

Smart Metering Implementation Programme
DECC
3 Whitehall Place
London
SW1A 2AW

10 October 2012

Dear Sir/Madam,

**CONSULTATION ON THE SECOND VERSION OF THE SMART METERING
EQUIPMENT TECHNICAL SPECIFICATIONS**

Thank you for the opportunity to respond to the consultation on the second version of the technical specifications of smart metering equipment and related matters, dated 13 August 2012.

We are generally supportive of the Government's aim for smart metering equipment that is fully interoperable and its proposals for the Home Area Network (HAN) solution, communications hub requirements and responsibilities, and assurance requirements.

Our key points are as follows:

- We support the consideration of additional technical capabilities to those proposed under SMETS1. However, we believe that any additional scope and capabilities should be phased in over time after there is confidence that the basic end to end architecture and components work.
- We believe that the HAN communication technologies required to maximise mass roll-out must be driven by the Programme rather than being left to the market, as we believe this would otherwise lead to a delay in the solution being fully established.
- While we agree that Communications Service Providers (CSPs) should procure and own the communications hub, we question the "costs lie where they fall" principle for communications hub installation and maintenance. The Government should give further consideration to how supplier costs can be recovered, should suppliers incur significant site revisit costs as a result of large-scale communications hub failures.
- If the communications hub for non-domestic installations is not required to be compliant with the Communications Hub Technical Specification (CHTS), the complexity in the opt-in / opt-out processes will potentially result in confusion and greater challenges around associated costs. We therefore suggest the Government should change its position and make CHTS-compliance mandatory.

- Interoperability is central to the consumer experience and the success of smart metering rollout, and we believe this should be supported via overarching interoperability governance arrangements in the Smart Energy Code (SEC). This will ensure that all parties are signed up to the same principles in respect of commercial and technical interoperability.
- We have identified a drafting issue with the draft licence conditions in Annex A. Condition RR.3(b) requires that there is 'established a communications link between the Smart Metering System and either the In-Home Display (IHD) or any other Consumer Device at the relevant premises, across a HAN Interface'. As drafted, this could have the following consequences:
 - in situations where the consumer declines to accept an IHD, but installs a device which they have purchased independently or received from a third party energy services company, suppliers might be obliged by this licence condition to resolve technical issues with the Consumer Device, even though they may have no responsibility for such issues;
 - in situations where the consumer declines to accept an IHD or to install an alternative Consumer Device, suppliers would be unable to comply with this condition.

We request that the drafting is amended to address these concerns, for example by clarifying that the link is only required with a correctly operating and compliant Consumer Device, and making it clear that the obligation is contingent on there being an IHD or Consumer Device in operation on the premises.

In conclusion, we welcome the Government's aim to ensure fully interoperable technical capabilities for smart metering equipment, and will continue to support the Programme in its activities. However we would welcome further clarity regarding the intended timescales for all remaining activities in the Programme ahead of mass rollout in order to give a full assessment of future end to end operational requirements. We would also note that this assessment is impeded by the potential impact of the revised security trust models and the requirements which will need to be translated to deliverables at an operational level.

I attach a response to the questions posed. Should you wish to discuss that, or any of the above points, please get in touch with me using the details on the previous page or contact

Yours sincerely,

SMETS2 CONSULTATION – SCOTTISHPOWER RESPONSE

Chapter 4 – SMETS 2a Development

Question 1: Do you have any comments on the criteria used in the evaluation of the application layer standards?

ScottishPower is in broad agreement with the evaluation criteria used and the conclusion that Zigbee 1 will support smart metering rollout requirements in Great Britain. While Zigbee 2 is an IP protocol with a more modular layer design, it is still in its infancy as a standard and would require significantly more bandwidth to carry the messages between devices. We therefore support DECC's stated position that Zigbee 2 will not meet the selection criteria.

DLMS and Zigbee SEP1.1 are both established open protocol standards achieving full recognition by the EU. While there are still areas which require development, it is our understanding that the development timeline is considered to be much shorter than other less mature standards. The low power demand of ZigBee is also an essential attribute in the context of the gas meter and in minimising the impact of unmeasured power loss.

We also recognise the merits of the independent testing and assurance arrangements already in place and managed by the ZigBee Alliance and DLMS User Association.

Interoperability

While we accept that there may be performance gains to be achieved through the use of tunnelling techniques, where multiple protocols are required, however this must not be to the detriment of interoperability. We still have interoperability concerns given BEAMA and SSWG do not appear to be in complete agreement on this subject. We therefore hope that a common understanding can be achieved during the detailed development of the GB Companion Specification.

Evolving standards

As standards other than ZigBee and DLMS continue to be developed and established, we believe that evolving standards should not be precluded from SMETS. However, if other protocols were introduced it would need to be ensured that that full technical and functional interoperability and backward compatibility could be achieved.

It is likely that advances in home automation will increase the number of devices operating with IP protocols. While we envisage that there will be obvious benefits of security / data protection and the utility HAN not being universally accessible, we believe that consideration should be given to the prospect of controlled and secure bridging (perhaps a one way transformation between ZigBee 1 to ZigBee 2).

Please also see our response to Question 2.

Question 2: Do you agree with the proposal to adopt ZigBee SEP / DLMS as the HAN application layer standards for GB?

We accept that the proposed HAN application layer standards are already widely used and recognised as an open standard by the EU and that ZigBee SEP and DLMS are the furthest advanced in terms of specification for use by GB smart metering.

ScottishPower is in agreement that SMETS is defined such as to permit the architectural option of having either a standalone or an intimate Communications Hub.

Please also see our response to Question 1.

Question 3: Do you agree that equipment should be required to comply with SMETS and a GB Companion specification for ZigBee SEP / DLMS?

We agree that all equipment installed as part of the Smart Metering System (including interfaces with generation meters and Consumer Access Devices) must be both independently certified and assured by recognised Test Bodies against SMETS version 2 in conjunction with the GB Companion Specification. This will apply for all aspects of capability associated with SMETS compliance, with self-certification and testing assumed for enhanced and/or bespoke functionality being added.

Consideration will also need to be given to the prospect of other open protocols being introduced over time. As and when this occurs, any new protocol will need to conform to a companion specification comparable with that associated with DLMS and ZigBee.

Question 4: Do you agree with the overall approach proposed in relation to the HAN physical layer? If not, please provide a rationale and evidence for your position.

