



KEMA'S CONSULTATION RESPONSE - SMART METERING IMPLEMENTATION PROSPECTUS

In support of the Smart Metering Implementation Consultation KEMA is pleased to contribute to the consultation process by responding to specific questions where we believe our comments can add value to the forward programme.

In short KEMA wholeheartedly supports the process adopted to date through the publication of the Prospectus, and the ongoing work packages that have been subsequently released. Our response focuses on specific consultation questions where KEMA has embedded experience of the subject area from smart metering programmes elsewhere in the world. In this regard we believe our experience in the Netherlands to date and from other significant programmes in the US and Australia provides valuable guidance in terms of lessons learnt (from initial assessment to deployment of the technology) as well as the measures that have been introduced to overcome some of the identified issues.

Should the Ofgem E-serve team wish to discuss any of our observations in more detail we would be happy to support meetings to fully debate the subject matter, and where appropriate, field the respective Smart Energy experts in specific practice areas to facilitate further discussion.

1 PROSPECTUS OVERVIEW CHAPTER 2 – THE CONSUMER EXPERIENCE

1.1 2.1 Question 3: Do you have any comments on the proposed approach to ensuring customers have a positive experience of the smart meter rollout (including the required code of practice on installation and preventing unwelcome sales activity and upfront charging)?

The installation process should not be unduly time consuming on the customers site. Any additional training to educate customers on the use of the system and IHDs in particular should be clear and succinct, and delivered in a professional manner. This does suggest an alternative skill set for a traditional meter installer, and the additional training for this and time on site should be taken into account in any roll-out planning or impact assessment review. The system must of course work from day one, and this will present logistical issues in the selection of both WAN and possibly HAN communication solutions whilst on site. The customer experience must be positive beyond the installation of the meter and must include acceptance of the first bill after the meter exchange, based on the closing meter reading of the removed meter and first billing read of the new meter. This may be impacted by pre-



existing industry data quality and meter reading history for that site; and all data quality for a site should be re-aligned in industry systems prior to this first bill being issued.

2 PROSPECTUS OVERVIEW CHAPTER 3 – INDUSTRY ROLES AND RESPONSIBILITIES

2.1 Question 7: Do you see any issues with the proposed approach to developing technical specifications for the smart metering system.

Whilst KEMA wholeheartedly supports the process adopted through the publication of the Prospectus, we observe that the Prospectus and its accompanying documents make no specific reference to testing or test procedures with respect to meters, devices and / or the protocols that will be used to support the transmission of data. Our experience of other 'smart' programmes (in particular the smart metering deployment in the Netherlands) shows that the grid operators' (network led programme) have combined to agree a single test platform supported by a common test house. Indeed this is an integral requirement of many international smart metering programmes where the pre-testing of devices and operating protocols always precedes implementation; ensuring that implementation is compliant to agreed and defined international standards and the requirements and standards of the local programme. In KEMA's experience, having a single test regime affiliated to a common test house makes the test process more efficient in terms of time, cost and risk reduction and ensures that all instrumentation, devices and protocols are tested and made ready to an agreed set of mandated standards. There is also no reason why this approach should not be extended to embrace matters associated with system security and data privacy; and in this regard much can be learnt from the Dutch programme (and others) where tangible benchmarks in this area are now beginning to emerge. Whilst the framework for engagement in the UK is uniquely different to elsewhere, we would suggest that the need for common practice with regard to the testing of instruments and devices, in accordance with the SM Functional Requirements catalogue, is similar to what has been carried out elsewhere.

2.2 Question 16: Do you have any comments on the proposals for requiring suppliers to deliver the rollout of smart meters (including the use of targets and potential future obligations on local coordination)?

Aggressive targets should not be to the detriment of the customer experience. This is a one off opportunity to correct poor industry data quality and the quality of installation; and the quality of data capture and set-up, should not be jeopardised. Each installation visit will have



the potential to highlight a pre-existing data quality issue in the existing systems and these should be thoroughly cleansed to ensure accurate billing and settlement going forward.

