent on developing UK specs on wM-BUS, an existing European standard for point-to-point meter communication on a number of sub-GHz bands, the most feasible option is to introduce Zigbee SEP. |
| 2 Do you agree with the proposal to adopt ZigBee SEP / DLMS as the HAN application layer standards for GB? | We are aware that as major players in the UK energy industry have spent significant time and resources on developing Zigbee SEP for UK requirements, that Zigbee SEP is now a foregone conclusion, despite maturer meter communication standards existing in Europe. |
| 3 Do you agree that equipment should be required to comply with SMETS and a GB Companion specification for ZigBee SEP / DLMS? | In order to ensure technical interoperability for equipment on the HAN and achieve the goals of the programme, compliance to SMETS and a GB companion specification is essential. |
| 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. | We believe that the assumptions regarding available bandwidth necessary to support the transmission of UK specs on each frequency are correct. 2.4GHz presents real difficulties for transmitting data in areas with foil insulation, dark gas meter installations and housing blocks. |
| 5 Do you have any comments on the criteria used in the evaluation of the physical layer of the HAN? | None |

- 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?
- Using the 868 MHz band is essential to ensure successful communication within the HAN, when 2.4GHz is problematic because of the installation environment. Dual band will not double the price of the HAN component. There are RF transceivers which can work on both 2.4 GHz and sub-GHz (e.g. 868 MHz) bands, that have already been developed. We would recommend the government to mandate dual band (2.4 GHz and 868MHz) for all HAN solutions.
- 7 Do you consider that additional measures should be taken to encourage the development of an 868 MHz solution?
- With a government-mandated 868 MHz band, manufacturers will be encouraged to accelerate development of 868 MHz solutions. The government should also liaise with the Zigbee Alliance and standardisation bodies to ensure an expedited schedule for technical specification and standardisation.
- 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.
- We believe that the market should not be left to determine the balance between 2.4 GHz and 868MHz. We think that it should be taken into account that propagation can change, for example after the landlord carries out refurbishment such as foil insulation in the walls (given that the government has targets to improve heat efficiency in UK homes). So a possible scenario is that a 2.4 GHz solution stops working after a refurbishment whereas a dual band solution that supports automatic frequency switching continues to work. We therefore believe that mandating a dual band solution is economical in the long term in order to avoid re-installation costs.
- 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)?
- Mandating a dual band (2.4 GHz and 868 MHz) HAN to search for the best frequency automatically would reduce the need and costs for revisits because of failed meter installations.
- 10 Do you agree with the proposal for a 'fit for purpose' installation obligation on suppliers?
- Mandating a dual band for all HAN equipment would not only ensure a viable solution at installation but will also be future proof when considering that propagation can change for example due to refurbishments.
- 11 Do you have any views on the proposed approach to developing a wired HAN solution?
- A wired HAN might be a viable solution for difficult communication between the communications hub and IHD in high-rise apartment blocks.
- 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)?
- In a dual band communications hub, it is essential to have automatic frequency search and defined synchronisation between 2.4 GHz and 868 MHz for the HAN. This requires technical specification.
- 13 Do you have views on the specification for an 'intimate' interface between electricity meters and communications hubs?
- A wired interface seems logical for an intimate communications hub.
- 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.
- CSP responsibility for the communications hub could be difficult in the case that the communications hub is intimately attached to the electricity meter, which is the responsibility of suppliers.

- 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? None
- 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? None
- 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? None
- 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 None
- 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. None
- 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? None
- 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. None
- 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. None
- 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. None

- 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. None
- 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? None
- 26 Do you consider that other CAD installation options should be pursued? If yes, please explain the approach you favour and your reasons. None
- 27 Do you agree with the proposal to include in SMETS 2 a specification for a PPMID, connected via the HAN, as described above? None
- 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. None
- 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? None
- 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. None

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. None
- 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. None
- 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. None

- 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? None
- 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? None
- 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. None
- 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. None
- 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? None
- 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. None

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. None
- 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? None

- 42 Do you agree that the licence conditions as drafted effectively underpin the Government's policy intentions for consumer operational requirements? None
- 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? None
- 44 Do you agree with the Government's proposals for the timing of the introduction of operational requirements? Please explain your reasoning. None

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? CSP responsibility for the communications hub could be difficult in the case that the communications hub is intimately attached to the electricity meter, which is the responsibility of suppliers.
- 46 Do you agree that the equipment development and availability timelines are realistic? Please give evidence. Timescales should reflect the time needed to make available not only a 2.4GHz GB Companion Specification but also a 868 MHz GB Companion Specification, to have a future proof dual band solution for the UK market. The arguments for mandating a dual band solution for the HAN are given above.
- 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? We believe that all specs that ensure interoperability and successful HAN communication specifications should be decided and the government are confident that a mass rollout is technically feasible.
- 48 What are your views on when responsibility for the SMETS modifications process should transfer from the Government to the SEC? None
- 49 Which of the options (standing sub-committee or non-standing sub-committee) would you prefer in relation to modifications to the SMETS? None
- 50 Are there any particular areas of expertise that the sub-committee will need to fulfil its role, in terms of membership composition? None