We agree that the results of the independent wireless field trials are representative. While we are in agreement that the majority of installations could be successfully achieved using 2.4GHz, alternative requirements solutions (wireless and wired physical layer) will be required to ensure there is the necessary coverage to fully achieve supplier roll out obligations.

In achieving the necessary coverage and mix of technologies, it is important that conformance with the GB Smart Metering System requirements is closely managed to ensure that technical interoperability, backward compatibility and interchange-ability between devices is maintained.

Question 5: Do you have any comments on the criteria used in the evaluation of the physical layer of the HAN?

We agree that the criteria used to evaluate the physical layer of the HAN is has demonstrated the greater coverage 868MHz provides when compared to 2.4GHz. Moreover we are satisfied that OTA RF solution options operating at lower frequency than circa 800 MHz, e.g. 169 or 433 MHz, would not provide for sufficient bandwidth and would restrict performance or function as a result.

While we support initial deployment of the HAN with RF based solutions, some installation scenarios will require a wired solution to achieve data connectivity, either as a result of technical shortfalls or customer preferences. Therefore we believe that secondary solutions should not be precluded from SMETS as in some cases these could provide a bridged protocol-to-protocol solution linking secondary and primary communications. This will enable the connection of devices in scenarios such as a gas meter location where the establishment of an 868MHz connection cannot be achieved. While the volume of instances meriting such an approach is expected to be small, the Programme should continue to determine a solution. It must also be ensured that SMETS does not impose a constraint on the introduction of an alternative solution in the future.

We would recommend that the following additional criteria should be incorporated into future testing of embedded components with smart metering devices:

- the quality and performance of antenna;

- co-existence with other communications; and
- protections against interference - both creation and resistance.

Question 6: What are your views on the compatibility of the reserved spectrum 870-876MHz with 868 MHz and the value of considering the use of this band?

We are in broad agreement that the sub-GHz solution should be extended to the 870-876 MHz spectrum range. Our view is based on the following considerations:

- this would cater for a greater number of channels which would enable adjustment of signal strength based on the siting and orientation of devices;
- to incorporate a wider spectrum, only minor adjustments would be required to the stack design and that moving from 868 MHz to an extended range could be achieved by remote upgrade; and

ScottishPower would urge the Programme to consider securing a slice of the reserved spectrum so that the utility industry can operate within a licensed band. The exclusivity of a licensed band enables greater choice in defining the rules of operation and would facilitate enhanced performance and robustness over operation in a licence exempt band.

Question 7: Do you consider that additional measures should be taken to encourage the development of an 868 MHz solution?

We believe that the Programme must have a central role in overseeing the development of specifications and standards for 868 MHz by silicon vendors, meter manufacturers and standards bodies. It is understood that it will take a minimum of two years to develop an open 868 MHz standard which has been approved by the ZigBee Alliance. Given the expected coverage shortfall of around 30% associated with 2.4GHz, it is essential that a sub-GHz open standard is established as quickly as possible.

It is our understanding that the establishment of 868 MHz as an open standard is dependent on at least three silicon vendors and metering device manufacturers working in collaboration to agree and define the standard before gaining acceptance by the ZigBee Alliance.

Any delays in establishing 868 MHz as an approved open standard will have a direct impact on mass roll out and make the 2019 roll out completion date even more challenging through reduced productivity and increased costs as a result of aborted site visits, detrimental consumer experience and increase in installation costs.

We are pleased that SSWG has volunteered resourcing to take up a leading role in pursuit of an open 868MHz solution under the Zigbee Alliance umbrella. However, these activities must be brought under the control of the Programme with key milestones agreed and incorporated into the SMIP plan.

Question 8: Do you agree with the approach to allow the market to determine the balance between 2.4 GHz and 868 MHz? If not, please provide rationale and evidence.

No, we do not agree that it should be left to the market to determine the balance between 2.4 GHz and 868 MHz. With superior propagation characteristics and range of coverage, 868MHz has the potential to be a more robust physical layer HAN solution than devices communicating at 2.4GHz and is certainly needed to address the shortfall in coverage at 2.4GHz.

Based on our understanding of a potential two to three year lead time, ScottishPower believes that work must commence now to ensure 868 MHz (or licensed band 870-876 MHz for instance if viable) is fully established as quickly as possible and we see the Programme having a key role in ensuring that this is achieved. To ensure efficient roll out of smart

metering and to establish a positive consumer experience, we believe that 868MHz enabled equipment should be readily available at the commencement of mass roll out.

Allowing the market to decide the availability of 868 MHz will inevitably lead to a delay in the solution being fully established and as a result suppliers will focus on pre-selected sites where 2.4 GHz is expected to work. Sites where an alternative HAN solution is required will be left to the end of the scheduled rollout and will no doubt include buildings such as high rise blocks of flats which are likely to house vulnerable consumers who may have the most to gain from a smart metering installation.

Question 9: What are your views on the three options identified for displaying wireless solutions (i.e. 2.4 GHz as the default; dual-band communications hubs; or market led)?

Option 1

Given 2.4 GHz is the most established technology, it is clearly the dominant standard at the current time, offering a greater level of coverage. However, with the known indications that this standard will leave a shortfall of around a third of the installations across Great Britain with either no, or an inadequate, HAN communications, then ScottishPower would agree with the Government's view that mandating this as the preferred solution in the short term makes little obvious sense.

Option 2

We believe that the dual-band option appears to be fundamentally flawed on the basis that it would in the most part introduce, at a cost, embedded redundancy into the Smart Metering System.

ScottishPower believes that there is a variant to Option 2 which merits further consideration. We believe that it would be possible for a suitably protected and secured extension port to be incorporated into the communications hub that would facilitate the introduction of a protocol bridge (for instance this may be an add-on modular unit to the Communications Hub in the form of a dongle or equivalent, provided the power and data connection is secure and tamper protected). This would provide the same capability as a dual-band communications hub but without the need for permanent embedding. The dongle would also enable greater flexibility as it could be a bridge from 2.4GHz to PLC or 868MHz to 2.4GHz, or 868MHz to any other communications technology solution that may become viable over time.

Option 3

Option 3 would require the installing supplier to determine the HAN technology solution for any given property (868MHz or 2.4GHz), which would inevitably lead to a variety of approaches across the industry. We do not regard this as an optimal way to address the transition between 2.4GHz and 868MHz during mass roll out.

