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Smart Metering Implementation Programme – Roll-Out Team
Department of Energy & Climate Change
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London.

Via Email: smartmetering@decc.gsi.gov.uk

Dear Sirs

RE – 2546 – SMIP Consultation on draft licence conditions and technical specifications for the roll-out of gas and electricity smart metering equipment

We thank you for the opportunity to provide response to this consultation. We are making comments on the consultation document and the IDTS within this letter, and we have subdivided our comments accordingly.

Declaration of Interest.

Sensus is a smart metering and grid communications technology provider, and therefore anticipate being a major subcontractor to one DCC comms technology bidders.

Comments on the Consultation document, 2546

We have not answered each question – many of them are more appropriate for others to consider. However, we would like to comment on the following areas:-

Q4. Do you agree that Smart Metering Equipment should be compliant with the SMETS extant at the time of installation and that it should continue to be compliant with that version of the SMETS through the operational life of the equipment? Please explain your reasoning.

Generally, we agree with this statement. It should noted, however, that there is still not a clear indication as to whether the hub, the WAN function within the hub, or none is within the scope of the SMETS, and clarity in this area is very important going forward.

It is unworkable to meet, maintain equipment or provide a service against an unknown specification if it is not in an existence at time of installation. Maintaining equipment to evolving specifications will result in higher additional costs of manufacture to compensate for unforeseeable options and the stranding or replacement of the equipment in the event of unforeseen options meeting the changing specification. Therefore any equipment should comply with the extant SMETS at time of installation.

Q24 Do you think that there are other requirements that the Government should adopt in the SMETS? Please explain your reasoning.

The specification should include:

The requirements for the Comms Hub. These should be specifically identified within the SMETS. The requirements should include physical, mechanical, electrical, logical functions specifications. Physical characteristics (minimum envelope) should be identified so an assessment can be made of its suitability for installation. The mechanical requirements, separable WAN & HAN module should be identified for example. Electrical specifications, the smart electric meter specifications calls for a number of electrical safety measures - do these also apply to the Comms Hub? The comms hub is recommended as the preferred option for the enduring market and will therefore be a major component of the SMETS, yet presently does not have a dedicated section which explicitly identifies its functional requirements of this component within the technical specifications. These requirements will be required to manufacture a standardised comms hub to achieve interoperability.

Accurate metrics on message sizes and frequency, and include requirements for anticipated peak volume throughput across WAN and HAN as well as the service interface to DCC users. This is a non-functional requirement that is needed to help scope component processing power, bandwidth and capacity design.

Q31 Do you agree with the estimated costs and benefits for outage detection and the Government proposal to require the Communications Hub to include the equipment necessary to provide electricity outage detection? Please explain your reasoning.

We agree the cost estimate is broadly in line with the cost of deployment of outage detection within a Sensus Flexnet enabled radio/comms/WAN module. E.g. £1.

The comms Hub or comms module or WAN Module is best positioned to detect an outage and send a notification. However the electric meter is based positioned to detect the loss of power being the measuring device. The loss of power indication from the electric meter will start the process of detection of a power outage within the comms hub, comms module or WAN module.

Q33 Do you think that the Communications Hub should also have the functionality to send a communication to the DCC when power is restored? Please explain your reasoning.

Yes "First Breath" should be included in the requirements. This will allow correlation to happen to between premises where power has been restored and those that have not responded, so remedial action can be taken to identify those premises which have been identified as still off power. This will reduce costs of cable or lines crews by identifying secondary faults. These scenarios are becoming more prevalent with global warming.

The comms Hub or comms module or WAN Module is best positioned to detect a restoration and send a notification. However the electric meter is based positioned to detect the voltage within limit being the measuring device. The power indication from the electric meter will start the process of detection of a power restoration within the comms hub, comms module or WAN module.

Q41 Do you think the Smart Metering Implementation Programme objectives would be best met by the proposed approach above? Or should a single, network-layer technology standard such as IPv6 be mandated? Please explain your reasoning.

We strongly agree with clause 154 – the transport layer should be left to the communications provider to allow innovation as per M441. The communications provider should be responsible for the end to end communications provision, with standardised interfaces, rather than dictating the technology.

Comments on the IDTS

- IM3:
 - When a hub or module has been swapped a record of the new module type and its configuration will need to be recorded. Decommissioning and disposal records will need to be recorded for the replaced device. There is a urgent need for a central repository for this information, to aid system security.
 - For backup/restore requirements – are there any likely security issues, i.e. violation of security certificates? Also, backup and restore of queued messages and stored data will be required. If backup is done to the HHT device then there must be a policy/procedure to ensure meter readings are not retained on the HHT after the data is transferred to the newly installed communications hub and the installation completed.
- IM11:
 - The IDTS has prescribed several requirements for the HHT – As a major component of the smart metering equipment technical specification the HHT requires a separate section within the SMETS.
 - If the HHT is to retain smart metering data for a period then this may be a security issue especially if this includes mirrored meter reading data. There must be requirements to ensure protection of data and to ensure processes and solutions to erase data when it is no longer needed to be kept on the HHT.
- IN3:
 - Where the requirement specifies that data should be made available to an external authorised party via the DCC, is the DCC service provider expected to provide this as a core service or is this a value added service driven by service requests? Such requests for files may put an additional load on the WAN, especially if a regularly scheduled update is created. Who pays for this traffic? The retailer? The third party? The consumer?
- ES6: Incorrect wording – ‘export’ should state ‘import’
- DI.1:
 - The level of event logging may create significantly large log files. Clarity on what data must be transferred across the WAN (message size, volume, frequency) is required to size WAN and data services infrastructure and processing. There is a risk that too much event data will be generated requiring complex event processing and correlation tools to manage the data..

- HA.7 / HA.9:
 - It is not clear how control and management for allowing these different devices (load control, repeaters, boosters etc.) to connect to the HAN will be governed. How do they connect? How are they authorised? Must they conform to SMHAN specifications? Who approves their connection and how is this maintained?
- HA.22:
 - Non-interference with existing premises networks will be difficult to prove or guarantee. “Continues to work acceptably” is too subjective to be measurable so how can it be proven who is responsible if a problem occurs across two different systems?
- WA.1:
 - The interfaces to the WAN at the application data layer level must be standardised to ensure interoperability. The lower layers of the WAN interface must be able to exploit innovation, as per the M441 mandate. Standardisation at the lower layers is undesirable.

We trust that these comments are seen as positive, and look forward to any questions or discussions you may wish to hold in the future.