



FAO:
Smart Metering Implementation Programme Team,
Department of Energy & Climate Change,
3 Whitehall Place,
London,
SW1A 2AW

From:
DNV KEMA Ltd.
Palace House
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08/10/2012

Dear Sir/Madam,

Re: SMETS2 Consultation, URN 12D/258

DNV KEMA welcomes the opportunity to respond to DECC's latest consultation regarding the Smart Metering Equipment Technical Specifications (SMETS). DNV KEMA has a number of observations to make regarding the status of SMETS, our main focus areas being communications, security, testing, certification and interoperability. We trust that DECC finds our comments useful and we would be more than happy to expand on any of the points at a later date.

Yours Faithfully,

DNV KEMA Energy & Sustainability, with more than 2,300 experts in over 30 countries around the world, is committed to driving the global transition toward a safe, reliable, efficient, and clean energy future. With a heritage of nearly 150 years, we specialize in providing world-class, innovative solutions in the fields of business & technical consultancy, testing, inspections & certification, risk management, and verification. As an objective and impartial knowledge-based company, we advise and support organizations along the energy value chain: producers, suppliers & end-users of energy, equipment manufacturers, as well as government bodies, corporations and non-governmental organizations. DNV KEMA Energy & Sustainability is part of DNV, a global provider of services for managing risk with more than 10,000 employees in over 100 countries. For more information on DNV KEMA Energy & Sustainability, visit www.dnvkema.com.

Question 3	Do you agree that equipment should be required to comply with SMETS and a GB companion specification?
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DNV KEMA would strongly agree with this point. There are three main areas of focus from our perspective:

- 1) Products - there will be a number of companies delivering products into the market. It is not only important that specifications are enforced and adhered to, but that each provider interprets the specification in the same way. To guarantee compliance, independent bodies would need to be established to provide testing and certification. Failure in this area is not an option and products a) must work seamlessly (first time ideally) and b) last for the period for which they were designed. This ensures that the programme can be delivered in line with its projected costs.
- 2) Interoperability - is a particularly challenging issue for the UK, given the nature of the competitive market and the number of products that will be used. Based on DNV KEMA's experience, 'theoretical interoperability' is very different to 'real interoperability' and therefore, a level of assurance is needed. DNV KEMA is concerned about progress in this area to date.
- 3) Security – the SMIP must ensure that the approach to security is clearly defined and fully understood by all parties. In DNV KEMA's experience, security mechanisms should be identified and agreed at the earliest possible stage of the design phase. There would appear to be a high level of uncertainty from both a technical perspective and in terms of the ongoing governance required – this is a significant programme risk which needs to be addressed as soon as possible. The topic of security must not be put to one side for Foundation phase as this could have significant consequences.

At the present time SMETSv1 appears to be left 'open to interpretation' and we would raise the question as to what constitutes SMETSv1 compliance during the Foundation phase (in conjunction with licence condition). DNV KEMA would also make the observation that testing criteria/solutions surrounding SMETSv1 or SMETSv2 (and any associated companion specs and versions of) need to be developed iteratively and relevant timings should be factored into the programme.

Question 31	<p>Do you agree with the proposed approach to the governance of security requirements? If you propose alternative arrangements please provide evidence to support your views.</p>
<p>DNV KEMA would absolutely support the concept of a technical sub-committee to the SEC panel which monitors security risks on an ongoing basis. DNV KEMA would ask the question as to who would take responsibility for an event (in terms of resolution, time to resolution and financial penalty etc.) There should be a clear set of guidelines that set out all the risks around device security, head-end security and end-to-end security, the potential consequences of the risk (including financial) and the ultimate risk owner. This is particularly important given the number of interfaces within the infrastructure i.e. Customer-CSP-DSP-DCC-Retailer/DNO/3rd party. In the event of a breach at the head-end that impacts millions of devices and results in an instantaneous reduction in demand, the worst case scenario is perhaps a 'black start' situation. This would subsequently need to be managed by National Grid/DNOs and the control mechanisms/responsibilities for bringing customers back on line (presumably using the DCC) would need to be agreed. It may be that this eventuality has already been discussed and dealt with by the security group.</p>	
Question 32	<p>Do you agree with the proposal to establish independent assurance procedures for DCC and DCC users? Please explain your views and provide evidence, including cost estimates where applicable, to support your position. Comments would also be welcome in relation to the impacts and benefits of the proposed approach with regard to small suppliers.</p>
<p>Building on the points raised in Question 31, DNV KEMA absolutely supports this and agrees with the need for a role-based approach, the parameters of which would sit under the SEC. However, the level of risk for each scenario should be quantified to calculate what measures (and hence costs) are appropriate for each certification tier. It follows that independent certification is a 'must have' in our view.</p> <p>Furthermore, given the value of the programme (£11.5bn), DNV KEMA would recommend a comprehensive risk management regime applied both at a programme level and to individual sub-topics including security. DNV has extensive experience of implementing risk management measures for multi-billion pound clients and can provide some high-level thoughts to DECC if this is of interest. Robust risk management measures provide further assurance that projected benefits will indeed materialise.</p>	