Please also see our response to Question 8.

Powering of the communication hub

We continue to support the communications hub being mains powered from the supply side of the meter. This position reflects the general opposition to the introduction of HAN range extenders or repeaters where the unit would be on the consumer's side of the meter.

Future proofing

Accepting that there is no single solution, future proofing and backward compatibility must be key considerations when determining what communications solutions should be deployed.

In the short term, as well as 868MHz development, development of a wired HAN option must also be encouraged to ensure an open standard is established.

Obsolescence and redundancy of communications technologies will be an on-going challenge for the industry in its efforts to ensure the best return on investment and minimise the stranding of existing communications components which have already been deployed.

Whilst it is accepted that there will inevitably be a period of time where 'old' 2.4GHz stock needs to be cleared once 868MHz becomes available, it is suggested that this should in the most part be done by selection of properties where a 2.4GHz based HAN solution is perfectly adequate.

Question 10: Do you agree with the proposal for a 'fit for purpose' installation obligation on suppliers?

In principle we agree that it would be appropriate to place a 'fit for purpose' obligation on the installing supplier. However, a number of issues still need to be resolved; for example, in instances where energy supply is provided by two suppliers, how will their roles be defined and to what degree will the CSP determine the equipment that is installed in the home? (And more fundamentally, what does the Government regard as a successful smart metering installation?) We would request further clarification on these points and for this to be clearly defined in both the Smart Energy Code (SEC) and Smart Metering Installation Code of Practice (SMICoP).

In practice we foresee difficulties in administering this obligation including any necessary apportionment of penalties and/or compensation especially where electricity and gas meters are not installed at the same time. We believe that further consideration needs to be given to scenarios where the communications technology installed with the electricity meter is found to be inadequate to establish a HAN connection with a gas meter subsequently installed by a different supplier. This could be overcome if there was an option to insert and lock-in a protocol bridge extension to the existing communications hub. However further consideration would need to be given to this technique and whether it is acceptable under the revised security trust model.

Question 11: Do you have any views on the proposed approach to developing a wired HAN solution?

Determining an appropriate wired HAN solution is a key consideration in ensuring the rollout of smart metering capability across Great Britain is maximised.

We are in agreement with Government that potential options should be tested and trialled in typical and challenging environment conditions in order to help influence the selection of a suitable open standard technology.

RF propagation

We have some concerns that determining a wired solution may not be gaining sufficient focus or momentum within the Programme as it is perceived that only a very small percentage of properties will require such a solution. Based on our understanding, it is not just high rise properties where a wired solution may be called upon given there are also properties with solid stone interior walls where RF technologies may have difficulties achieving the necessary propagation to achieve a reliable link to individual smart metering system components.

Customer preferences

In some instances consumers may object to having RF solutions of any form in their home and therefore a wired HAN solution must be available to ensure that customer preferences can be addressed at the point of installation. While a customer may be happy with the overall concept of smart metering, suppliers do not wish to be faced with another barrier to achieving their already challenging rollout targets or additional costs where a repeat site visit is required once a wired solution is available.

Trialling

We are happy that DECC has recognised the urgency to commence wired HAN trials. However, ScottishPower would urge Government to commit to leading and co-ordinating the trial along similar lines to the RF trials conducted in Q1 2012. It is vital that the trials are independently managed and that the results and subsequent decisions are seen as credible by all stakeholders.

ScottishPower wish to take this opportunity to note that we anticipate there will be a potential requirement for a 'last mile wired' local area network approach, or some alternative, for some properties / locations which could be in the form of a shared WAN infrastructure. A solution of this type may be needed in some new build instances where RF signals do not penetrate into the building, or for difficult concentrated meter locations, e.g. in the basement of a tower block, where it would be impractical and cost prohibitive to install an external WAN extension antenna for each metering system in the tower.

Question 12: Do you agree with the proposed scope of functional requirements for a communications hub? Are there any other functions that should be included and what would be your rationale for including those functions (including estimated costs and benefits)?

Yes, we broadly agree with the scope and functional requirements set out in the initial drafting of the Communications Hub Procurement Specification and have provided a number of review comments and suggestions on specific points of detail.

We currently have some reservations with respect to how CSPs will be effectively governed given the existence of the Communications Hub Technical Specification (CHTS) and Communications Hub Procurement Specification (CHPS). In our experience, it is important to be detailed in the specification of communication devices in areas such as firmware management, memory, diagnostic functions and power supply arrangements due to the varied interpretations by manufacturer.

We remain actively engaged with the Programme and will continue to provide our feedback as and when requested.

Question 13: Do you have views on the specification for an 'intimate' interface between electricity meters and communications hubs?

We believe that the intimate interface needs to be standard in terms of pin connection, size and form and with the appropriate protections should be capable of supporting both data and power. This will ensure full interchangeability and interoperability between devices.

Standardisation of the physical connection (not OTA or optical) will be a basis upon which to deliver interchangeability. The Programme should therefore establish a technology roadmap which seeks to pursue the standardisation of both power and data interface via the connection between the electricity meter and the communications hub. Manufacturers must therefore commit to promote a universal standardisation of the physical connection between meter and communications hub which provides appropriate safeguards, including

compliance definitions relating to protection e.g. secure locking, protection, voltage AC/DC and resistance to physical tamper.

The standard for the intimate interface should not rule out the option of an 'umbilical' cord connection between the electricity meter and communications hub to enable orientation of the smart metering system to optimise signal strength and location adjustment between devices.

Question 14: Do you agree with the Government's marginal preference for the CSP-led model for communications hub responsibilities, or do you prefer the supplier-led model? Please provide clear rationale for the advantages and risks associated with your preferred option

Yes, we are in broad agreement with the Government's preference for a CSP-led model. However, we do not agree with the proposed 'costs lie where they fall' principle and think that the Government needs to give further consideration to the way in which supplier costs can be recovered for the installation and on-going maintenance of communication hubs - particularly where suppliers incur significant site revisit costs following communication hub failures.

We consider the main advantages of a CSP-led model to be:

- CSPs are in a stronger position to purchase communications hubs due to economies of scale;
- CSPs are better placed to integrate communications hub and WAN technologies;
- smaller suppliers may be subject to constraints due to volume and manufacturing/financing;
- where a single communications hub is supporting two different suppliers, the CSP-owned model will provide a standard service level for both parties;
- should there be significant communications hub faults, the responsible party will be known at all times.

