

Dear Sir/ Madam,

Rather than respond to the set of questions, I have the following comments.

1. I find no reference to a required level of reliability of the smart meter. e.g. in terms of failure rate per annum.
2. Failure rate of electronic metering is expected to be higher than experienced with current meter systems.
3. The inclusion of a cut-off valve increases the chance that a meter failure will "accidentally" remove energy (and in the future, water) supplies
4. This is admitted within "Analysis on disablement/ enablement functionality for smart gas meters" where it states "The potential to lose supply through valve closure (whether intentional or accidental) needs to be addressed for vulnerable consumers who could be on credit meters."
5. The accidental disconnection of supply now has two mechanisms - incorrect demand to disconnect from DCC and by meter failure leading to valve closure. These two mechanisms replace the need for a person to attend the address and manually turn a valve.
6. There is a £20 penalty mentioned for "non-performance" that results in an accidental disconnection but there is no mention of compensation for the consumer / small business.
7. Reconnection of gas supply cannot be completed without the consumer or other responsible party being present (agreed) for safety reasons - however, the requirement of reconnection within 4 hours; 8am-8pm on working days and 9am-5pm on other days; needs to be reconsidered and should be within 20 minutes on a 24 hour / 365 day basis. Compensation from the supplier for incorrectly commanded or meter fault disconnection needs to be at a level that forces suppliers to put into practice procedures to stop incorrect disconnections and to ensure the reliability of the smart meters.
8. It is not clear whether there will be an "old fashioned" mechanical meter within the smart meter to act as a check. I think that this is essential as existing technology has been proven to be reliable while the electronic smart metering is a) unproven in the eyes of the public; b) likely to use lead free solder, which is a new technology and there is little evidence of the reliability of this; and c) there are reports of consumers seeking legal redress regarding over charging subsequent to installation of smart metering - it is not clear if this is actually linked to issues regarding the reliability of smart meters. Hence a mechanical "check" meter could provide a sensible measure to ensure that the consumer has access to technology that they can trust in event of claims of over charging.
9. Smart Meters must not be allowed to use controversial technology for HAN or WAN communications. Communication over power line technology (PLT) is currently being challenged regarding conformity to EU New Approach Directives - particularly 2004/108/EC. If smart metering was rolled out using PLT communication, and the challenge to PLT technology succeeds, there could be significant costs and consumer disruption involved in converting installed meters to another means of communication.
10. There are concerns whether the smart meters can be "hacked" and reprogrammed, whether by the consumer or by other persons. The security must be of the highest concern to this program. I would not like to advise a government minister how to tell the public that smart metering had been "left open to attack by anti UK interests".
11. In the relating documentation available from the consultation site, there is a comment regarding the life of electromechanical (the old) meters being 20 or even 30 years. Even today, it is unlikely that the electronics will last for 20 years. Even if it does - the following is relevant.  
In 2009 there were just short of 23million domestic households registered for community charge in England. Without adding small businesses or Scotland Northern Ireland or Wales into the equation we find that, with a life of 20 years and 23 million premises, the supply companies will need to replace over one million smart meters per year.
12. If the life of a smart meter turns out to be 5 years, then there will need to be 4 million replacements a year. There is also the question regarding new technology and its impact on smart metering and the replacement cycle.

13. Finally, there is a requirement that design of the meter be such that other equipment - including radio transmitters - will not disrupt it's proper function. Because of its billing function and the possibility that the failure of the smart meter may be safety critical (leading to death) there should be an explicit requirement to use appropriate standards for the purpose - there was no obvious requirement in the documentation that I have read.

My background is electronics, with involvement in safety related / safety critical design. My input is as an individual and I request that you do not use my headline address for replies, but use that at the bottom of this e-mail.

Regards

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