



Smart Metering Implementation Programme
Rollout Team
Department of Energy and Climate Change
55 Whitehall – room 101
London SW1A 2AW

8th October 2012

Dear SMIP Team

**Consultation on the second version of the Smart Metering Equipment
Technical Specification**

Thanks for the opportunity to respond.

We have enclosed responses to the individual questions and would like in this covering letter to address the issues at high level. Of the highest importance is our view that the timely development of the complementary 868 MHz and Wired HAN solutions is now reaching the critical path of the Smart Programme and as such must be considered with some urgency, if Suppliers are to be expected to meet the intended range of new Licence Conditions that are being developed.

Communications Hub:

- We fully support the Communications Service Provider (CSP)-led model;
- We do not believe that the 'costs lie where they fall' approach is appropriate. Risks and costs associated with a value chain should only lie where there is appropriate control;
- Further consideration needs to be given to ensure that costs for replacement of faulty equipment and revisits for reasons outside of suppliers' control, for example upgrades, are not included in this approach; and
- We support the need to establish a practical design for the 'intimate' communications hub as this will potentially be needed to accommodate several communication systems including 2.4 GHz, 868 MHz and wired HAN. This accommodation is rapidly approaching the critical path in design terms.

Security:

- Security regimes must be robust and cost-effective;
- Therefore the development of systems and processes to
- accommodate data access for Consumer Access Devices (CADs)
- connecting to the meter must be measured and cautious;
- Proposals that make sense to us include for example the formation of a
- technical sub-committee to the Smart Energy Code (SEC) Panel as
- a way of achieving the necessary maintenance of smart metering
- security; and

RWE npower

Trigonos
Windmill Hill Business Park
Whitehill Way
Swindon
Wiltshire SN5 6PB

T +44(0)1793/87 77 77
F +44(0)1793/89 25 25
I www.rwenpower.com

Registered office:
RWE Npower plc
Windmill Hill Business Park
Whitehill Way
Swindon
Wiltshire SN5 6PB

Registered in England
and Wales no. 3892782



- Assurance requirements extend beyond security and should also cover practice such as the Smart Meter Installation Code of Practice (SMICoP) and equipment operation. This will ensure that the full end-to-end process has passed an assurance test;

Home Area Network (HAN):

- Since around 20% of installations will need a wired HAN solution, then wired HAN trials are required. This is now on the critical path (and could affect our roll-out strategy) and should be government funded and co-ordinated; and
- The 868 MHz solution is critical in order to provide HAN for all property types. Currently only 2.4GHz is available and timely development of 868 MHz is essential.

Hand Held Terminal (HHT) Functionality:

- DECC has now stated that the HHT will not be able to perform any write commands to the device set. We disagree with this decision as this would leave Suppliers with:
 - i) an obligation to install compliant smart metering equipment during roll-out at sites where not all of the infrastructure is in place (e.g. no WAN);
 - ii) no clearly identified capability of installing fully compliant systems; and
 - iii) the current insistence from DECC that no derogations will be considered.

Design

- There is currently insufficient certainty in the end-to-end design;
- This will establish the level of certainty required to support manufacture, supplier design programmes and a practical and detailed baseline;
- Testing can be defined in relation to the baseline;
- This design baseline must be firm and also accompanied by an appropriately developed change control process;
- Whilst we recognise the potential benefits of some SMETS 2 functional design requests, we believe that cost/benefit justification is needed in all cases so that the overall priority of functionality vs. cost can be discussed. All costs ultimately flow to consumers;
- Some functional design requests are too recent for a cost benefit analysis to be conducted in sufficient depth. These must be regarded as "timed out" from SMETS2 unless there are clearly critical oversights;
- The end-to-end solution for new market participant appointments requires both clarification and planning;
- Equipment development time-scales and their inter-dependencies must be understood and planned in to the development of the end-to-end solution; and
- Looking for Transparency of technical designs in order to facilitate due diligence of equipment design and compliance.

Small Suppliers and other market participants:

- The industry requires common systems, processes and equipment to be developed and installed wherever possible to facilitate the rollout obligation that suppliers are required to fulfil. Key examples are inter-operability and effective switching;

- Exceptions and exemptions add considerable complication and harm the consumer experience; and
- Any market competition benefit of small supplier exemptions is far outweighed by the cost/complication for the programme, and deterioration of the consumer experience.

General

- In general, our responses argue for consistency of implementation of smart metering equipment, noting the exceptions already granted for some market segments. This consistency should extend to the design and manufacture of equipment, systems and processes developed to support smart metering and the application of these by all market participants, however large, without exception;
- Without this consistency we believe that as the Programme develops it will become more difficult and costly to ensure that Suppliers can fulfil the numerous new Licence Condition obligations that are being placed upon them, particularly during a change of supply; and
- In addition to issues for inter-operability and effective switching, an inconsistent implementation caused by exemptions and the corresponding exceptions, will compromise the licence condition requirement for 21 day change of supply with a flexible objection period.

Operational requirements

- In brief, the operational requirements are:
 - Easy Customer access to consumption data and tariff information;
 - Provision of wholly accurate bills using smart meters;
 - Provision of and In Home Device (IHD) providing or enabling display;
 - Provision of exportable consumption and tariff data on the IHD;
 - Customers access to data via the Home Area Network (HAN);
 - Full range of IHD functionality as per SMETS;
 - The cost/benefit of a requirement to provide account information to the IHD is still under review; and
 - Consumer Access Device (CAD) access and pairing.
- We support these in general (except the current costly suggestion for the account balance information to be live) as this will help to develop a robust and consistent approach to establishing equipment, systems and processes, functionality and roll-out;
- We believe that this approach is the most appropriate if we are to meet our many obligations under smart metering arrangements whilst maintaining inter-operability and ensuring that effective-switching prevails. We do however have some reservations, at present, as to the assumptions that appear to be being developed by DECC that we still, as yet, have to clarify. The major points at this stage are: i) the expectation set that 100% of bills will be 100% accurate –some exceptions will still occur and require estimation, ii) how CAD access and pairing will be achieved in practice, iii) security implications of CAD pairing and who would be responsible in regard to security incidents; and
- The current security proposals include: i) DCC and DCC users' systems being subjected to independent assurance against the security requirements; ii) DCC users' certification requirements should be set in relation to their role code; and

iii) Re-testing of DCC and DCC users systems should occur at set intervals and more frequently where there is significant change to systems or security arrangements.

Provision of data

- We agree with the proposals for the data that should be made available to domestic customers and understand and support the additional requirements to cover prepayment customers;
- We view the data requirements for micro-businesses to be similar in nature; and
- The definition of micro-business should be the same in all licence conditions (as per SLC7a), otherwise consumer experience on change of supply could be inconsistent.

Operational requirements of other parties

- We support the approach that the operational requirements for SEC parties should be covered under the SEC;
- We understand DECC's consideration for the facilitation of smart grids, which then leads to the concept of Network Operators having access to certain data items. However, we are still unclear as to the full extent of the data required or the impacts that such an approach may have on any smart developments and supplier systems and processes; and
- A common approach between suppliers and Network Operators is required on development or funding, within the Smart Programme.

This response is not confidential

Yours sincerely

Chapter 4 – SMETS 2 Development

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

Yes, we support DECC's approach

We are comfortable with the criteria, although the DLMS was not as open as expected.

We understand that due to the 'chatty' nature of the DLMS, multiple messages may need to be sent to a meter to effect certain instructions. This approach therefore makes messaging a meter more complicated and so more costly as the meter functionality will have to be developed to be able to open these multiple messages which may also have a bearing on the meter's battery life. These aspects of this application layer must therefore also be taken into account.

In addition, these criteria may need to be revisited and potentially re-drafted as and when required to accommodate the full assessment of any future developments in this area.

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

Yes we support, with caveat

We support the proposal, subject to the completion of the companion sets as we have remarked on in question 3.

In addition, consideration must be given to the physical layer solutions required in order to ensure that an optimal number of successful installations are achieved during roll-out. These must include both the 2.4 GHz and 868 MHz solutions.

A wired HAN solution must also be considered alongside these application layer standards, as a matter of urgency.

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

Yes we support, with some concerns around time-scales

We agree that the equipment should be required to comply with SMETS

With regard to the companion specification, we are aware that the DECC SMIP is still trying to determine the content of and approach to the preparation of a companion specification and we are expecting the product description to be provided into SMETS Stakeholder Advisory Group (SSAG) for review.



We understand that DECC are proposing that the Companion Specifications will be available at the end of 2013. We therefore have concerns around how quickly SMETS 2 / DCC compliant meters will become available in the market.

In the absence of the product description we support the requirement for a specification that provides the degree of clarity around the specification of the HAN solutions required by manufacturers; other solution stakeholders (including the Data Services Provider DSP and Communications Services Provider CSP); and assurance design. This should cover all the solutions, including wired HAN, which are required in order to ensure that 100% coverage is achievable and this should be considered at the earliest opportunity.

Our support is conditional on better information about its status / materiality with regard to solution definition; in its content; and how it is to be prepared (including responsibilities and dependencies).

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.

Yes we support, with further consideration required.

We agree with the overall approach, with regard to the solutions so far progressed.

Consideration must now also be given to progress all other solution developments that are required to ensure that suppliers can roll-out, fully specified and functioning smart metering equipment that is fit for all customers' requirements.

A wired HAN solution has always been considered as a requirement in order to be able to provide the necessary communication links between smart metering equipment at certain sites, for example, high-rise flats. With this in mind and the need to ensure a smooth roll-out of smart metering equipment we take this opportunity to urge DECC to consider the planning exercise required to initiate a DECC led Wired HAN trial as soon as possible. Without this complementary solution we believe that the reputation of the Programme will be under threat due to the number of abortive visits that will occur without the necessary wired HAN solution. It should be remembered that customers will have made the effort to be at home for these visits as requested.

We have participated throughout the evaluation of the physical layer options within the HAN Advisory Group, and also fully supported the Wireless Trial activity. Whilst the sample size for the trial was relatively small and the test was simply of frequency and not of actual equipment, it was important and useful work to confirm assumptions and clarify the necessary next steps. The conclusions on wireless options are not as clear cut as many would like, but they reflect the current technological capability whilst acknowledging the potential for future development.