However, we believe the following points require further consideration if the CSP-led model is to be adopted:

- why it is considered that HAN responsibilities need to be split with the HAN coordination within the communications hub being only the responsibility of the CSP;
- the skill sets suppliers will need to develop to support the installation and on-going maintenance of installed communication hubs;
- how to avoid the situation where suppliers are left exposed to significant additional costs where communications hubs fail, e.g. as result of the CSPs selecting the cheapest compliant option;
- the basis upon which "fit for purpose" criteria will be determined; and
- should auxiliary antenna be required, who will pay for this additional equipment?

Question 15: Do you agree with the proposal that a CHTS-compliant communications hub should not be mandated for opted out non-domestic sites and that suppliers should be free to use whatever type of communications equipment best supports their processes and WAN service?

No, we do not agree with this proposal.

Upon roll out of smart metering, suppliers will be required to take 'all reasonable steps' to ensure that SMETS compliant metering systems are installed in non-domestic premises. It would therefore make technical and commercial sense also to mandate installation of a CHTS compliant communications hub for both opted in and opted out smart meters. It is

accepted that there may be a 'bespoke' solution associated with the WAN for particular opted-out premises; however the HAN links in the metering should conform with SMETS compliant standards.

If this is not mandated, and a supplier chooses to opt-out and install a non CHTS-compliant hub, this could present a barrier to the premises being opted back in to DCC services in future. Therefore, if the CHTS-compliant hub is not mandated, ScottishPower believes the opted out supplier should be required to pay for the installation of a CHTS-compliant communications hub at the point of change of supply should the new supplier choose to opt the premises back in.

In considering the Government's revised security trust model, we now question how this will be implemented where there is the potential for equipment to be installed which does not meet the required standards, including independent certificates and assurances.

Question 16: Do you agree that the gaining supplier should bear the costs of installing an appropriate communications hub if they decide to switch between opted in and opted out?

Yes, we agree that if a supplier decides to opt out of DCC services it should bear the costs of installing an appropriate communications hub. However, as stated in our response to Question 15, we believe it would make technical and commercial sense if a CHTS compliant communications hub were mandated for both opted in and opted out smart meter operation.

Any opt-out process with an alternate communication hub will need to take account of scenarios where a combination of opted in and opted out suppliers are providing services within a premises. It will need to be ensured that the installation of an additional communications device does not interrupt or interfere with an opted in smart metering system. Consideration must also be given to the costs and practicality of the SMETS equipment being either maintained in situ in a dormant state or removed and returned to the appropriate communication service provider.

Where a consumer regularly changes between opted in and opted out services, the costs to achieve this change will result in higher costs, particularly where there is more than one GB communications hub specification.

Consideration must also be given to other parties (e.g. ESCos) where they will be obligated to comply with SMETS for their metering needs, but may be prevented from utilising HAN connectivity due to the customer's choice to opt-out.

Question 17: Do you agree that the design and implementation of outage reporting functionality should be assigned to CSPs, documented in the communications hub technical specification?

We agree that outage reporting, in terms of first and last gasp, should be the responsibility of the CSP providers. The design needs to be incorporated in both the CHPS as well as the CHTS and the functionality should be configurable – i.e. on/off.

From the onset, CSPs should be expected to facilitate the capability to have outages notified and reported on a site by site basis in accordance with the Network Operators chosen settings.

Question 18: Do you agree that it would be inappropriate to require meters operated outside DCC to be required to implement outage reporting? Please provide rationale to support your views

We agree that it would be inappropriate for meters operated outside the DCC to be required to implement outage reporting, given that the volume of opted out meters may be small and the meters may not be compliant with SMETS.

Question 19: Do you agree that maximum demand registers should be included in SMETS? Please provide evidence to support your position and provide evidence on the cost implications of delivering this functionality via back office systems or via the meter.

Yes, we agree that maximum demand recording should be included in SMETS. Furthermore, the specification should not be limited to the capabilities being sought by the Network Operators but should also include maximum demand recording for supplier and billing purposes, should these requirements be different. (Clarification on the definition and computation of maximum demand for Network Operators has already been sought through the ENA's Working Group on this subject.)

Although we believe the capability for maximum demand recording should be included in SMETS, we do not believe it should be rolled out operationally until the basics of smart metering end to end operation have been successfully demonstrated. The new incentives around consumer and/or network alarms and alerts offers the opportunity for further innovation, especially when associated with energy efficiency products (e.g. time of use tariff), and delaying operational rollout would allow time for these requirements to become clearer.

The condoc sets out two options for maximum demand recording: Option 1 'in the meter' (using maximum demand registers) and Option 2 via back office systems. Our observations on these options are as follows:

Option 1 (Maximum demand registers)

We believe this option could help to reduce communication costs and issues associated with access to data. However, network operators would still need the capability to carry out a detailed analysis of all the maximum demand register reads that they retrieve.

Through our on-going representation at SSWG, we are of the understanding that the maximum demand register is already included as a capability in the SSWG specification of the electricity meter. Given that smart metering rollout is supplier-led, we think it would be sensible that supplier maximum demand registers are incorporated into SMETS along with network operator requirements. However, adding network registers does add complexity to the logic in the firmware - especially for the management of Time of Use maximum demand scenarios.

Dependent on the conclusion of the ongoing security trust model assessment, ScottishPower would not be supportive of a requirement whereby suppliers have to apply or reset their quality thresholds for maximum demand registers on behalf of a network operator. This would add considerable cost and complexity to the development and operation of our back end systems.

Option 2 (Back office systems)

This option could result in higher communication costs to obtain profile data. Network operators would still require the systems capable of processing and analysing high volumes of data.

If the network operators plan to use reactive and active power interval data, we would expect their systems to be capable of analysing half-hourly consumption data for maximum demand purposes. Any additional IT costs to allow network operators to support Option 2 would therefore be minimal (provided the network operator already has plans to retrieve and analyse the reactive and active power data.)

Question 20: Do you agree with the proposal not to include the capability to generate additional voltage alerts based on counter thresholds in SMETS 2? Do you have any evidence that could justify including this functionality in SMETS 2?

We do not regard this as a supplier issue and it is no longer supported as requirement for SMETS by the ENA. On this basis the requirement should be removed from SMETS.

