

# Smart Meter Roll-Out Strategy

## Consultation Response – UKMF, May 2015.

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The UKMF is a trade body comprising the major metering asset providers and managers. The members will be expected to purchase smart meters to meet the obligations placed on energy suppliers proposed in the Roll Out Strategy document published 24<sup>th</sup> March 2015.

This response from the UKMF addresses the questions that are of relevance to the membership.

- 1. Do you agree with the minded to position to set a de-minimis obligation for all large suppliers to install, commission and enrol 1,500 SMETS 2 meters or 0.025% of total meter points (whichever is the lower) within six months of DCC Live? Please explain your rationale and provide evidence.*

### Availability of Meters

The availability of SMETS 2 meters is independent of the DCC go live date. The latter does not affect the former. SMETS 2 meters will only be available when manufacturers place them on the market and there is no obligation for them to do so. DECC can only oblige energy suppliers to fit SMETS2 meters when they are considered fit for deployment having passed all certification and security tests.

### Smart Meter Reliability/Durability

Smart meters contain switches/valves to control the supply of energy to the home. The inclusion of this functionality will have some impact on the reliability of supply to consumers' premises. The reliability of the switch/valve, its drive circuitry and the associated firmware is not specified. DECC has not defined what standards of reliability/durability should be met.

The MID specifies the requirements for the metrological features of the smart meter and there are regulatory bodies appointed to ensure they are complied with. There is no regulatory body appointed to specify or regulate the 'smart' non-metrological functions embedded in the smart meter. Reliability requirements and a regulatory body should be defined prior to roll out to ensure meter asset providers can be assured that devices they purchase meet and have been tested against appropriate standards. The requirement for such a body was highlighted in 2012 when a population of smart electricity meters fitted with switches from a particular manufacturer failed (and continue to fail) in the field causing the energy supply to be cut off. In the absence of any regulatory body, the industry deemed that the failure rate of 1/50,000 per week was acceptable. Such a figure may not be acceptable to DECC when the population of meters reaches its target of 27m however, at present, there are no requirements stated. The IEC 62059 series of standards provide the means to calculate and test meter reliability/dependability for the metrology but could be extended to cover the smart functionality and that of the comms hub, smart gas meter and other devices on the HAN.

Software/firmware dependability is not specified. WELMEC Guide 7.1 may be used to ensure the firmware meets industry guidelines and MISRA standards are quoted as a requirement for CPA certification but device manufacturers cannot verify that these standards are met in the embedded ZigBee stack code or in some cases, the DLMS stack code when it is supplied by a third party. They only have access to the executable libraries supplied by the stack vendor and no access to the source code, they have to assume it has been thoroughly tested and meets dependability standards (whatever they might be). The reliance of the ZigBee radio between comms hub and electricity meter rather than a hardwired connection introduces a failure mode that cannot be fully quantified.

Presumably energy suppliers who have been obliged to fit smart meters will be responsible for any consequences due to the loss of supply caused by any malfunction so it would be reasonable to expect some assurance as to their reliability and a body to whom they can refer should any issues arise.

## **IPR Issue**

There are potential intellectual property issues arising from the use of remote communications for prepay applications. The specifications published by DECC potentially conflict with existing patents and hence action could be taken against energy suppliers and meter manufacturers who are deemed to be in breach of them. DECC must ensure that potential claims arising from unauthorised use of these patents has been mitigated prior to obliging supply companies to roll out smart metering for prepay use.

### ***4. Do you agree that electricity DNOs should be mandated to be DCC Users from DCC Live? Please provide evidence to support your position***

The prime KPI that a DNO must meet under its license obligations is the supply voltage which must be within specified limits. Smart meters as specified in SMETS do not provide accurate voltage measurement. The DCC system cannot supply data with sufficient speed for it to be used in a smart grid control system. Low Carbon Network Fund trials have shown that smart meters cannot be used for smart grid applications (eg CLASS, Smart Street, Customer-led Network Revolution where additional metering equipment had to be installed).

Neither IEC metering standards nor the Measuring Instruments Directive specify that electricity meters shall provide accurate voltage data. Electrical energy is the only mandated measured value.

SMETS meters are specified to provide out of limit voltage alarms. There would be some question over how accurate the alarm information would be given that there is no requirement to calibrate voltage. Assuming a 2% accuracy in line with meter calibration, this would be 5v which is not precise enough for DNO purposes.

DNOs have already invested in alternative technology for accurate voltage measurement at strategic points on their networks to provide accurate voltage and other relevant data faster than the DCC system.

There is no requirement for the Energy Suppliers to specify and pay for functions and features that are of no benefit to them and hence those features required by DNOs have been omitted in the specifications. (Energy Suppliers are not responsible for the supply voltage.)

It is difficult therefore to see what value is to be gained by DNO's from the smart meter system that does not provide the data they require at the speed they require it and hence what justification there would be for obliging DNO's to pay for a system which is of questionable benefit to them.

***13. Do you agree with the proposal to enact the New and Replacement Obligation in mid-2018?***

Assuming there is a business case for smart metering, there should be no need to mandate for a new and replacement meter.

There may be an issue where the consumer does not want a smart meter to be fitted.

***14. Do you agree with the proposal to set a SMETS1 end date of DCC Live plus 12 months? Please provide evidence for your answer.***

The availability of SMETS2 products is independent of the DCC go live date. Whilst the intention is valid, the completion of DCC does not mean that certified SMETS2 devices will be available.

It should also be noted that the population of SMETS1 meters is to be limited as they are considered to be insecure and vulnerable to cyber attack. It is therefore not the date that determines the end point but the maximum meter population allowed by the security evaluation.