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

We support and are also looking to establish flexibility

The criteria in paragraph 48 are a distillation of the work that the industry has been pursuing for several years and npower support their use for the evaluation of wireless solutions.

We believe that they may need to be revisited and refreshed for the assessment of wired solution options as some may not be wholly relevant for a wired solution, for example the need for sufficient band-width capacity. Whilst, there may also need to be consideration for other, as yet to be defined, criteria covering aspects of the wired solution equipment and architecture. Work on wired evaluation criteria and assessment methods were included in the final report of the Planning, Drafting and Operational Group (PDOG) HAN Working Group last year, that prove to be a good starting point in this regard.

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 support, with some concerns around interference issues

We have been involved in discussions about the use of a reserved spectrum for wireless HAN solutions for several years and have consistently been made aware that Ofcom and the Government do not consider this an option worth pursuing – with their preference being the licence exempt Industrial, Scientific and Medical (ISM) bands.

The HAN Advisory Group (HAG) working group has recently been informed by Ofcom that the reservation of a spectrum is a commercial concern, some relevant spectrums could be available and Ofcom would consider all suitable proposals with a sound commercial footing. We have not seen any proposals from the Programme on this and would like to understand what is being proposed and what the impact would be on the existing supply chain and all the associated costs.

From a technical perspective, we understand that the relevant next generation silicon will be capable of being electronically retuned from 868MHz to the specified potential bands, and we do not have any concerns on this.

We have concerns in relation to the potential interference issues that LTE mobile phones (4G) will cause to sub GHz HAN solutions, as a result of using a spectrum adjacent to 868MHz. This potential risk needs to be understood in greater detail as soon as possible, as the development of sub GHz support for the Smart Energy Profile needs to begin quickly in order to meet current deployment targets and the LTE problem could become a major issue.

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



Yes

Through our participation in groups preceding the Programme, and throughout the work of the Programme, we have seen the amount of work that has needed to go into ZigBee and the Smart Energy Profile to reach version 1.0, and believe that every lesson that can be learned from that development should be used to optimise the development of support for the SEP at sub-GHz frequencies.

We understand that the silicon providers, meter manufacturers and representatives from the ZigBee Alliance believe that a clear and authoritative statement of requirement is the most important first step, and that Government is best placed to make such a statement. A theoretical debate amongst market participants will only serve to delay the availability of products, which in turn will delay the ability of Suppliers to install smart metering for a large proportion of customers.

If the statement of requirement is to be realised through an obligation on Suppliers, it should equally be placed on the CSPs, as providers of Communications Hubs featuring HAN hardware, to support sub-GHz in a timely manner. Suppliers and CSPs are the key customers for the devices that will feature HAN hardware, and their requirements (or obligations) should drive the supply chain to deliver earliest products in order to win business, but continued monitoring of development and delivery of the required solutions should continue to be a concern for the Programme or the subsequent SEC.

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.

Yes, with caveats

As we are attempting to prejudge the level of success of 2.4GHz based on testing of frequency only, not actual equipment using actual antenna technologies, it is difficult at this time to appreciate the level of coverage that 2.4 will provide and the amount of customer impact, field operative rework and overall cost that will result from not having a more appropriate physical layer.

It has been suggested that the arrival of sub-GHz silicon would entirely replace 2.4GHz solutions - we feel this is too simplistic a view. The initial deployment of sub-GHz will face technical challenges, the global 2.4GHz standard will continue to be refined and the economics of different platforms remains unknown.

The market has to be allowed to find the right levels at the right times - eventually, we foresee a requirement for a single HAN frequency in new devices and this is likely to be sub-GHz but, whilst 2.4GHz systems remain in the field, or whilst customers continue to use equipment with a specific physical layer, there will be a mix of installed solutions.

We are not entirely sure how DECC would control the balance of 2.4GHz and sub-GHz solutions under any model other than allowing the market to determine the levels.

We feel that by allowing the HAN frequency to be either/or, DECC needs to ensure that the type of equipment in any individual property is remotely identifiable and highlighted to customers. Customers will need to know which smart metering HAN frequency operates in their home if they are looking to purchase Consumer Access Devices that will work. Suppliers and their agents need to be able to visit a property, for whatever reason and know that they have suitable replacement equipment available.

It should be noted that the only true way to allow the market to determine the balance between the 2.4 GHz and 868 MHz solutions is to ensure that both are readily available at the earliest opportunity and that the lack of a more comprehensive HAN solution does not undermine customer confidence. We believe that sub-GHz solutions are a vital part of the HAN technologies that need to be available in order for Suppliers to be able to provide a consistent and controlled roll-out of smart metering equipment at a national level. It is therefore appropriate that the development of this technology should, in the first instance, be driven by Government who we believe are best placed to initiate this work that is now rapidly approaching the critical path.

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

We Support option 3, but believe that 868 MHz and wired HAN solutions to also be considered and that the timing of mass rollout is critically dependent on this

As a member of the HAN Advisory Group, we have represented our concerns alongside other Suppliers on the potential issues with Option 1, specifically on the level and cost of installation visits aborted due to the lack of HAN coverage. We are also concerned that we will not be able to fulfil our obligations to provide smart meters for all new and replacement visits from a point of time ahead of the availability of technically (or economically) suitable solutions.

We believe that rapid and parallel progression of 868 MHz and wired HAN are so important that without these solutions there could be a delay to mass rollout. We therefore need to understand when these HAN solutions will be available.

Consideration must also be given to the development of the communications hub with regard to the number of solutions that are required in order to ensure roll-out, which currently include 2.4 GHz, 868 MHz and wired solutions. This could be facilitated by considering the development of a standard 'plug-in' approach, for example. However we acknowledge that the development of the communications hub is the responsibility of the CSPs and as such a true market-led approach may not be wholly possible in practice, until all required solutions have been fully developed and tested.

We are concerned at the prospect of Option 2, as we believe the cost of secondary redundant silicon is somewhat understated and that this cost would apply to every home, regardless of whether this is a Supplier or CSP provided Communications Hub. Option 2 looks like the 'easy way out', except that the sub-GHz silicon supporting the Smart Energy Profile aspect of the potential solutions does not yet

exist and no-one has yet created a Communications Hub of this type or architecture. DECC would need to provide a specification for a dual band communications hub at the earliest point to facilitate the industry matching requirements with products. However, as with any solution the total economic case must be considered, taking into account all aspect of the proposed dual-band communication hub, as this option is a trade-off that we do not believe we can currently assess fully. We believe that this option may be more viable if visible progress were made on the timely development of other HAN solutions that are required to be incorporated into the Communication hub's design.

Option 3 is the most realistic approach and will reflect the actual position once sub-GHz solutions are available. However this currently appears to be several years away. At the moment the market for SMETS compliant metering, is all 2.4GHz. Since suppliers must install SMETS compliant meters, the market is effectively being forced by these requirements anyway.

We believe that the Programme requires a solid steer from Government in order to initiate the development of the sub - GHz solution that is required and as such is now rapidly approaching the critical path.

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

Yes, although recognition is required that the definition will evolve by precedent

Initially the standard is subjective and will require greater definition over time

The definition will need to be sufficient to enable contracts between Meter Asset Providers (MAPs), suppliers and Meter Operators (MOPs)

A process for monitoring and enforcement will be required

Current experience of installing SMETS metering is very limited and fully certified sub-GHz solutions for SEP are not yet available. Hence if sub-GHz with SEP is fit for purpose then fit for purpose cannot be satisfied.

In addition, there are certain non-standard arrangements in which fit for purpose may not be possible, for example large gas meters, Current Transformer (CT) meters, semi-concealed boxes and in-home configurations that would require extensive disruption to customer premises. It may be that a specific set of "fit for purpose" definitions, or derogations, is the best approach.

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

We fully support

It is critical to develop a wired HAN solution.

Without it suppliers will not be able to fulfil their roll-out obligations, to all customers.

We believe that the current assessment of the need for a wired HAN solution considerably underestimates the number of installations requiring this form of equipment to be installed in order to become Smart compliant.

Further, the lack of any detailed solution for a wired HAN is now approaching the Programme critical path, as without detailed design requirements the development of appropriate smart metering equipment it will not be possible for several years which will affect roll-out to large areas of the country and types of dwelling. This would discriminate against those customers (e.g. in tower blocks) wishing to take advantage of these new energy provision arrangements, whilst at the same time incurring them the socialised cost.

Without wired HAN, separate communications hubs would need to be developed, at further cost to the programme, to accommodate later developed, wired solutions, whereas early consideration could result in the development of a 'universal' communications hub that could connect to both wireless and wired solutions.

We firmly believe that these developments can only be effectively initiated by Government whose central role within in the Smart programme is required in order to initiate such a trial. In addition, it is the Government who has responsibility for delivering the completion of the Programme, in line with the previously published costs/ benefits that emerged from the earlier Impact Analysis

Through the HAN Advisory Group (HAG) sessions on wired technologies, it is apparent that more work must be done in making solution providers aware of the metering requirements and of the solution options.

Unlike the wireless physical layer, there is no clear market leader, and there appears to be very little relevant experience of using this type of technology within homes to achieve the desired deployment rate. We believe the delivery of products featuring wired physical layers supporting the mandated application layers will take a considerable amount of time.

We do not yet have a view of the options, or an assessment of their compatibility with the smart metering requirements. Some of the criteria for the Wireless HAN are not applicable for the Wired HAN - considerations around band-width capacity, for example. Without a preferred option, we cannot assess the gaps for metering device providers to develop and deploy interoperable and interchangeable products. We cannot assess the amount of time and effort required to promote and support the adoption of a preferred wired solution across the Programme and within standards, certification and assurance mechanisms.

Therefore we believe work on the wired options should commence . We accept the proposal that a trial similar to the wireless activity is the most accessible method to move beyond academic/technical and commercial debate on the various solution options. However, we also believe that any trial is likely to raise as many questions as it answers and the Programme should be prepared to provide timely and peer reviewed responses following the trial.