Question 21: If DNOs were permitted to access remote disablement functions, should control logic be built into DCC systems or meters? If the logic should be built into meters, should the logic be specified in SMETS 2? Please provide rationale to support your position including estimates of the cost of delivering this functionality under the different options being considered and any evidence relating to safety issues associated with each option.

Given the current review of trust models this area is currently subject to further detailed review.

SMETS1 entitles a supplier to raise a request for the DCC to send a remote command to open the load switch in an electricity meter. If at some future stage network operators were permitted to invoke a remote disablement command, ScottishPower Energy Retail would be in support of the control logic being incorporated into the DCC system to ensure complementary or conflicting commands from different parties are managed appropriately.

The load switch in the smart electricity meter is not a means of supply isolation and if accepted and treated as such, ScottishPower Energy Retail does not consider there to be any safety related risk associated with disablement / re-arming functionality.

During the early stages of rollout we do not believe that the remote disablement of meter should be considered. From a supplier perspective, there are a number steps which are taken to ensure such an action is a point of last resort. Should network operators be granted the power to disable supply at a meter this should not come into place until the latter stages of mass rollout.

Question 22: Do you agree that variant smart electricity meters should be specified in SMETS 2 and that the cost uplift for variant smart meters is similar to that for variant traditional meters? Please provide evidence of costs to support your views on cost uplifts.

We agree that variant smart electricity meters should be specified in SMETS2. While single element and twin element meter variants are required to meet the requirements of existing wired arrangements in domestic homes, the inclusion of auxiliary load switch controls with the contactor integral or external to the meter is anticipated for a wide range of future demand side management uses.

Comparing the cost of a traditional twin element pre-payment meter against that for a single element prepayment meter we believe the uplift to be around 10%. We have also recently determined a similar level of uplift in the context of a single element smart meter to a twin element smart meter.

We still have concerns that gas meter variants are not sufficiently considered by SMETS including the extension of operating temperature range, temperature correction in high altitude conditions and higher IP rating for semi-concealed meters. Currently these functions are seen to be down to the commercial judgment of the Supplier. ScottishPower has consistently lobbied for a review of this stance on the basis that the environmental conditions at a site which may warrant a higher IP rating for instance to operate in a semi-concealed location, will be the same for all Suppliers. Suppliers should not expect to have to replace devices at the premises due to another Supplier's choice to go for an inappropriately low rated albeit compliant gas meter.

Consideration will also need to be given to communication hub variants which will be required to support infill (alternative, non-primary) solutions, which to date have not been reflected by DECC in their IAs. We believe that infill solutions will present higher costs given that they will be required for a low number of installations across Great Britain.

Question 23: Do you agree that randomisation offset capability should be included for auxiliary load control switches and registers as described above? Do you have views on the proposed range of the randomisation offset (i.e. 0 – 1799 seconds)? Please provide evidence on the cost of introducing this functionality.

We agree that randomisation offset capability should be included for:

- time of use rate changes;
- auxiliary load control switches and
- associated activation/de-activation of linked tariff registers.

We also support the randomisation being applied at the meter as a positive offset of up to 30 minutes from a scheduled switch time on the understanding that this requirement is simpler to implement than a +/- 15 minute randomisation. Randomisation should be able to be configured to be on or off as associated with each price switch arrangement.

We accept the reasoning behind the randomising of a switch between time of use price registers where there is no associated link to the activation / deactivation of an auxiliary load switch on the basis that consumers may have demand side management systems that will automatically react to price signals (via their Customer Access Device) to bring on or take off load.

Consideration should be given as to how consumers are likely to react to randomisation, especially where the delays are towards 30 minutes, and how it might be best explained.

ScottishPower would not support any moves to randomise the change of block tariffs as the volume of consumption would already be inherently randomised from household to household.

Question 24: Do you support Option 1 or Option 2 for 'pairing' a CAD to the HAN? Please present the rationale for your choice and your views on the implications that these options have for the technical design of the solution.

ScottishPower would advocate Option 2, however any support and assistance in the commissioning of the CAD (if it is solely a gateway bridge) to the consumer's own HAN environment should not be within the scope or jurisdiction of SMETS.

It is ScottishPower's understanding that a Consumer Access Device (CAD) is a device which offers a one directional (i.e. read only) secure data bridge enabling consumer access to data via one or more output ports.

Based on the CAD having an input from the SMHAN and output to the consumer HAN, the CAD interface in the context of SMETS simply offers the input side a 'rich' set of information from the SMHAN at a regular (to be defined) interval¹. Where appropriate the CAD would allow a one-to-many data link from the SMHAN to the consumer's own HAN.

The CAD interface with the SMHAN would be secured in the same way as any other device being permitted to join the SMHAN. The device would communicate one open standard language (i.e. Zigbee SEP 1.x) with the SMHAN. Depending on the consumer's own choices, and providing the CAD device incorporated the necessary protocol transformational capability, multiple consumer devices and/or external consumer services could be supported. Note that SMETS would purposely offer no prescription around the 'multiple' languages output on the consumer side.

We agree with the Government view, that the mechanism to securely join a CAD to the SMHAN should broadly be similar to that necessary to join for instance an IHD. Therefore a consumer should be able to install a CAD without the need for specific technical knowledge.

On this basis Option 2 would be favoured over Option 1 where the process of securely joining a CAD is as close as possible to that for joining an IHD to the SMHAN. The CAD would require to be a certified and conformant device tested and approved to operate its input via Zigbee SEP 1.x with the standard private / public key managed authentication to commission the communication join with the SMHAN.

The consultation gives the indication that a CAD could take the form of a multitude of different types of consumer or third party devices / functional applications etc. each of which would require to be securely linked to the SMHAN to provide its source of information. ScottishPower has concerns around potential operational data traffic management issues that a multitude of CADs may impose on the SMHAN, any involvement of time and effort on the part of the DCC and/or Supplier in the installation, commission and support process will be proportionately increased with each new CAD added over time without an obvious mechanism for recompense.

Question 25: If Option 2 were adopted, do you agree that obligations should be placed on energy suppliers to support this process by submitting 'pairing requests' to the DCC on request from their consumers?

While we have obvious concerns around the unpredictable level of support needed to assist their customers in the process of submitting pairing requests (particularly if there is to be allowance for multiple CADs per household), it does not seem unreasonable that suppliers (gas and or electricity) should be expected to provide assistance.