Question 34	<p>Do you agree with the proposal to establish an independent security certification scheme for smart metering equipment? Do you have any views on the proposed approach to establishing a certification scheme or evidence of the costs or timelines for setting up such a scheme or submitting products for certification?</p>
<p>DNV KEMA strongly supports the concept of an independent security certification scheme. We also agree that SMETS1 equipment should be certified prior to enrolment in the DCC - but there are a few decisions needed now to enable this. A debate needs to be had as to how long a security certificate should be valid for. This is another topic which must be closed down very soon in our view.</p>	
Question 37	<p>Do you agree that interoperability is central to the development of a successful smart metering solution and that activities related to the assurance of SMETS equipment should be governed by SEC? Please provide views on the governance arrangements that would be appropriate for assuring interoperability of smart metering equipment.</p>
<p>DNV KEMA has had many recent conversations with companies in the UK regarding interoperability. Interoperability testing is an extension of the testing and certification process and ensures that all devices will work together seamlessly. However, from our experience, interoperability testing should be undertaken completely independently and handled as a separate process to the testing and certification of the devices themselves. Based on our previous learnings, it is DNV KEMA's view that every and any version of a product (in a software sense) that has an ability to communicate with other devices within the confines of the UK smart metering architecture must be tested to ensure interoperability prior to its deployment. DNV KEMA has witnessed numerous issues in other countries whereby a manufacturer has claimed interoperability and this was by no means an appropriate claim.</p> <p>Given the sheer number of manufacturers delivering products, a lack of governance in this area would undoubtedly be a recipe for disaster. As a pre-requisite to an interoperability test, the manufacturer in question should be able to demonstrate conformance with SMETS by producing a valid certificate. Although at the present time, there would appear to be no formal procedure (during Foundation) to determine what is and what isn't SMETS1 compliant. See also our response to Question 3.</p>	

Question 38	<p>Do you agree with the creation of an 'approved products' list and the requirement on suppliers and CSPs to obtain, retain and provide evidence of appropriate certification should apply regardless of whether they intend to enrol the equipment in DCC?</p>
<p>Yes – but it should be independently maintained and not place unnecessary burdens on manufacturers. In the MID space, DNV KEMA has a simple system that can help prevent fraudulent products entering the market. Controlling access to the list is something else to consider.</p>	
Question 39:	<p>Do you agree that protocol certification (against a GB companion specification) should provide adequate assurance that a product will meet interoperability requirements? Please explain your views and identify any additional assurance testing that you consider to be necessary and the rationale for including such testing.</p>
<p>This doesn't always follow – see also our answer to Question 37. In DNV KEMA's experience interoperability testing should be a completely separate process.</p> <p>DNV KEMA is also concerned by the following statement on page 66 of the consultation document: "The Government is not proposing to introduce an overarching interoperability licence condition at this stage....."</p> <p>Given the emphasis placed by all parties, particularly suppliers, on the need for interoperability, and given the significant issues associated with achieving interoperability, it is inconceivable that the issue is not given the highest priority and licence rigour to ensure that it is achieved.</p>	
Question 46	<p>Do you agree that the equipment development and availability timelines are realistic? Please give evidence.</p>
<p>DNV KEMA has some significant concerns with regards to the continual development of the specifications and the testing regimes which are to be determined. Some general observations we would like to make at this stage include:</p> <ul style="list-style-type: none"> • There is a need for a GB companion specification. There is also a need to define and develop a testing regime for SMETS2. Once this has been done, a (to be established) SMETS2 'user group' could appoint test house(s) to provide the testing. Given there is still significant work to be undertaken with regards to the companion specification, a target date of Q1 2014 would be realistic to ensure that appropriate testing regimes are in place, that there is time for development and that test houses can be appointed. 	

- Testing is an iterative process and the speed depends not only on the quality of the products but the number of different interpretations of the same specification. DNV KEMA would point out that there are two possible outcomes to a test; pass or fail, and there must only be 'one version of the truth'.
- Once testing commences, it may become apparent that the spec and test cases/scenarios will need to be adapted as problems are identified. This can delay the process significantly.
- If a comms hub (or indeed electricity or gas meter) requires testing to assess asset life risk – this can be a 6 to 9 month process from the point at which the device becomes available off the production line. This can however be managed by limiting the number of installations in the early months - see also Question 47.

Taking these points into account, there remains a risk that the programme could be delayed by up to a year.

Question 47	Do you agree that SMETS2 should only be designated when the Government has confidence that equipment to satisfy the new requirements is available at scale? Should a further period of notice be applied to ensure suppliers can manage their transition from SMETS1 to SMETS2 meters?
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DNV KEMA is supportive of this view. It is important to ensure that products are fully tested in accordance with a unified procedure before too many are deployed.

Question 48	What are your views on when responsibility for the SMETS modifications process should transfer from the Government to the SEC?
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Criteria should be established to assess what time period constitutes 'successful operation' of the devices. DNV KEMA would recommend a period of 2 years for this, by which point we would be at peak roll-out.

Question 49	Which of the options (standing sub-committee or non-standing sub-committee) would you prefer in relation to modifications to the SMETS?
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A standing sub-committee should be established in the first instance with a remit for monitoring and reporting. As the situation stabilises and the performance reporting becomes more established, then our suggestion would be to move this to non-standing.