Without clear and demonstrable leadership from the Programme on the evaluation and recommendation of options for Wired HANs, there is a very real risk of

commercial imperatives resulting in Suppliers and their meter supply partners establishing proprietary solutions to resolve customer and regulatory commitments thereby causing direct issues of interoperability, inter-changeability and ongoing customer support across change of supplier.

As with the wireless HAN, we would seek to involve the CSPs with the consideration of any potential components that will feature in Communications Hub equipment at the earliest point, as there will be a risk of delays in the supply of suitable equipment which will affect customers and deployment targets if the CSPs feel that there is no clearly understood solution for wired HAN technology.

We therefore believe that DECC should use the lessons learnt from wireless HAN trials and demonstrate strong leadership to develop a challenging plan, assess options, address issues and recommend solutions for the wired HAN .

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)?

We agree generally, with some further suggestions

We agree with the currently proposed scope of the functional requirements. We do so however with some caution and suggest that the HAN specification is also used to define the range of capabilities that the communications hub needs to support, thus covering requirements from a HAN perspective. For example, whether the communications hub needs to support the upgrade of firmware to other HAN devices;

In addition, we have the following points that we wish to raise for further consideration:

- We believe that the communications hub must support requirements regarding:
 - i) Local and remote diagnostics;
 - ii) The end-to-end security solution (including being the Trust Centre for the HAN);
 - iii) Hand Held Terminal interfaces / capabilities - i.e. facilitating the in-field processes required to manage the Smart Metering Device sets from cradle to grave;
 - iv) Issuing general alerts over and above those covering power outages;
 - v) The range of HAN solutions, including 2.4 GHz, 868 MHz and wired HAN that may be required to ensure 100% coverage is achievable; and
 - vi) The CAD and IHD
- We are concerned at the level of questioning by the DECC programme about the scope of the communications hub functionality at this late stage in the programme and DSP and CSP procurement.

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



We support the specification and believe that further considerations are taken into account

It is the CSP's responsibility to source and procure communication hubs, the design of which should be predicated on the availability of a standard metering design.

We supports the need for a full and complete assessment in order to develop an appropriate specification for an 'intimate' interface between the electricity meter and the communications hub.

Our understanding is that maximum benefits can be obtained, particularly during the early stages of the smart programme, as systems and process developed are allowed to settle based on practical experience, if consideration is given to the development of consistent smart metering equipment. As such, we believe that there are several, key benefits in developing an interface of this nature that include:

- i) The development of consistent hardware and software solutions provides assurance that most installations will be achievable, with minimum impact to customers and suppliers' roll-out strategies;
- ii) Equipment solutions require no additional wiring, which only adds complexity and costs to an installation;
- iii) The support of inter-operability and interchangeability, particularly evident at a future change of supply event;
- iv) Optimum metering equipment 'footprint', enabling more efficient installations to be conducted at sites where space is at a premium; and
- v) Optimum amount of equipment required by engineers to enable efficient installations to be conducted

We believe that these benefits can only be achieved by the development of an 'intimate' interface that has been both carefully defined and appropriately constrained.

These constraints would avoid the possibility of uncontrolled, alternative designs to be developed. The proliferation of alternative products and equipment at an early stage of the smart programme would undermine the smart benefits case by adding unnecessary complication and cost, before any benefits case has been established or understood.

This approach, we believe, is the only practical way to advance the development of such an interface in order to generate the confidence required by manufacturers and CSPs to develop these products in a cost-effective and timely manner.

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 support that CSP led model, with some concerns and further clarifications noted below

We fully support a CSP-led model to cover communications hub responsibilities, as we believe that this approach better facilitates inter-operability placing, as it does, an obligation on those market participants with the appropriate level of expertise in this area.

This decision will ultimately lead to greater levels of interoperability and consistency regarding the development of supporting systems and processes. There are however, certain other considerations that we feel should be highlighted at this time:

- i) 'Costs lie where they fall' – We believe that costs should lie where they can be mitigated. If they must lie where they fall, then further clarity is needed. For example, we would expect that initial installations and any subsequent replacement or upgrade would be treated differently as we would not wish to be responsible for costs incurred due to replacement of faulty equipment, for example, or other changes incurred that are outside of our control such as manufacturer upgrades etc;
- ii) Risk of delay - in availability of Communications Hubs as CSPs have to first be appointed in order to facilitate and finalise any design, these time-scales have yet to be unequivocally established which will have a potential impact on roll-out and Controlled Market Start Up (CSMU);
- iii) Consistency of design – whilst we understand and support the need for equipment development to take place, we ask that any such developments are adequately controlled, potentially via contractual arrangements between the DCC and CSPs to ensure a consistent and transparent process for the development and provision of communications hubs is maintained. The uncontrolled development of variants would lead to poor inter-operability and the need to introduced detailed tracking processes in order to understand what equipment is installed where; and
- iv) Communications Hub development life-cycle – We must take account of the fact that the HAN and WAN modules have yet to be given a thorough field test under sub-optimal conditions.

The CSP vs supplier led communications hub debate is longstanding, the arguments rehearsed, and the decision made. Only in the face of compelling new evidence should it be reversed.

The Programme Business Process Design Group (BPDG) processes have been developed based on the assumption that there will be a CSP-led approach to design, ownership and procurement and certification and testing of the communications hub. Any changes to this assumption will therefore require a re-visiting of these BPDG processes

A supplier-led model would require multiple parties to have to consider development of a common and co-ordinated procurement strategy with supporting processes and the drafting and negotiation of pertinent contracts. Competition Act constraints, particularly in the light of incomplete participation by exempted small suppliers, could be significant.

This model is therefore more complicated and as such will require more time to establish and will potentially be a more expensive approach.

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

We do not support the proposal not to mandate CHTS-compliant communications hubs for opted-out non-domestic sites.

We believe that this approach will add unnecessary complication and costs to the change of supply process.

We believe it best to ensure inter-operability and effective switching for customers by mandating that consistent smart metering equipment should be installed.

To allow non CHTS-compliant communications hubs to be installed would disadvantage the compliant, gaining supplier. This would create the wrong incentives and distort competition. It would also make switching for the customer more difficult and costly, potentially limiting their choice.

Without a CHTS compliant communications hub we are not sure, at this stage, how a customer will be able to access their data via a CAD, if this is their preferred approach. Further, without compliant equipment we believe that it will be difficult for suppliers to be able to provide this service as per the obligation on Suppliers.

Increased cost-to-serve and customer PR at first visit on an opted out to opted in change of supply does not leave a good impression and additionally does not facilitate effective-switching as customer could be put off changing supplier which amounts to a retention activity resulting in lack of customer choice. This effectively becomes a barrier to competition over time

Opting out disadvantages those suppliers who have decided to opt-in to the DCC

The ability to opt out creates disincentives for suppliers who choose to utilise the DCC as their preferred option as there are cost implications for these suppliers upon gaining an opted-out customer, which will increase their costs-to-serve

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?

With reference to answer for Q15 – we do not support the opting-out for non-domestic customers, but if it was to be then:

We believe that full consideration should be given to the range of possibilities that could occur between installing and gaining suppliers during a change of supply event. These should take account of customer movements from and to both opt-in and opt-out situations, but exclude those smaller, non-domestic customers who can legitimately opt-out until 2014.

Opted-in should be viewed as the 'norm', anything else should therefore be regarded as an alternative. Any consequences resulting from these alternative strategies should therefore be managed and funded by the supplier opting-out; and

Our arguments are based on the fact that the Industry is now striving to provide a new, national approach to metering that involves new market participants in the form of DCC, DSP and CSP and that the supporting systems and processes currently being developed will become the new standards for the industry.

We believe that any initial or subsequent costs for the provision of compliant communications hubs should be met by the party who makes the decision to move away from any of these industry standards.

The matrix below summarises who we believe should therefore pay for each scenario:

Gaining supplier → Losing supplier ↓	Opted-in	Opted-out
Opted-in	Installing/ existing Supplier	Gaining Supplier
Opted-out	Installing/ existing Supplier	Installing/ existing Supplier

This logic must also apply for any subsequent change of supply event, with the existing Supplier having to pay for any costs associated with ensuring that communications hub is compliant with regard to smart programme requirements where the gaining supplier operates (and wishes to continue to operate) in an 'opt-in' mode.

Where a meter set moves from opted in to opted out, opting back in should not require that the gaining supplier bears costs for the communications hub

If the gaining supplier opts out then they should pay the associated costs

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?

Yes

We strongly support and agree with DECC position that the design and implementation of outage reporting should be assigned to CSPs (through DCC licence conditions) who may choose to implement it either in the communications hub or in other components of their solution.

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



Yes, but we do not support opting out

We agree. We believe it is inappropriate to require meters outside of the DCC to implement outage reporting.

One of the disadvantages of opting out is the outage reporting would be complex, so much so that it would be impractical to require opted out meters to implement outage reporting.

A SMETS2 meter may be enrolled into the DCC at any time in its lifetime (subject to complying with the adoption and enrolment criteria) therefore all meter points should provide outage reporting functionality included but it should only be used when the meter is connected to the DCC.

We believe that the number of meters affected would be relatively small and outage management would require functionality in the Smart Meter System Operators (SMSOs) for the DNOs. That functionality could push up the cost of the SMSO contract price for suppliers which would invariably be passed onto consumers.

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, in principal, but further work is required to understand hardware and functional requirements and associated costs

We understand the requirement for this additional functionality and why it is needed.

However, our support for this development is conditional as we also understand that DECC are currently minded to allow the provision of halfhourly (HH) data to DNOs that will effectively provide this information directly to them.

A decision on this is due in October 2012. Therefore whilst this decision is outstanding we feel that it is inappropriate to comment on this development in detail.

Further to this, detailed discussions were had and decisions made around this request during the Hothouse sessions and we believe that these should be revisited for consistency.

As it currently stands we have not seen sufficient supporting evidence (e.g. positive cost-benefit analysis) for either option.