Given the DCC and CSPs should largely remain as unknown parties to the consumer by default suppliers would be required to develop a CAD registration process which would pass requisite detail to the DCC e.g. unique serial number details of the communications hub and the associated CAD.

It is assumed that the security credentials would be pre-loaded into the DCC to enable verification and authentication and that the CAD would have some form of indication on the device to demonstrate to the consumer that data was being received.

¹ CDIG White Paper – February 2012

In light of the current trust model review, this is an area which requires further careful consideration and subsequent detailed clarification.

Question 26: Do you consider that other CAD installation options should be pursued? If yes, please explain the approach you favour and your reasons.

It is ScottishPower's view that a consumer should be able to self install and commission a CAD using the same secure verification and authentication process as that of an IHD. Whilst it is the expectation that if a consumer has chosen to receive an IHD it will be installed and commissioned at the time of first installation of smart metering by the field operative, the mechanism should be simple enough that the consumer could in principle repeat this process. Should a direct electronic (out of band) link be established with the DCC, via an HHT for instance, the only difference between an installer and consumer commissioning a device may be in the timeliness of the commissioning transaction. Provided the security keys for the CAD are pre-loaded to the DCC (assuming this to be the Trust Centre), or alternatively a mechanism is initiated whereby the necessary details are provided at a specific point during the commissioning process where a WAN connection has been established, then the process could be kept relatively straight forward for consumers. On this basis we do not believe that there should be a requirement to introduce any alternative secure commissioning process specific for the CADs interface to the SMHAN.

We will continue to work with the Programme to understand any implications based on the revised trust modelling and subsequent requirements.

Question 27: Do you agree with the proposal to include in SMETS 2 a specification for a PPMID, connected via the HAN, as described above?

We support the inclusion of a PPMID capability in SMETS2 based on the capability through a HAN interface to invoke emergency credit and/or provide a more convenient entry means of the UTRN to locally top-up the electricity and/or gas meter balance as a contingency in the event of there being a WAN communications failure.

We are also in favour of the PPMID having the capability to provide a command to enable electricity supply remote from the meter itself. We believe that it is entirely possible to put the correct procedures in place to ensure that enablement of the electricity supply can be done via the PPMID without compromising safety. Excluding the capability to achieve this will not only lead to the provision of PPMIDs which fail to fully meet customer expectations of the smart metering system, it will also perpetuate the current situation where meter location can be a barrier which prevents customers from being provided with the prepayment product of their choice.

We do however recognise the unique technical challenges which mean that this is not a feasible requirement in the context of a gas meter.

Question 28: Would including the capability to enable gas and electricity supply through a PPMID connected via (a) a wireless HAN or (b) a wired HAN meet GB safety requirements? What impact would including this capability have on the cost of smart metering equipment? Please provide evidence to support your answers.

We agree that the ability to reinvoke supply should be extended beyond the electricity meter's own intrinsic user interface. We do not believe that this should be a requirement for gas meters.

On a purely practical and cost basis, the implications on the development timeline are not considered to be material when compared to the capabilities to perform update commands for the invoking of emergency credit and entry of a UTRN via a PPMID.

Question 29: Do you agree with the proposal that the communications hub should be specified such that it can support multiple smart electricity meters? How many smart electricity meters should be supported by each communications hub?

Yes, ScottishPower support the proposal for the communications hub to support multiple electricity meters given different forms of micro-generation may be taken up by the household.

We would suggest the possibility of up to four different electricity meters. However, we are not convinced that a generation meter needs to be fully SMETS2 compliant given it is not envisaged that the meter type will have a load switch or have the capability to operate in either pre-payment or credit mode. In its simplest (and cheapest) form it may purely be a conventional instrument capable of measuring and storing interval data and incorporating a HAN chip capable of securely joining the SMHAN in order to fulfil an AMR level of functional capability.

While current considerations surround the number of electricity, other utility metering, e.g. gas, water and heat, should ideally not be discounted from inclusion in the Smart Metering System over time.

Question 30: Do you agree that a specification for a HHT interface to the HAN should be defined? If yes, please identify the functions that this interface would need to support and the scenarios in which such functionality could be required.

Yes, we agree that an HHT to HAN interface specification should be defined. However, this should only be regarded as a contingency option where the WAN link is unavailable at the time of commissioning Smart Metering System devices with the SMHAN.

We have previously expressed a view that from a security perspective it would be far safer not to allow an HHT to interface electronically with SMETS2 equipment. However this would result in situations where smart equipment could potentially be installed to operate as dumb but not be smart enabled.

Provided the security risk is assessed as being acceptable, ScottishPower would support the need for a HHT Interface to assist the installation and commissioning of the smart metering system to operate in a semi-smart (i.e. credit mode only) manner whilst temporary service interruption (planned or unplanned) is being encountered with the WAN connection

We do not envisage that there is a need to facilitate any other functions via a HHT e.g. device diagnostics. Remote alerts and alarms being defined within SMETS will be universally accessible and ought to provide sufficient detail to remotely determine the necessary course of action.

The use of HHTs is still subject to evaluation as part of the wider security trust model review.

Chapter 5 – Governance and Assurance of Security and Interoperability

Question 31: 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.

Yes, we agree with the proposed approach. However, it must be recognised that this cannot be done without a baseline architecture and an agreed v1.0 of security requirements integrated into a design baseline. We believe it is essential that DECC publishes this as soon as possible to ensure that suppliers have a stable baseline against which to implement

their solutions and comply with future assurance measures (which are yet to be defined). Should there be further significant delay we foresee an increased delivery risk for the Programme.

We believe that there should be an operational sub-committee of the SEC Panel dedicated to security. We propose that this body operates in a similar way to STEG, however a greater level of openness and transparency will be required as it will in effect operate as an industry change board.

Question 32: 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.

Yes, we agree that an independent assurance regime would be an appropriate measure in ensuring that all parties have suitable processes and procedures in place to mitigate the risks of a security breach.

While we recognise that an independent assurance regime may appear onerous to smaller suppliers, given the nature of potential security threats, we believe a single market approach to risk mitigation is necessary. Assessing all parties against the same measures will provide confidence that weakness can be clearly exposed and addressed in a consistent manner.

We believe that the proposed 'Risk' or 'Role' based options are not mutually exclusive and cannot foresee a role based approach that is not inherently risk based to begin with. However, we are satisfied with an approach that considers risk in the context of the activities, access rights and permissions given to a relevant user.

