

[REDACTED]
Sent: 28 September 2010 14:35

To: Ofgem Smart metering team

Subject: GB Smart Meter programme - Renesas Electronics Europe response to Ofgem consultation

Dear Smart Metering team,

Please find below response to the consultation on behalf of Renesas Electronics Europe.

Regards [REDACTED]

[REDACTED]

[REDACTED]

Dukes Meadow
Millboard Rd
Bourne End
Bucks
SL8 5FH
UK
<http://www.renesas.eu>



Prospectus

Question 1: Do you have any comments on the proposed minimum functional requirements and arrangements for provision of the in-home display device?

The IHD should be portable to enable consumers to easily see the effect of changing the status power consuming equipment.

Ease of set up and use is key.

- existing ones (e.g. British Gas) are extremely confusing, for example showing tariff 1 and 2, whilst the instructions talk about day and night tariffs; the IHD requires you to set start and end times for each tariff but nowhere can you find this information; there are various modes, for example KWh, cost / KWh, daily cost... most of which are meaningless to anyone outside the industry, etc.

The IHD must primarily display how much money is being saved by the measures taken . This will be main motivation for people to use it for more than a few days .

Question 6*: Do you have any comments on the functional requirements for the smart metering system we have set out in the Functional Requirements Catalogue?

Potential concern that the future requirements for domestic vehicle charging haven't been fully considered. e.g.what are the technical requirements and additional functionality are likely to be .

Statement of Design requirements

Question 1: Should the HAN hardware be exchangeable without the need to exchange the meter?

This would be a sensible approach, as the meter should have a 15+ year life time, communication technologies will have evolved greatly over this period and even with software update capability, the hardware components of the HAN may not be capable of supporting future developments over such a period of time.

Consideration should be given to the authentication of communications modules that may be connected to the meter so that a hole in security is not open at the interface of the HAN module to the metering system.

Question 2: Are suitable HAN technologies available that meet the functional requirements?

HAN technologies that are based upon open standards and are interoperable do exist and can support the data rate and battery life requirements.

The two main candidates being WirelessMbus and ZigBee Smart Energy. Of the two, ZigBee Smart Energy is a more developed solution with data set and commands defined as a profile, approved test and certification processes in place and multiple chip and software vendors existing. WirelessMbus has the potential for greater range and penetration due to using 868MHz band vs. 2.4GHz for ZigBee.

The ZigBee Alliance has already undertaken co-existence analysis with other wireless technologies such as WiFi- see attached document.[3.19]

It is feasible to extend the range of a wireless HAN using a power line bridge or gateway way for example. Renesas has developed a demonstrator to show the practicality of this .

The Homeplug Power line Alliance and ZigBee Alliance are developing common smart energy profile specification which will provide seamless application integration using ZigBee or HomePlug devices such as Homeplug Command & Control (HPCC)

http://www.homeplug.org/news/pr/view?item_key=6a5534049ae55b0e7fd8d2df32760a4d425fed22
http://www.homeplug.org/news/pr/view?item_key=6ddb0d46d2156a8cb71f25199c02b2dfd20ce8b

Question 4: Do you believe that the Catalogue is complete and at the required level of detail to develop the technical specification?

More consideration of the potential WAN technologies should be taken. Emphasis is given to cellular infrastructure which certainly will have a place, however technologies such power line carrier which are being or planned to be deployed in most of mainland Europe have many benefits which should be considered for the last mile connection.

e.g

More secure -less likely to be tampered with as the cable carries power.

Unused transmission medium - unlike cellular which is often overloaded in times of crisis

Lower cost - no data transmission charges over the "last mile".

Smart Grid enabler - sub/station phase balancing, early fault detection, technical/non-technical loss analysis, faster response time.

See attached article from Metering International

Allowing flexibility over WAN technologies to be used in specific areas is a positive step as some DNO's may wish to move forward with smart grid deployment earlier than others and potentially offer data carrying service to the DCC.

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