In summary, we would require clarity around the design of any maximum demand register development before being in a position to be able to unconditionally support it or not. For example, the inclusion of one new register to record maximum demand into the design of a meter is one thing but several new registers set to capture differing levels of demand across different time-periods is obviously much more expensive and would also potentially impact development time-scales. The option to provide half-hourly information, if approved, must also cover the aspects of security

and privacy and ensure that DNOs are granted permissions for access to this data appropriately.

Initially, suppliers would not need to be involved in the process of maximum demand analysis, although if a use of this information is to alter a consumption pattern or a cost structure, suppliers would need to become involved then.

In addition to the date and time of maximum demand being important, the average over a defined duration, or the maximum integrated power flow over a period, are also important as thermal stress on the distribution network takes time to build up.

There are additional complications, such as reset dates (change of supplier/tenant/season/event/DNO-set), and export.

Since different DNOs may take different approaches to maximum demand, then the SMETs specification may have to include all possible forms of information requested, or if the meters were configured according to DNO, then MOP and MAP management would become very complex.

This subject was addressed to some extent in the Hothouse work in 2011. Our best understanding is that the DNOs asked for maximum demand on the assumption that halfhourly information were not available. It may be that halfhourly power flow is sufficient for maximum demand (i.e. assuming constant flow over the halfhour or adding a variation tolerance) or that the profile across halfhours can be used to infer a peak over a shorter period. Whilst we are not the experts, we would be surprised if there is a positive cost/benefit case for maximum demand, when halfhourly data are available. Since profile classes 01-04 do not currently require maximum demand, then at least one new register would be required.

Maximum demand information also has a cost to collect and store.

We are not convinced that useful maximum demand could be achieved by the provision of three registers

Chapter 4 – SMETS 2 Development

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?

Yes

We do recognise the importance of voltage management in smart grid, particularly with increased penetration of microgeneration. However at this point there is no positive cost/benefit case for voltage alerts based on counter thresholds.

We do recognise the chicken-and-egg situation. DNOs cannot invest in smart grid utilisation of meter level voltage information if this information is not present, and there is no benefit in measuring, collecting, sending and storing information that cannot be used. In essence, this requirement is timed out of SMETS2.

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.

We do not agree with this additional functionality at this time

We recognise the benefit of DNOs being able to affect flow at meters. However, for each scenario, the full solution needs thinking through.

For example, whole area (distribution block) load shedding or voltage reduction could be reduced by curtailing load at specific meters. However; i) doing this at smart meters would disincentivise consumers from taking on smart meters, ii) commercial arrangements between DNOs and suppliers and suppliers and consumers would need to be worked through, iii) with consumer participation, load can be curtailed by suppliers on behalf of DNOs, iv) coordination and conflict resolution between supplier and DNO curtailment status would be required

The arguments are similar for full load cessation and load limiting.

We recognise the current need for DNO disconnection for safety and the benefits of being able to do this remotely. It would be possible to think through a solution to do this through the suppliers' physical/technical capability (but not regulatory jurisdiction).

We remain strongly of the view that load limiting by suppliers would be a very useful capability that would increase consumer choice and provide an alternative to disconnection. If this functionality were developed then there would be associated network and smart grid benefits. In addition, there could be some configuration

choices at the consumer's premise, for example selective load limiting on the heating and electric vehicle circuits

22. Do you agree that variant smart electricity meters should be specified in SMETS2 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.

Yes we agree generally but are unable to fully comment on the cost uplift aspects. Consideration is also required for Gas meters.

We agree that variants should be specified.

Since the cost uplift may not be the same as for traditional variants then the meter manufacturers are best placed to answer this.

We understand that smart poly-phase could cost significantly more over standard smart than traditional poly-phase over traditional single phase.

The consultation response should be read and analysed in conjunction with relevant associated documents (i.e. the Smart Meter Technical Specification and the Electricity Meter Variants paper) in order to understand and agree on a common set of terminology when describing the technical functionality. In particular the types of switches used in the Electricity Meter Variants.

We await the first draft of the Electricity Detailed Device Specification (DDS), due on 27th September 2012, which should include some consideration of variants. If so, this work should also be considered.

The Meter Variants_SSAG v2h1 document includes, as variants:

- Single Phase Two Wire Two Element Meters;
- Poly-phase Meters;
- Auxiliary load control switches; and
- Boost buttons to over-ride auxiliary load switching.

We believe that gas meter variants should also be specified, although we recognise that a derogation has been given to U16's and above.

On CT meters in domestic premises we support the proposition not to introduce explicit obligations or exceptions for the very small number of domestic properties with a CT meter. Suppliers will deal with these on a case by case basis, either by installation of a smart meter or an advanced CT meter;

We believe that the approach for CT meters should be followed for other non standard meters

The variants paper describes Additional Load Control Switches as Auxiliary. Auxiliary switches apply to only one circuit (e.g. heating), whereas the main switch controls the whole supply

Gas meters – We believe that the issue of Gas U16 meters in domestic and smaller non-domestic properties is more material than that of CT electricity meters. At present there is no guidance on how to address these. The issue of U16 meters is compounded by their relatively high use in Independent Gas Transporter networks (for pressure fluctuation management), and the remaining regulatory issues for metering in IGTs. Our understanding is that no U16 smart meters are being developed/ manufactured.

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 with randomisation, but suggest that 30 minutes is a little too long

We agree with the proposed randomisation capability as it provides an appropriate corollary to the current tele-switching functionality, the provision of which still needs to be considered for the future. We agree with the range of the randomisation offset but feel that it should not be limited to ½ hour (1799 seconds) as the metering solution needs to be 'future-proofed'. Regard to any consequential impacts on settlements should then be considered at a later date, as and when required.

Our best understanding is that this feature would not add significant cost if the randomised offset is self-generated by the meter, but that configurable offsets may drive more complex implementations.

There are several consumer consequences of having a long period, for example physically, in display and information, and in corresponding billing to tariffs.

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.

We cautiously support option 2, with a suggested variation

Whilst we understand and agree with the need to allow customer access to their data via a new, independently purchased access device, we currently consider the whole area of pairing a CAD to the HAN to be a risky proposition for suppliers at present.

Of the two options currently defined, we believe option 2 to be better, with considerations around a customer 'self-serve' option, requiring proactive access to suppliers' website, for example and to follow on-line instructions in order to send a request to 'pair' a new device. By utilising only a suppliers' website we believe that security and privacy can be best maintained.

In addition, Option 2 also has the benefit of enabling the supplier to better keep track of technology that is 'connected' and that they are responsible for as dictated via Licence Conditions. As such we do not believe that device pairing should be undertaken by a 3rd party, unless expressly granted by a Supplier.

Option 1 would require customers to keep safe yet another Personal Identification Number (PIN) and it is not clear exactly what process would need to be developed to provide another should this be lost.

In either case, both options need to consider how the communications hub can be put into pairing mode remotely and what additional physical functionality may be needed to enable the on-site requirements to be met.

Consideration must also be given to the proposed creation of an 'approved products' list, how this is developed, maintained and used. For example, if we need to confirm that any CAD is on the approved list, it is best for the DCC to perform the authentication process as this will be a more efficient and secure process. This also raises the question as to how a device could be authenticated against such a list and what information could be provided by the customer.

It is not known at this stage the scale of customers who will purchase a CAD or indeed what will be available in the market place for purchase. Our current analysis suggests that this could be low. If this is the case care must be taken not to develop a costly infrastructure to administer what could be a relatively small number of these devices, particularly during the early stages of the smart roll-out.

- 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?

Yes

As a natural fit, that energy suppliers should be the first point of contact as this type of request is likely to be made in conjunction with other service requests.

However, further consideration should be given as to where the devices are being provided and whether or not the party involved has access to the DCC.

We believe that energy suppliers need visibility of the requests and that this should only be achieved in a controlled way via a centralised, standard 'application solution' that would be actioned by the DCC.

In effect, this could preclude the pairing of CADs from non SEC parties who would, by their very nature, therefore not have access to the DCC. However, as it is the Suppliers who are responsible for provision of data within a private and secure environment, under Licence Conditions, we believe that this is a wholly appropriate requirement, as without these safeguards Suppliers are being asked to take responsibility for something that could be outside of their control, which is not appropriate.

Finally, we believe that the obligation is required as this is the only way to ensure the design and development of consistent systems and processes that will ultimately facilitate a Suppliers' ability to be able to fulfil their Licence Condition obligations around inter-operability and effective switching

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

Yes, this is the detail of our proposed variation to option 2

As we have touched-on briefly in our response to question 24, we now provide a little more detail to our suggested variation to option 2, which is to enable customers to contact their supplier for CAD approval and pairing via a suppliers' website.

The process could therefore be as follows:

Validation requirements:

- A customer could 'self serve', for example via the supplier's website
- All solutions would need adequate customer authentication;

Process steps:

- Customer logs on to website and enters customer account details;
- Customer provides relevant pairing details e.g. link key, mac address; and
- Customer submits request - If this was via npower.com or other contracted party then we would have an interface with the DCC to submit the pairing request.

This suggestion, like all the other approaches currently being suggested would need to be carefully considered to ensure that it is a cost-effective and secure method for pairing a CAD.

As we noted in question 25, there remains the question of a simple and cost effective solution to the passkey.

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 with the condition noted below

Although we agree with the requirements for a PPMID and understand and support the benefits that such a device would bring to both Supplier and customer we would ask that consideration is given to the level of access and functionality that is available. For example, we agree with and support functions such as activation of emergency credit and adding credit via entry of a UTRN being added to SMETS but would ask that appropriate consideration is given to aspects of safety in situations where enabling supply is envisaged.

We do not believe that the SMIP should in any way be increasing risk within customers' homes by allowing the enabling of supply to be carried out using interfaces that could be sited away from safety valves/switches. Therefore npower will not support re-enablement of either gas or electricity supply from the PPMID until a full risk assessment confirms that consumer safety is not compromised when compared to the existing arrangements.

Further, we need to understand whether or not the HAN will function when a meter is effectively switched off and also where a PPMID would be connected, either on the customer or distribution side of the meter, as this has a bearing on usage of the PPMID when a customer is off-supply.

