

Avonbank  
Feeder Road  
Bristol  
BS2 0TB

Smart Metering Implementation Programme  
[smartmetering@decc.gsi.gov.uk](mailto:smartmetering@decc.gsi.gov.uk)

Our ref

Your ref

Date

8<sup>th</sup> October 2012

Dear Sir/Madam

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

I am writing on behalf of Western Power Distribution (South Wales) plc, Western Power Distribution (South West) plc, Western Power Distribution (East Midlands) plc and Western Power Distribution (West Midlands) plc in response to the above consultation of 13<sup>th</sup> August 2012.

**Consultation Questions**

The following response addresses primarily the questions most pertinent to our role as a DNO. We have chosen not to respond to questions primarily aimed at suppliers.

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

We agree that in a number of scenarios, a wired HAN solution would appear to be the most practical solution. It is recognised that this could involve some form of power line carrier technology. However, it should be noted that a number of PLC applications are currently being used on DNO networks, including broadband internet provision, street lighting controls and various smart grid trials. Any in home solution would therefore need to ensure that it did not interfere with existing DNO PLC applications. We would therefore stress the importance of testing levels of PLC signal leakage onto DNO networks as part of any further trials, along with co-existence with current in home PLC solutions.

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)?

We have no comments as to the functional requirements of the communications hub. However it should be noted that positioning the communications hub after the cut-out and before the meter will increase DNO technical losses.

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?

For smart metering data to provide the maximum benefit to DNOs, a significant level of metering density is required. Data from individual meters can be aggregated to provide an overview the network and how it is performing. If I&C data is missing from the aggregation process, it will limit the accuracy of the network modelling, essentially measuring domestic load only. This is also true for any fault management application on the low voltage network.

If non-domestic sites opt out of the WAN service, this could complicate the data recovery for the DNO and limit the development of smart grid applications. We would therefore stress that whatever communications solution is employed, it is vital that the DNO gets access to the appropriate data in a timely manner. However, if this data is not fed through the DCC it could result in multiple communications methods to DNOs with associated complexity, performance, risk and cost issues.

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?

Outage reporting can broadly be split into two main categories

- Automatic outage notification (last gasp)
- Retrospective reporting of outage and restoration timing.

The automatic notification of outages is a message to notify the DNO in near real time of an interruption to electricity supplies. This message is sent as the mains supply is failing, and relies on some form of power storage to send the message out. In the proposals outlined in SMETS2 this could be undertaken through infrastructure associated with the communications hub.

The reporting of outages and restoration times relies on accurate time stamping of power off and power on times. This data could be used for reporting purposes although will duplicate existing manual processes. We see that this functionality would most probably sit within the electricity meter due to the time stamping functionality, although could also be facilitated by the communications module.

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

We do not agree with this position. In the event of a low voltage network fault, it is generally the non-domestic properties that are hardest to verify outage conditions or confirm power restorations. In addition, a partial data set reduces the effectiveness of fault finding and restoration planning. We would therefore suggest from a customer

service perspective that meters operating outside of the DCC should implement outage reporting.

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 we agree with this position from an engineering perspective; however we are currently unable to comment on the cost implications of such as solution.

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?

While adding additional voltage alerts to the metering functionality would provide the simplest method for DNOs to collate multiple alarms, it would also be possible through the utilisation of back office functionality.

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.

There are conditions when a DNO would seek to utilise remote disablement e.g. for safety reasons. In the event of a hot / damaged cut out, disabling the supply remotely would limit the amount of power flowing through the device while awaiting a site visit. We would therefore support DNO access to this functionality.

While we believe there should be industry logic associated with the many and varied use cases for this functionality, under the existing messaging proposals we are agnostic as to where that logic should be sited.

We also note that current industry workshops are being held in an attempt to define where message translation and signing should take place. Of the options under consideration we favour the option (C) whereby the DSP would contract with independent organisation (referred to as MSP) to provide message formatting and signing, and both organisations to be part of DCC. This option would be cost neutral for us whereas the requirement to sign critical messages (option B) would add an estimated £150,000 to our system implementation costs. Should option C be selected then there would be a strong case for the control logic to also be managed by the DCC.

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.

The BBC is currently engaging in discussions with the ENA regarding the decommissioning of the current RTS system which utilises the BBC Radio 4 LW signal. There are large areas of network within the WPD area that rely on the functionality to regulate the switching of a number of devices, including storage heaters. We would therefore support the inclusion of variant smart meters in SMETS2 as a long term replacement of the functionality associated with the RTS system.

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.

We are currently not in a position to comment on cost, but from a network perspective we agree to the suggested randomisation approach.

Comment on Questions 24-26 Pairing CAD devices to the HAN

Regarding the pairing of CAD devices we recognise that this may become a key factor in the introduction of low carbon technologies, such as electric vehicles. There is also the potential for numerous white goods to connect the HAN for future power management applications. We would therefore suggest an in-home pairing system would be preferable subject to suitable security arrangements. This will then allow consumers the required empowerment to introduce a range of devices to the home that will aide in power management. This would appear to be an easier option that contacting a supplier or third party to connect devices to the HAN

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?

Yes we agree. While we have no opinion as to the maximum number of devices that can connect to a communications hub, we do see a benefit to FITs meters being able to communicate directly into the DCC. This will aide network management in areas with dense distributed generation, and allow a more complete picture of energy usage and power flows.

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?

From a DNO perspective, there are a number of network specific functions included in the SMETS2 meter. Previous reports produced by the ENA have demonstrated the benefits to network operators in utilising the data associated with the smart metering system. It is therefore vital that meters are configured in a way that allows DNOs access to this data via the DCC. We would therefore support the inclusion of obligations in the SEC

Comments on Questions 48 – 50 SMETS modification process.

Any modifications that are made to SMETS must take into account the views of key stakeholders. In particular, DNOs must be part of the review team, especially in matters relating to smart grid functionality and associated data access.

Should you wish to discuss any aspects of our response please contact

Yours sincerely