Question 33: Do you agree with the proposal that re-testing should occur at least at set intervals and more frequently when significant changes to systems or security requirements are introduced? Please explain your views.

We do not believe that a routine of full retesting is necessary. Instead, we would prefer an audit regime where variations are monitored and retesting determined based on a set of predetermined principles e.g. following significant system change. This approach, we believe this would roughly align to existing energy industry practices.

Question 34: 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?

Yes, we agree that it would be appropriate to establish an independent security certification scheme.

We believe that it would be appropriate for the regime to be established under the SEC and an appropriate SEC Panel Committee. However, implementing this approach may present initial timing challenges. We therefore think that in the first instance a separate scheme should be established, transitioning into the SEC at the earliest opportunity.

Question 35: Do you agree that sanctions for non-compliance with security requirements should be included in the SEC? Do you have views on the nature of the sanctions that might be imposed?

We agree that limitations on DCC use as a result of non-compliance with security requirements should be included within the SEC. However the way in which any sanctions

are imposed requires careful consideration and should be based on the materiality of the risk presented.

We believe that parties should be given appropriate timescales to correct any non-compliance with clear guidance about the actions that they must take. Initial sanctions could include limitations on DCC use. However, in cases where parties have consistently failed to comply with security requirements, or have made no or little attempt to rectify their non-compliance, the penalties should be increased including regulatory action for licensed suppliers and suspension of membership of the SEC for others.

Question 36: Do you agree with the proposal to, in effect, extend the arrangements already proposed for SMETS installations prior to DCC operation, to all installations being operated outside DCC? Please provide evidence of the costs that might be incurred and the impact of this approach on small suppliers.

While in principle we accept the proposal, the arrangements are still unclear.

We also believe there are additional considerations where installations operated outside DCC may be opted in to DCC. At the point of these installations being opted in they should fully comply with a specific set of criteria which we believe is still subject to future consultation.

We are not aware of any reason why adopting suitable security precautions would have disproportionate cost impacts for smaller suppliers.

Question 37: 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.

Yes, we agree that interoperability is central to the success of smart metering rollout in Great Britain and the smart metering experience that consumers will receive.

Governance through the SEC will ensure that all parties are signed up to the same principles in respect of commercial and technical interoperability. However, it must be ensured that all parties have sufficient time to procure the same interoperable products at volume otherwise individual rollout plans could be compromised and unfair advantages established in the market place.

Consideration must be given to future innovation and the advanced uses of technology. While interoperability is essential, at the same time SMETS should not stifle innovation.

Question 38: 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?

We are in broad agreement with the creation of an 'approved products' list as this will minimise interoperability issues and provide greater confidence within the Change of Supplier process. This approach is also in line with BSCP601.

However, it must be ensured that the framework is sufficiently robust across the industry. Careful consideration will need to be given to the timescales in which the approved products list will be established and whether it will have any impact on the lead times for product procurement and installation. The complexity of two certificates being required for a product must be considered carefully and the practicalities of successfully running two separate

assurance processes in parallel. Should it be identified that the process will present procurement and subsequent rollout constraints then this may necessitate supplier rollout plans being reconsidered.

In addition to considering how an approved products list would be created, consideration must also be given to the process by which products are removed and what impact this has on smart metering system components which have been installed.

In conclusion we would note that in determining the end to end process, and in considering the factors above, the cost of managing such a governance scheme must not be overlooked.

Question 39: 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.

We agree that certification against the GB Companion Specification is a critical element of assuring interoperability; however we do not believe that this in itself gives all the necessary assurances.

While successful testing at a protocol level may provide sufficient verification that a device is compatible at the interface join, it does not necessarily mean that the device has performed its expected functional action. For instance, in the case of a remote command to disable supply, did the meter's firmware perform the appropriate conditional checks before performing the action to open the load switch or close the valve?

While smart metering devices will operate with a combination of application layers i.e. DLMS and Zigbee, the Zigbee Alliance has its own test regime and would certify and assure compliance only in relation to the Zigbee protocol. While the combination of a manufacturer's device type and firmware, which will be proprietary to the device manufacturer, will be tested independently against a Golden Unit it will only be applicable to that device type's intended capability. Technical interoperability can only truly be tested by comparing the interchange-ability of one manufacturer's device with devices from other manufacturers e.g. Communications Hub WAN connection to / from Head end and electricity meter to / from Communications Hub etc.

Therefore, there is a critical requirement that performance and interoperability within the HAN and over the WAN be tested and assured. However, for enhanced functionality beyond SMETS capability, it is our understanding that bespoke UAT would need to be undertaken over and above testing against SMETS accreditation and assurance to maintain interoperability against compliant capability.

Chapter 6 – Operational licence conditions

Question 40: Do you agree with the Government's proposals to require energy suppliers to operate specific aspects of smart metering equipment functionality for domestic consumers? Please provide rationale to support your position.

We are in broad agreement with the Government's position. Customer access to, and use of data are clearly important factors in realising the benefits of the smart roll out and it is also important that such access be free of charge to foster the necessary on-going levels of consumer engagement.

However, the regulatory burden on suppliers is already considerable, with each additional licence condition increasing regulatory risk and, potentially, impeding investment. Therefore, whilst we recognise the requirement to regulate in key areas including the operation of smart metering equipment, we would favour a policy of forbearance where suppliers already have a clear commercial imperative.

Question 41: What are your views on the Government's proposals to require energy suppliers to operate specific aspects of smart meter equipment functionality for micro-business, but not other non-domestic, customers?

We agree that the requirements of micro-business customers broadly align with those of the domestic market. Charging micro-business customers to access data, particularly consumption data, via the HAN, could result in customers disengaging from the Programme and impacting the potential benefit realisation.

Question 42: Do you agree that the licence conditions as drafted effectively underpin the Government's policy intentions for consumer operational requirements?

Yes, we agree the proposed licence conditions support the Government's policy intentions. However, we have identified a drafting issue with the draft licence conditions in Annex A. Condition RR.3(b) requires that there is 'established a communications link between the Smart Metering System and either the In-Home Display (IHD) or any other Consumer Device at the relevant premises, across a HAN Interface'. As drafted, this could have the following consequences:

- in situations where the consumer declines to accept an IHD, but installs a device which they have purchased independently or received from a third party energy services company, suppliers might be obliged by this licence condition to resolve technical issues with the Consumer Device, even though they may have no responsibility for such issues;
- in situations where the consumer declines to accept an IHD or to install an alternative Consumer Device, suppliers would be unable to comply with this condition.