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.

Conditional support

Please see response to Q 27

We do not differentiate between a wired and wireless HAN in this regard.

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 we support generally, with consideration required for gas meters and the need to establish that this is not an elective service

We agree with and support the proposal that the communications hub should be specified such that it can support multiple smart electricity meters. At the same we recognise that if these are very few in number, then communications hub variants may be appropriate. Consideration must also be given to the concept of multiple gas meters to ensure that if a solution is required that it is considered appropriately. Some examples of small and medium enterprise (SME) and residential configurations that require a single communications hub to support multiple electricity meters include:

- Customers with 3 meters for the three different phases, two micro-gen meters e.g. wind and solar;
- Where a minimum of 1 import / export and 1 generation (as 1 meter for each generation station is required) is needed, for example. With a further import / export for installations with multiple electricity supplies;
- Electric Vehicle (EV) charging;
- Blocks of flats turned back into single dwellings; and
- Primary and subsidiary meters ("Primes and subs") for gas SMEs.

It is clear from the examples provided that a number of alternative installations already exist that should be considered at this stage in order to develop an appropriately designed Communication Hub, thus minimising the need for a large number of variants. At this stage we also suggest that consideration is given as to the number of HAN switches required. We propose that an absolute minimum of 4 HAN switches need to be supported. Further, there are additional implications of multiple import / export meters and multiple HAN switched on the IHD that will need to be considered. For example, how to over-ride "programmed" switching times. As the scenarios discussed above form a relatively small part of a suppliers' portfolio it may be prudent to consider the communications hub here to be variants.

We have some concern about a lack of availability of a robust registration system for Feed in Tariff (FIT) metering points until after DCC go live. The option to incorporate these metering points into a consolidated industry registration when the standard gas and electricity registration functions are transferred to DCC should be pursued.

We strongly disagree that the 'A – H' list of requirements and the capability to store and transmit readings from a micro-generation meter should be classed as an elective DCC service for smart metering. It may not be needed as a core service from day one but once the service is available or if DECC have plans to place obligations on suppliers to retrieve this data then it should be core.

Consideration must be given as to how other devices on the HAN e.g. CAD or enhanced IHD will manage data being made available from multiple meters

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, with some caveats

We believe that if there was no WAN available then the HHT would need to mirror all functionality of the DCC, apart from Universal Transaction Reference Number (UTRN) capability, if we are to fit a SMS and meet Smart Meter Installation Code of Practice (SMICoP) requirements for a complete install. The table below is an example of one of these issues:

High level Scenario	Low level scenario	HHT Function	Requirement(s)
Recertification required of traditional asset	Post go-live, no WAN connectivity is possible at the site	Commission, configuration and maintenance of asset via the HHT	Where WAN is unavailable, the HAN should still be able to be established to enable ongoing supply to the customer

We agree that a specification for a HHT interface to the HAN needs to be defined and we welcome the opportunity to review the specification once it is published. It needs to be re-emphasised that this has to be a requirement if we are to be interoperable. We believe that the starting point in the creation of the specification has to be the creation of test cases around the scenarios/functions leading to a robust compilation of industry end - to - end processes.

The Licence Conditions are likely to need specific derogations along with amendments to the Industry consequential changes to accommodate. Even though the scale of this problem is yet to be fully realised, without this approach being adopted we believe that it could introduce a risk to the business benefit leading to an onerous cost to the customer and an impact to the integrity of the SMIP.

We disagree with the DECC stated position that HHTs will not be able to perform read/ write commands to the device set, as we believe that this will raise the following problems:

- i) Suppliers will be instructed, via licence conditions, to roll out smart meters without the necessary tools to do so for all installations;
- ii) In some instances this would result in Suppliers having to leave semi-Smart meters at premises where there is no WAN connection in the foreseeable future. Suppliers would not be able to maintain the functionality at these installations:
 - a. As prices change;
 - b. to support prepayment effectively, and
 - c. in terms of future products (e.g. Time of Use -ToU);
- iii) These installations would not meet SMICoP obligations and would not count towards a suppliers' installation targets;

- iv) Further, these installations would therefore effectively become a more expensive equivalent of a traditional meter with a clip-on display. The IHD would show initial pricing information (which clip-on's do not) which over time would drift as subsequent price changes took effect, effectively misinforming the customer, unless additional site visits were arranged to make the necessary corrections; and
- v) Finally, suppliers would lack the ability to update security which could potentially lead to a range of security issues, such as fraud, data extraction etc. In effect, these sites could become unsecured access points, which is a potentially worse situation for all parties concerned and maintaining a traditional meter would be a much better proposition.

From a security perspective we would like to make the following points;

- i) There will have to be an interface specification defined for the HHT, even if it is a model specific specification (i.e. manufacturer ABC produce a spec for configuring a specific model of manufacturer ABC meter). The more makes and models that need to be supported, the more devices the engineers will need to carry (and the greater potential for them to get lost or stolen;
- ii) Having a HHT that only works with a subset of the meters on the market would generate numerous problems;
- iii) Any HHT HAN interface will need to be able to work when there is no WAN connectivity to authenticate the HHT;
- iv) The list of functions needs to be tightly controlled, so that the Communications Hub/ Meters can ensure that nothing other than an authorised HHT is allowed to invoke them; and
- v) If from a security perspective the HHT will not be able to perform any write commands to the device set then this leaves some gaps that now need to be plugged;

All suppliers have a range of processes that need to be supported in the field - these go beyond the installation & commissioning of devices (whether new or replacement, for whatever reason)

Suppliers need solutions for all these requirements in the field. There are options around how these can be delivered, some may be impacted by security principles and related solution constraints, and need to be considered on an end to end basis. The HHT working group needs clarity from DECC and the security experts, with regard to these constraints

True optionality of solutions at the device and DCC level do not meet the interoperability objective, for example:

- o If it were optional for the SMS to support a HHT Application Programming Interface (API), one of our agents could attend an appointment with an HHT but to a device set that has not implemented the optional APIs, we would need to re-schedule the job or replace the on-site equipment for models we can support via our HHT solution; and
- o Similarly, if support for HHT APIs is optional, then the alternative option(s) need to be understood to ensure that there's the suitable support from DCC and the equipment manufacturers - these options are very likely to introduce new requirements on the DCC, the equipment, or both - e.g. there may be the necessity for a key pad and display on the



Communications Hub - which in turn needs an engineering menu that might need to be secured.

Optionality will introduce additional cost into the industry (solution at DCC and device), compromise the IA and potentially adversely affect customer experience (if all options not supported by all device sets)

Requirements in the field need to take be cognisant of the commercials regarding meter asset provision; premature replacement charges in the industry could escalate beyond anything anticipated in the Impact Assessment (IA) if field requirements are not fully considered and solutions worked through

Some solution options may have complex implications on the supply chain and reverse logistics, these need to be understood sooner rather than later so that new processes can be designed and implemented across the necessary parties within the necessary timescales.

Chapter 5 - Governance and Assurance of Security and Interoperability

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 additional items for further consideration

We support the formation of a security specific sub-panel of the SEC to manage the ongoing security requirements. This panel should also be looking at security across all smart activities and should not just be restricted to the requirements. We would want to see this panel being involved in all discussions that had a security impact.

We also believe that it is important to ensure that the SEC structure is set up in such a way that all security related decisions can not be overruled or discounted by the main SEC panel without an appropriate process in place.

We would like to see representation from non-security experts on the Security panel to ensure that all decisions are made in full light of the impacts to the smart programme, rather than being made in isolation. We would also like to see security representation on other SEC panels, even if it is just in an advisory capacity.

With regard to the risk assessments that will be created and used, the supporting paragraphs are unclear as to whether the requirements are expected to be developed solely from the DECC risk assessment or whether the other risk assessments "which reflect the particular characteristics of their organisation and market" will also be used to generate the requirements. We believe that it is important to establish a view of risks from all stakeholders represented in the requirements, not just those of Government.

For security, the governance arrangements would need to be specified tightly. For example the powers of the panel to reject, or not, a change that the Security Sub-committee has proposed. The rules may be different according to circumstance, for example in the normal course of development of understanding of risks and solutions, or following a breach or a local or foreign event.

Some considering is required for the intervening period until the establishment of the SEC

The technical sub-committee should be involved in risk assessments that involve security

Need to ensure that the Security panel is made up of appropriate people. Need both security and business aware people.

The Programme should also consider ensuring that Security representation is concentrated in the Security Technical Experts Group (STEG). It may be that other groups may benefit from the presence of a security expert. It is possible that concentrating on the SEC panel may cause a bottleneck.

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, with comments that we wish to be considered further

Overall we agree that the DCC and the DCC Users should undergo independent security assurance. We believe it important to establish that the level of assurance required was commensurate with the level of risk that each stakeholder represents. We agree that a Role based assurance regime will be best suited to the DCC Users.

We believe that further clarification is required for Suppliers who do not operate in the domestic market and may not make use of the DCC at all. This is especially important as meters in their portfolio may be gained by suppliers who are using the DCC. We would not wish to see a situation where gained meters are not trusted because the losing supplier was not subject to the same level of security assurance.

We believe that consumers and the system should not be compromised by lower obligations for some suppliers. This is particularly important in security, which is dependent on the weakest link in the chain. In addition we do not believe that small suppliers are helped in the long term by exemptions, as to grow above the obligation threshold they would have to retrofit security requirements that would have been better to design in initially.

We have always believed that security is one of the key pillars of the smart programme and it is a cost of operating in a smart marketplace.

The extent of testing will need to be clearly defined for each role. Participants need time to plan for testing.

The most rigorous assurance regimes must apply to the DCC itself

Independence in assessing assurance outcomes is important to ensure a consistent approach to market entry, providing a degree of confidence to the market that participants are operating to Smart market requirements, and that risks indicated by international experience in smart are seen to be mitigated in Great Britain.

There is a practical and cost difference between certification from an auditor and receipt of a certification from an independent international certification body (ISO27001).

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.

Yes

Our comments here pertain specifically to security testing, rather than wider assurance regimes.