3 STATEMENT OF DESIGN REQUIREMENTS CHAPTER 3 – OVERVIEW OF THE SM FUNCTIONAL REQUIREMENTS CATALOGUE

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

There is no doubt that the programme to date has thoroughly researched this area of the design architecture and a great deal of consideration has been given to the proposed option. However, the lifetime of devices when used in the field is still very uncertain and the true life of devices will only become clear once the programme is underway and the technology is deployed by the participants day after day. In our experience to date we also note that there are a number of areas associated with HAN technology where the track record is unproven (known unknowns). Of greater concern are areas where possible technology obstacles have not yet been encountered or considered (unknown unknowns) and will not become visible until the devices are stress tested in an operational environment. Add to this the possibility of damage through on site building alterations and upgrades and the inevitable tampering issues that are likely to ensue, and, in our opinion, it makes good economic sense to make the HAN hardware exchangeable without the need to exchange the meter. As such KEMA supports this approach.

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

Suitable HAN technologies are available but they need rigorous evaluation and testing before a final selection is determined. It is recognised that there may not be a “one-size fits all” solution for the WAN and the same is equally true for the HAN, and regardless of a common protocol may require alternate hardware within end-point devices – which also supports the HAN exchangeability view in Question 1 above. Such HAN selection issues may not become apparent until the installation within each property is taking place. Clearly the choice of HAN capability, immediate and long term, has a bearing on choice affecting the wide area network and its application; technology compatibility is therefore critical. Ensuring effective operation (in all circumstances) will also require rigorous testing to minimise operating risk and ensure that the technology will deliver the immediate and the evolving requirements of the programme. The security and privacy requirements of the HAN (as stated in the Design Requirements) must also be assured and, we suggest, verified through independent testing and compliance procedures. A number of important international programmes have trailed



and tested different combinations of HAN / WAN technologies and in so doing they have unearthed some interesting observations; some of them could have been anticipated but others were totally unexpected. KEMA assume that Ofgem and its partners have drawn from these learning's in developing the scope of the prospectus to date and will build on this when subsequently progressing the design detail.

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

KEMA believe that the catalogue provides a comprehensive summary of what the system must deliver. However, we observe that there remains a fair degree of ambiguity in the way the requirements are described. For example under 'General and Operational Services' 1.53 states that 'when a smart meter is installed, remote registration of the meter will be required'. It is also stated that meter registration will not be part of the initial phase of services delivered by the DCC. There is therefore some ambiguity over what meter registration means in this context. We note that it is stated that DCC may take on responsibility for meter registration over time; more detail is therefore needed to describe how DCC, as the common communications interface between participants, is excluded from the registration process in the first instance or indeed the intention regarding the interim interface between the DCC and the existing MPAS in the interim. If in the first instance it means that meter identification using reference data sets extracted from legacy systems is used, then for clarity, this should be stated and described in subsequent documents. KEMA have assumed that this area will form an important element of the deliverables for the phase 2 DCC functional requirements and the required clarity referred to will be released in due course.

4 ROLL OUT STRATEGY - CHAPTER 2 APPROACHES FOR ROLL-OUT

4.1 Question 2: Would the same approach be appropriate for the non-domestic sector as for the domestic sector?

From KEMA's perspective, the approach to the mass market domestic sector will need to be more intensive in terms of programme awareness and the benefits case that supports the roll out. Essentially 27 million households need to be engaged and supportive if the programme is to be successfully completed in the timescales described. The non domestic sector represents a relatively small proportion of the meter population, with a greater understanding of the case for reform in the electricity and gas metering sectors. In fact a significant proportion of non domestic customers have already moved towards adopting interval metering solutions. It is however, likely that small high street businesses will generally not be tuned in to the change to the same extent as their larger sector counterparts, and as such



they will also need to be treated similarly to the general domestic population. The approach therefore should be structured to suit the respective segments of the market and the level of understanding (and interest) of the customers within those segments. This will require at least separate approaches to domestic and non domestic groups and it is also likely to require further detailed support and approaches at sub-sector levels.

4.2 Question 3: Is there a case for special arrangements for smaller suppliers?

Our feeling is that given that the barriers to entry in electricity supply are significant, then special arrangements for smaller independent suppliers (and new entrants) should be introduced as the programme develops. If greater independence is to be continued to be supported (in the wake of a consolidating supply market) then certain measures aimed at minimising further barriers associated with mandatory deployment of smart meters should be considered. In any event consideration should be given to small supplier meter installation resources, which could otherwise be “swamped” by the demands of the larger suppliers.