We request that the drafting is amended to address these concerns, for example by clarifying that the link is only required with a correctly operating and compliant Consumer Device, and making it clear that the obligation is contingent on there being an IHD or Consumer Device in operation on the premises.

Question 43: What are your views on the Government's proposals for obligations to be included in the SEC for information to be made available to Network Operators and ESCOs via the DCC?

We require further clarification of the Government's intentions behind this proposal. The consultation document states that:

"Energy suppliers would ensure that smart metering equipment is configured to enable the DCC to offer services that would provide the following information to SEC parties upon request, subject, where appropriate, to consumer consent and any other relevant legislation."

However, for a meter to be enrolled with the DCC, it seems inevitable that it will need to be configured in accordance with specified criteria. We therefore cannot see a situation that requires further obligations on suppliers.

With regard to the policy intent of the proposed obligation, we have no objection to the DCC providing these services to Network Operators or ESCOs, on condition that all necessary

security and data privacy safeguards are fully in place and that the relevant supplier is not expected to play any role in the service provision.

Question 44: Do you agree with the Government's proposals for the timing of the introduction of operational requirements? Please explain your reasoning.

We would welcome further clarity regarding the intended timescales for all remaining activities in the programme ahead of mass rollout in order to give a full assessment of future operational requirements.

This assessment is further impeded by the potential impact of the revised security trust models and the requirements which will need to be translated to deliverables at an operational level.

Chapter 7 – Next steps

Question 45: Do you agree with the proposed changes to the smart metering regulatory framework to reflect the CSP-led model for communications hub responsibilities? Are any other changes necessary?

We agree that the requirements are best set out in the DCC's licence, as the DCC should be able to back-off the obligations via commercial agreements with the CSPs. Moreover, as the CSPs will not be licensed, nor will they be signatories to the SEC, it is difficult to see how such an obligation might otherwise be given effect.

We also agree that the supplier roll-out licence conditions should be changed to require installation of a CSP provided communications hub, although we believe the commercial implications of the maintenance arrangements need to be fully explored and consulted upon. This investigation may lead to identification of further necessary changes to the regulatory framework in support of any commercial terms.

Question 46: Do you agree that the equipment development and availability timelines are realistic? Please give evidence.

Given the level of complexity and detail that is still being debated under the Programme, we consider there to be too high a risk that equipment requirements will not be sufficiently stable any time soon. The associated timelines for the availability of compliant equipment therefore appear unrealistic.

The biggest risk to roll-out would be the negative effects of introducing devices and end-to-end processes that had been rushed to market without either full development or testing. In some cases this could result in either aborted installs or multiple visits to consumer homes.

We note that the accreditation and assurance body or bodies are yet to be appointed and we envisage that the preparation time that they need will be considerable. Equally, there appears to be little to suggest that any account has been taken of the likelihood of bottlenecks occurring when device types start to go through initial testing.

Manufacturers indicate that most of the equipment changes to achieve full SMETS compliance are already being designed and developed and will be nothing more than adjustments associated with firmware and therefore remotely upgradeable. We regard this as optimistic, especially given the recent announcements of changes to the security trust model.

We remain of the opinion that irrespective of the final security requirements that emerge, the Programme plan assumes that the smart metering end to end solution will work first time without any technical issues. Given the reliance on a number of technologies, some of them

new, it would appear to be a significant oversight if no contingency has been allowed in the planned timetable for some technical challenges.

Question 47: Do you agree that SMETS 2 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 SMETS 1 to SMETS 2 meters?

Yes, we agree that SMETS2 can only be designated the GB smart metering standard when there is sufficient confidence that the following factors have been appropriately addressed:

- sufficient guarantees that the SMETS2 supply chain can support mass rollout and is based on tangible evidence including:
 - sufficient testing and trialling has been completed;
 - the approved products list process is established within a framework of robust governance
 - sufficient headway has been achieved in the delivery of 868 MHz and other sub-GHz solutions to ensure national rollout coverage
- assurance and accreditation requirements have been clearly documented;
- SMETS1 adoption and enrolment criteria have formally agreed; and
- enduring security requirements have been determined and roles and responsibilities have been clearly defined.

Question 48: What are your views on when responsibility for the SMETS modifications process should transfer from the Government to the SEC?

As a general principle, we would consider that SMETS should be incorporated into the SEC from the code's inception, or as soon as possible thereafter. However we also recognise the potential for added complexity if the SEC were to evolve over time.

We would, therefore, be concerned to ensure that SEC processes were sufficiently and demonstrably well established before responsibility for such a crucial aspect of the arrangements was transferred away from the Programme. Equally, we are not persuaded that the matter should simply be left to the Government's discretion.

While, ideally, we would prefer that some objective measures be employed to identify when milestones in the SEC's maturation had been reached, this would appear rather impractical.

Therefore, and to provide some certainty, we would suggest that the matter be left to the SEC Panel to review and consult further on, with a decision required within a defined timeframe (e.g. SEC go-live plus 100 days). The Government could then input to this process, but with Ofgem acting as ultimate arbiter. Such an approach would need to afford Parties access to the appeals process in the event of the Authority's determination conflicting with the collective industry view.

Question 49: Which of the options (standing sub-committee or non-standing sub-committee) would you prefer in relation to modifications to the SMETS?

We can see some merit in the principle of a standing sub-committee bringing overlapping technical expertise to bear on the question of modifying SMETS. However, we can equally envisage such an approach leading to inefficiencies and stagnation of views. If the SMETS is conceived as the embodiment of innovation, the case for a non-standing body may be equally compelling.

On balance, and given that SMETS changes might well be very infrequent, we would prefer Option 2 (a non-standing committee).

Question 50: Are there any particular areas of expertise that the sub-committee will need to fulfil its role, in terms of membership composition?

Continuity of management and general administration are essential, however these requirements can be covered by either technical or non-technical resource.

Given the diversity and range of expertise required to cover all aspects of SMETS, we would propose that recognised experts are called upon dependent on the decisions which need to be made. One such example would be in the area of security.

ScottishPower
10 October 2012