We believe that an annual frequency of re-testing of IS systems is manageable, sufficient and in line with other standard security certification such as ISO27001.

If there are significant changes to security requirements then we would expect a corresponding update to the assurance regime. Any changes to systems in order to implement the changes will take time and as such it is likely that the regular testing window will still be able to be used.

It is unclear from the consultation if the system changes are internally or externally driven. If an organisation wishes to change its internal systems then this would not normally trigger a reassessment under schemes such as ISO27001. Instead the system would be examined as normal when the reassessment time came around again. It is also unclear from the consultation at what point a system would be deemed to be significantly changed and who would make this assessment. The set intervals (if required) should be sensibly set and be able to be modified. Similarly the process for 'more frequent' testing would need to be defined and understood throughout the industry.

The Elexon approach to re-qualification is a model that might be worth adopting - i.e. formal written assessments of the changes undertaken by participants followed by Elexon and the relevant participant agreeing the assurance approach required; and

We do not see any requirement to put additional field testing in place. Equipment should only be retested when something changes. User systems and processes should be done on a regular basis in line with industry good practice (ISO27001).

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, with a view that assurance provided is for all, not just DCC

We do not agree with the statement in the consultation that the prime objective of the security scheme would be to provide assurance to the DCC. The DCC is only one of the stakeholders in the Smart metering system. Suppliers, DNOs and customers should all be provided with as much assurance as the DCC.

We strongly support an independent security assurance scheme for smart metering equipment. However we believe that it should extend to all smart equipment, firmware upgrades etc. and not just the meters. Whilst the compromise of a meter can be used to disable the supply or commit fraud, compromise of one of the other pieces of equipment could lead to damage to the security of the system as a whole or theft of a customers' data with all of the DPA and SLC implications that this involves.

We agree that one of the steps the equipment must pass in order to achieve SMETS2 accreditation should be the security certification and believe that

consideration also needs to be given for the implications for SMETS 1 meters. However the timescales for doing so must be inline with the programme milestones and the costs must be commensurate with the risks.

We also agree that there is little benefit in re-certifying the equipment if nothing has changed. Unlike the DCC and DCC User systems, the equipment installed in the customer premises is static and will not change, apart from firmware upgrades.

We believe that security assurance should be re-evaluated if there is a security defect found in a piece of equipment. In this case we would also expect the CPA security criteria to be re-evaluated to ensure that flaws of that nature would be caught during the assurance testing in the future. There must also be a clear framework for liability set down, so if a piece of equipment passes the assurance tests and is later found to be flawed, the cost of updating or replacing the equipment is passed onto the appropriate party.

If a piece of equipment is found to be flawed after installation we expect clear guidelines on timescales for remediation. In the worst case this could involve site visits to replace millions of meters.

Certification must be extended to all components, such as the IHD and the bridge to consumer access devices. If there are CSP provided Communications hubs then certification should apply to them too.

We agree that security certification must be a condition for the SMETS badge;

Further tightening of conditions for re-certification may be required, for example following the solution of a security exposure which caused certificate revocation.

We believe that any process developed should be fit for purpose in terms of time, cost, and security assurance. At this point we are working with limited information from DECC.

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?

Yes we agree and look for the establishment of appropriate escalation process(es) and sanctions

In general we support the concept of sanctions for non-compliance with security requirements.

However we do not support the withdrawal of DCC services as this effect would be catastrophic effect as it would effectively stop a supply business from operating and also prevent change of supplier and provision of other services to consumers which are required under licence conditions.

We strongly believe that any sanctions imposed should not impact the service that the customer receives. Continuity of supply and the ability to top up a pre-payment meter are essential.

We would want to see the sanctions laid out and enforced by Ofgem as the regulator for the industry and would expect sanctions to apply to all parties including the DCC and the manufacturers as well as the suppliers.

Consideration must also be given to an appropriate escalation process that would effectively underpin the concept of sanctions, as without due process of this nature true sanctions could not be readily identified or appropriate levels set. In addition, account must be given to ensure that the new Security proposals are aligned with any changes to the assurance processes that may be required from time to time.

The sanctions imposed would need to be proportionate to ongoing security requirement and the failure of compliance with the regulations.

We believe that further consideration of security is required in the non domestic sector.

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.

Yes we agree, with some further considerations required

The May 28th consultation on the Foundation Security licence conditions has not yet had a response published. The industry is therefore not quite ready to respond to extending those conditions.

The May 28th consultation makes no reference to the non-domestic market and as such it can not be used as a baseline for this consultation.

The supporting text in the consultation makes reference to "comparable levels of security". The currently proposed security regime for the Foundation period and for meters hosted outside of the DCC does not have some of the same security obligations that the enduring solution has. These differences include the fact that there is no assurance model for meters outside of the DCC, nor is there any requirement for strict assurance criteria for SMSOs that are not the DCC. Instead the individual suppliers are required to implement controls as they see fit.

The work to date has concentrated on the proposed 'opted-in' segment of the market, the sweeping inclusion of "all installations operated outside of the DCC" now brings in swathes of installations, with varying levels and standards of security and other requirements needed to support new SMETS and GB standards, that have not been adequately supported by the programme. We strongly believe that this consultation should be restricted to Consumer Smart installations and a separate consultation should address the issues of non-domestic installations.

We support the need to provide a secure environment for smart installations outside of the DCC. We agree that suppliers, SMSOs and manufacturers should be following industry good practice in all of their activities, and this would include the metering

installations outside of the DCC. We agree that regular audits is an appropriate measure inline with our response to the 28th May consultation.

We believe that the costs of implementing a secure environment are one of the costs of operating in the smart marketplace. As such we do not believe that there should be any differentiation between suppliers based on their size. Allowing different tiers of security responsibility will lead to interoperability issues when meters are gained by suppliers who are obliged to implement stronger security. Having multiple tiers of requirements will also put an artificial cap on the size of suppliers due to the large increase in costs to implement the additional security in order to gain additional customers which could potentially become a barrier to effective switching.

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 strongly

We strongly support interoperability, without which we can not see how the programme can succeed. Interoperability has always been a cornerstone of the programme and we do not believe that this is open to question.

We strongly believe that the SEC is the appropriate point of governance for interoperability and assurance arrangements. Interoperability is key to ensuring that costs of market operation remain predictable and that the customer experience is consistent and acceptable to all stakeholders and does not adversely impact supply competition.

The assurance arrangements should ensure that the material aspects of interoperability and interchangeability are delivered - precisely what this requires with regard to detailed scope of testing will need to be determined.

The assurance arrangements should ensure that the material aspects of interoperability and interchangeability are delivered - precisely what this requires with regard to detailed scope of testing will need to be determined. The assurance regime should certainly be designed to capture minor formatting differences in the presentation of individual data fields and other potential implementation differences including behavioural ones; it may therefore be necessary to introduce further assurance steps to increase confidence in the interoperability of products. npower believes that the following need to be addressed by the device assurance regime:

- i) Conformity and consistency of security implementation;
- ii) Functional interoperability such that:
- iii) Participants and customers get a consistent experience during operations across the whole range of Smart functionality / capability
- iv) Devices from different manufacturers will work to specification with all CSP Communications Hubs

- v) The HAN can be formed of devices from different manufacturers and continue to operate to specification
- vi) The DSP can manage all devices on the HAN consistently (accepting that the different CSP communications hub implementations are likely to drive different development requirements) - thereby constraining development and maintenance impacts on the DSP Head End systems which would also assist in meeting timescales for DCC implementation - if functional interoperability to the DSP Head-End Systems (HES) is not achieved then the DCC timeframes will be compromised or device options could be constrained
- vii) HHTs can "integrate" with the SH HAN and devices such that suppliers and their agents can build a single HHT application to work with all compliant devices

However, we believe that the precise specification against which devices are assured still needs to be confirmed and questions whether the companion specification will be sufficiently detailed to enable its use as the assurance specification. The technical specifications being produced by the SMIP programme are not detailed build / implementation specifications. The assurance specification must not allow implementation ambiguity or the interoperability objectives won't be met and the industry could find itself in legal wrangles about what constitutes a SMETS compliant device, transparency around the process and due diligence are therefore required.

Furthermore, we believe that careful consideration must be given to how functional interoperability with the HES is assured and certified. - providing a SMETS tag to a device without testing with the DSP may leave the DCC open to further development requirements - i.e. once the SMETS tag is given, legally it might be difficult for the DCC to do anything but support it?

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 fully support, and have further considerations as to how this should be developed and managed

We fully support the development of an approved products list, however we believe that further consideration should be given to ensure exactly what smart metering equipment should be included, for example, only those products that will be managed by the DCC.

Having a central repository for the list of approved products will mean that there is consistency across the industry as each supplier will be able to look up in one central location whether equipment they wish to install are supported. A central approved products list will mean that there is a consistent approach to ensuring that all of the accreditation is stored in one place.

We believe that each approved product should also have the role that the product is expected to perform as part of the product list. If a device performs more than one

role, we would expect it to meet all of the approval criteria for every role that the device can perform.

We believe that there needs to be a mechanism to ensure that updates of new products are quickly added to the approved product list when they pass all of the accreditation criteria. There also needs to be a mechanism for removing a product from the list if it no longer meets the accreditation criteria (i.e. if there is a security flaw discovered in a particular version of firmware). In this case there also needs to be a process for managing any devices that are in use when the product is removed from the accepted product list

We believe that the approved product list should be stored and maintained by the DCC, regardless of whether the devices are to be supported outside of the DCC or not. There is no benefit to making each Supplier and CSP maintain and assure separate lists, when the DCC can provide a central repository that all stakeholders can readily access. Further, by considering the development of multiple lists automatically introduces the real dangers associated with version control and alignment of lists that would be required as they are continually maintained.

As the DCC will only allow Users and CSPs to enrol products that are on the approved list, the DCC should hold the evidence that the product meets the appropriate criteria. The Suppliers and CSPs should only be required to hold evidence that the devices they are installing are on the product list, not whether the products they are installing are appropriate to be placed on the product list.

Compliance should be a requirement regardless of the intended SMSO.

SMETS certification should be obtained for all devices installed in line with the requirements of the mandate - whether or not the intention is to operate via the DCC.

We believe that a process should be developed to provide governance over all assurance activities relating to SMETS. The establishment of a technical sub-group focused on SMETS assurance makes sense in the short to medium term; experience during this period should shape the long term approach. Evidence of certification must be mandatory.

Npower is firmly of the opinion that the DCC should maintain a list of supported devices and that only these devices are allowed to be used, whether through the DCC or not. To become a supported device may require more than the certification process (see the points in our response to Q 37 about HES interoperability) to have been successfully navigated - there are also operational support considerations and logistics that need to be established prior to the DCC being able to support a given device (e.g. effective participation in the SEC and associated change management processes, firmware provisioning infrastructure, device manifest delivery and associated security certification).

Devices should be approved for the role that they are to perform (Meter, IHD, CAD etc).

More clarity is needed on what should be the scope of the approved product list be. For example just for devices that are managed by the DCC, or not bought from the suppliers?



The list should be owned and managed by the DCC, rather than suppliers needing to each keep their own evidence of certification. This simplifies assurance by suppliers when they gain a meter as they can just look it up on the list.

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 tentatively, with further consideration required.

We strongly support interoperability and interchangeability between devices and Users of the system, and we anticipate that the creation of a GB Companion Specification will be a large part of this process.

The GB Companion specification needs to be sufficiently detailed to ensure that not only do all devices speak the same language, but that they also speak with the same accent. The protocols in this consultation (ZigBee and DLMS) can each be used in a number of different ways to achieve the same goal. The protocol not only need to specify what the protocol must support, but describe how the implementation is to be achieved.

We also expect that any use of one protocol tunnelled over another protocol is specified and assured to provide interoperability and clear guidance on which combinations of protocols are acceptable and supported.

We strongly recommend that part of the assurance regime is to ensure interoperability and not just blind compliance with a written specification. We would want to see all equipment tested against a known gold standard as well as interoperability testing with other products in the Approved Products list. As the DCC is the centre of the structure that makes up the smart metering system, we expect that the DCC will take a significant role in this assurance, under the governance from the SEC.

We strongly recommend that interoperability extends beyond the network protocols and into the physical interoperability between devices. This would include the physical specification for components such as intimate communications hubs.

The assurance regime should certainly be designed to capture minor formatting differences in the presentation of individual data fields and other potential implementation differences including behavioural ones; it may therefore be necessary to introduce further assurance steps to increase confidence in the interoperability of products. npower believes that the following need to be addressed by the device assurance regime:

Conformity and consistency of security implementation and Functional interoperability such that:

- i) Participants and customers get a consistent experience during operations across the whole range of Smart functionality / capability.

- ii) Devices from different manufacturers will work to with all Communications Hubs regards less of the CSP who provides them, or the WAN communications technology that is used.
- iii) The HAN can be formed of devices from different manufacturers and continue to operate to specification
- iv) The DSP can manage all devices on the HAN consistently (accepting that the different CSP Communications Hub implementations are likely to drive different development requirements)
- v) Hand Held Terminals can "integrate" with the SM HAN and devices such that suppliers and their agents can build a single HHT application to work with all compliant devices

Given the different profiles for gas and electricity, it may be worth considering testing for both, and mitigating the risk of any protocol translation problems

Certification of devices needs to be against a suitable, documented specification. Whether this is the GB Companion Specification is difficult to say as this product has yet to be published. We are concerned that the GB Companion Specification will not be sufficiently detailed to ensure that all the interoperability requirements are met - in npower's opinion the key is to ensure that the detailed objectives of the assurance / certification regime are well defined - the implications of the objectives then need to be taken into account when designing the detailed certification process and associated test specifications; we do not believe that this consultation is sufficient to drive out the detailed certification process and associated test specifications.

Tunnelling needs to be part of the assurance specification (tunnelling ZigBee over DLMS or vice versa).

Final architecture for communications hubs need to be resolved, this can introduce additional assurance requirements.

Physical interoperability (intimate communications hubs, communications hub power from electricity meter etc.) needs further

Chapter 6 – Operational licence conditions

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.

Yes we generally agree - but there are some underlying issues that need to be resolved - See below.

Government's Proposals for Domestic Consumers

Government is proposing that Energy Suppliers should be required through Licence Conditions to ensure that domestic consumers can access, free of charge, the full range of IHD functionality as set out in SMETS including the additional functionality that the IHD must be capable of performing when the meter is operating in PP mode. The obligation would apply for 12 months following the installation of a SMETS compliant meter. We support this

Government is proposing that Suppliers should be required to ensure that all consumption, export and tariff information held on the meter is made available free of charge over the HAN. Consumers could then access this data through Consumer Access Devices (CADs) providing that they comply with the HAN specification. CADs would not necessarily be offered by Suppliers but could be offered by retailers and other service providers. We support making the information available free of charge over the HAN but have wider concerns regarding the CAD (see responses to Q24 – 26 on CAD and Paragraphs 128-146). For example, how can Suppliers be assured that any CADs procured and used by Customers do comply with the HAN specification and pose no security or breach of privacy risks? Further consideration is needed regarding processes relating to CADs. Also have some concerns regarding the LC drafting in this area – see response to Q42.

Government is proposing to require energy suppliers to take all reasonable steps to establish and maintain a connection between the meter and the WAN. We support this provisionally but we do not currently have a full range of HAN solutions or visibility of WAN coverage as yet and it should be made clear that, whilst Suppliers are responsible for the metering system we are not responsible for the WAN itself or the Communication hub. Care needs to be taken to ensure that clear lines of responsibility between Suppliers, the DCC and Service Providers are defined and maintained. These issues need to be resolved before we can fully accept this responsibility.

Further clarity is needed with regards to the Drafting - see response to Q42.

The above operational requirements should apply to any compliant smart meter installation, including SMETS1 meters, installed from the time the operational licence conditions come into effect. We support this approach with regard to compliant smart meter installations but ask that consideration is given to how suppliers should manage non-compliant installations that they may inherit. The volumes of these instances can only be expected to increase whilst foundation activities are expected to endure for a longer than anticipated period whilst decisions are made as to what constitutes compliance and no approved metering specifications are in place.

Suppliers that gain customers with a smart meter would have to deliver the requirements once the meter had been enrolled with the DCC. We find it difficult to comment on this as the Adoption and Enrolment criteria still need to be developed and we understand that a Consultation on this is imminent.

Energy Suppliers would be expected to deliver all the above functionality for ALL meters (including any not enrolled with the DCC) by the end of Mass Roll-out (Dec 2019). Our position is that there are still a great number of 'unknowns' that still need to be discussed, established and agreed before we will be in a position to be able to properly answer this question. We acknowledge the intent for consistent functionality to be in place by the end of mass roll-out, but again without the foresight to predict prevailing market conditions to any level of detail in 2019 we remain cautious in our approach to this intended obligation.

Additional Comments

- Para 213 - We support the concept of suppliers making use of more accurate and detailed consumption data however we would question the notion that suppliers will then 'automatically' be capable of providing wholly accurate bills as a result of access to this data. There are several scenarios where this may not be possible for example, outages that could affect the HAN and WAN or operational difficulties with the new DCC, for example;
- Para 216 – We support the decision to not include the requirement to display account balance on the IHD. As stated within our response to the SMETS consultation in November 2011, we are of the view that the core function of the IHD is to provide the consumer and industry with a representation of consumption. The requirement should not extend further. Representation of cost to the consumer will develop naturally in a variety of ways and should not be specified by regulation.

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?

The Government's proposals in relation to non-domestic consumers - The Government proposes extending the operational requirements proposed for the domestic sector to micro-businesses (as defined within Standard Condition 7A of the Standard Conditions for Electricity Supply Licences – see Supporting Info) with some exceptions, namely:

- Suppliers will NOT be required to offer an IHD to non-domestic customers, therefore operational requirements relating to IHDs will not apply to micro-businesses. We support this
Micro-business sites with metering arrangements that are opted out of the DCC will be exempt from the operational requirements. We do not support this. There will be a level of increased complexity (and hence costs) of developing systems and processes that effectively cater for certain excluded market segments. Further consideration should therefore be given prior to making any decision in this area.

DECC state (within Para 223) "that applying requirements to opted out sites could require the use or deployment of technology that would not otherwise be required (for example, a specific communications hub) creating costs that the Government does not consider would be justified given that the customer would have agreed a contract for service provision with the supplier, and would be free to switch to another supplier if a different type of service were required". Should the micro-business site change supplier however, with the new supplier electing to opt-in to the DCC services, then the operational requirements would become effective and, one assumes, the costs of this would have to be borne by the gaining supplier. This may not be appropriate or fair

The Proposal to extend the operational requirements proposed for the domestic sector to micro-businesses (with a couple of exceptions) poses some challenges as the Standard Condition 7A definition of a micro-business is:

- (b) a person supplied or requiring to be supplied with gas or electricity at premises other than domestic premises, with—
 - (i) an annual consumption of—
 - (aa) electricity of not more than 55,000 kWh; or
 - (bb) gas of not more than 200,000 kWh; or
 - (ii)
 - (aa) fewer than 10 employees (or their full time equivalent); and
 - (bb) an annual turnover or annual balance sheet total not exceeding Euros 2 million

It is not yet clear how Suppliers will be able to use the definition provided in the Statutory Instrument in this context, as suppliers will not have access to the numbers of employees or the business's annual turnover, leaving the suggested levels of consumption being the only measure that could be used. We can envisage that in some instances it may be difficult to determine whether a customer/premises with an annual consumption of not more than 55,000 kWh (Electricity) or 200,000 kWh (Gas) is a micro-business or a domestic premise, however unclear how much of an issue this will be (Given that definition is already used, is it an issue that we "currently live with"?). It is therefore possible that divergent views and definitions with regard to how Suppliers identify micro-businesses could emerge that would impact inter-operability and effective switching obligations.

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

Read Across: Annex A (pages 81 – 86)

Support but with further clarifications required and suggested further considerations

Overall Comment:

We agree that the Licence Conditions, at a high-level, effectively underpin the Government's policy intentions but suggest that several areas of the drafting need to be considered further. In general, we need to better understand how these Licence Conditions are intended to work whilst other required solutions, such as the 868 MHz and wired HAN solutions have not yet been developed and the effect of developing WAN services that will not provide 100% coverage.

Specific Comments:

Licence Condition drafting:

Condition RR 3 states

"The requirement of this paragraph is that there is established a Communications Link:

- a) between the Smart Metering System and the licensee's Head End System, across a WAN interface; and
- b) between the Smart Metering System and either the IHD or any other Consumer Device at the relevant premises, across a HAN interface.

Condition RR 3a) - Usage of the term licensee's Head End System within Condition RR 3a) would therefore suggest that it is the Electricity Suppliers/Gas Suppliers Head End System that is being referred to. However, Paragraph 219 of the document states "Nevertheless, to provide additional confidence that suppliers will use the capability of smart metering to take remote reads, we propose to require energy suppliers to take all reasonable steps to establish and maintain a connection between the meter and the WAN⁴³", with footnote 43 stating "The 'head-end' system is the software used by the DCC (or a supplier in the case of meters operated outside DCC) to manage remote inter-actions with smart metering equipment". The WAN definition in the consultation glossary defines WAN as "The network that is used for two way communication between smart metering systems in consumers' premises and the DCC". Based on the above information, it is unclear to us whether the Head End System being referred to in 3a is the DCC's Head-End System or Supplier's Head End System – clarification is therefore required with the current nPower view being that it refers to the DCC's Head-End.

In addition, the drafting should make clear that the WAN itself is not the responsibility of the Supplier.

Condition RR3b - states that Suppliers will be obliged to establish a Communications link between the Smart Metering System and either the IHD or any other Consumer Device at the relevant premises. As a Supplier we may well not know what Consumer Devices the customer has procured and installed within their premises, therefore we do not believe that an obligation in relation to Consumer Devices is appropriate (which is the Energy UK view also).

Condition RR4 - should there be an "and" between a) and b)?

Condition RR9ii – what is the difference between "the amount of Outstanding Charges" and "the level of Outstanding Charges"

Condition RR7 - Paragraph 220 in the Consultation document states that the operational requirements will apply to a compliant smart meter installation from the time the proposed licence conditions come into effect. Does this mean the requirements apply to relevant equipment installed before the Licence Conditions come into force or only those installed on or after the Licence Conditions commencement date? Npower are currently of the view that it is the former, as otherwise, we will have created two classes of metering installation that are exactly the same but being treated differently. However, paragraph 7 of the draft Licence Conditions appears to allow for this where the Smart Metering System wasn't installed or arranged to be installed by the licensee. But this exception applies only until:

- i) the system is placed in the Smart Metering Inventory; or
- ii) 31/12/19 whichever is the earlier.

There seems then, on the face of it to be a disjoint as to the application of the Licence Conditions depending on whether a supplier has installed, or acquired a customer with, a previously installed SMS.

We therefore seek clarification on this issue as it may be that the "disjoint" is intentional in order to differentiate between installing and acquiring supplier obligations.

Discussions are still ongoing within the industry regarding meter variants/difficult properties etc. What if some of the solutions that are developing for these scenarios preclude these obligations being met?

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 support with caveat

Overview: We support the concept that the SEC should include certain operational requirements for energy suppliers to configure smart metering systems in order to ensure inter-operability with the DCC, however we believe that further consideration and debate is required regarding the DCC's provision of this service.

Inclusion of these operational requirements within the SEC would support the argument that all market participants required to/wanting to access this information must accede to the SEC itself. We believe that this approach would help to develop a more efficient and consistent approach to managing such requirements.

Government Proposals

The Government is proposing that:

- SEC should include certain operational requirements for energy Suppliers to configure smart metering systems so that the DCC can offer services that would provide the following information to SEC parties (including DNO's and ESCOs) upon request:
 - i) Power quality information and related log

- ii) Real-time alerts associated with power quality thresholds
- iii) Real time outage management information (interruption and restoration)
- iv) Active 13 month import/3 month export profile data for electricity (kWh) and 13 month consumption data for gas (m3)
- v) Reactive 3 month import/export profile data for electricity (kWh)
- vi) 6 minute gas consumption log –We do not support the proposal to provide this level of information to Gas Transporters; and
- vii) Tariff information (including all tariff information used for billing purposes)
- The obligation would apply:
 - i) at the point when the meter was enrolled with the DCC (see Para 227); and
 - ii) to domestic smart metering systems that have not been enrolled with DCC by the end of 2019 (see Para 229).

Government is still considering:

- i) whether the provision of the info listed above should be made available as a core service to DCC users – we would not support this; and
- ii) The government is considering (as part of its data access and privacy consultation) whether non-domestic smart meters opted out of DCC should be required to provide information of the kind listed above to SEC parties.

Issues

The proposals imply that Suppliers must configure smart metering systems so that DCC can offer listed services once the meter is enrolled with the DCC and, by the end of 2019, for all domestic smart metering systems that have not been enrolled with the DCC by that date. It is not clear how the DCC is proposed to provide the listed information to Network Operators and ESCOs for sites that have opted-out/not been enrolled? Will the DNOs not have a requirement to have this data for opted out customers (especially larger customers who could have greater network impacts)?

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

The uncertainty at this time, with several consultations yet to be concluded, makes this difficult

Government proposes that the operational requirements should apply to the installing supplier from the time that the operational licence conditions come into effect.

Energy Suppliers that gain customers with smart meters would have to deliver the requirements once the meter had been enrolled with the DCC, or for domestic consumers not enrolled in the DCC, by the end of December 2019.

There are several aspects that come into effect when considering the timing of the introduction of these requirements:

- Development of suppliers systems and processes to accommodate smart;
- A suppliers' roll-out plans; and
- Gaining customers from other energy suppliers.

The timing of implementation of operational requirements is dependent upon metering equipment being made available after it has been tested and certified. We therefore do not wish to be in a position whereby the timing of the introduction of operational requirements effectively forces a supplier to have to install metering equipment that will not be supported long-term or is not a suppliers preferred solution, as this effectively undermines any smart roll-out strategy currently being developed and the Programme benefits;

Whilst there are several consultations that have yet to be concluded that have Licence Condition implications it is difficult, at present, for Suppliers to be able to fully understand the impact that these will have either singularly or jointly. An ongoing approach to understanding the impact and timing of operational requirements is therefore appropriate.

Chapter 7 – Next Steps

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?

Yes we support the CSP led model for the communications hub

We fully support the DECC preferred model of CSP-led to cover communications hub responsibilities and believe that it needs to be supported by a robust set of DCC Licence conditions. If this is not it has the potential to affect our ability to achieve interoperability

If the CSPs are to be responsible for procurement of the communications hub then the requirements would be built into contracts via CHTS. If this route is taken then supplier roll-out Licence Conditions would need to be changed to mandate the fitting of a communications hub. From a supply chain perspective, the DCC is best placed to own this in order to promote a single supply chain rather than a lot of small supply chains.

Alternatively, if supplier led then the requirements would be included within SMETS

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

We do not agree with this as we do not believe that we are in a position to fully understand the timings around equipment development and availability at present

We do not believe that it is wholly appropriate for suppliers to be expected to sign off the Government's procurement process for communications hubs or any other part of the DCC supply chain. Further, this is also inappropriate as we still do not have confidence around certain aspects of the metering equipment and development, for example, the wired and 868 MHz HAN solutions.

With consideration to the above caveats, we have the following comments to provide that represent our current thinking:

We currently understand that although the 2.4 GHz GB Companion Specification will not be available until Q3 2013, the nature of the development process is such that the lead time for equipment that is certified as compliant with the specification should not be significant.

Similarly, as the DNO, hand-held terminal, PPMID and meter variants requirements could be considered as technologically straightforward and in many instances are only an extension of SMETS 1 requirements, equipment that delivers these requirements could be available in late 2013. As proposed earlier, equipment will be required to be compliant with the proposed security assurance regime. The design and establishment of this assurance regime should be completed in 2013, enabling the first tranche of product testing to be completed by early 2014.

The Government intends that the CSPs will be appointed in late spring 2013. The CHTS should be available by this stage, so the CSPs should be able to begin the development of communications hubs, albeit they may be reliant on adoption of the GB Companion Specification by ZigBee to complete their design. The Government is currently involved in dialogue with potential CSPs, including on the possible development time for communications hubs. It is currently assumed that these communications hubs should be available for testing and trialling in early to mid-2014 and at scale in late 2014, which would coincide with the start of the mass roll out stage.

As the DCC isn't going to be appointed until June 2013, we believe that this makes this timeline very challenging.

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?

We agree with the concept, with caveats.

We recognise that there may be some surplus SMETS1 assets on go-live of SMETS2. In such a case we would support a small transitional period to avoid stranding the assets. However, this period would need to be controlled/ capped to avoid the large scale over purchasing and flooding the market of SMETS1 meters.

We believe that SMETS2 should be designated on time as per the DECC plan, following governance to ensure the correct action can be taken if slippage occurs. Without this fixed milestone or if there is failure in adherence to it then our planning around our deployment curve will be adversely affected. This situation would leave us with two options; halt our deployment until SMETS2 is designated or continue to deploy SMETS1 meters.

The issue caused by continuing with deploying of SMETS1 metering past the milestone is that it would lead us to exceed our prearranged contractual and supply chain arrangements to cover the period and volume cap against our planned deployment curve of SMETS1 metering.

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

We agree and support the approach, timing and the rationale.

It is proposed that responsibility for the SMETS modifications process should be transferred from the Programme to the SEC as soon as it is practicable to do so. However, the Government proposes that the precise timing of the transfer should be subject to a number of milestones being reached in order to provide sufficient confidence that the Government's objectives for smart metering will be met. These milestones would include:

- i) A version of SMETS having been completed which reflects the major policy decisions that need to be taken to deliver the Programme's business case; and
- ii) SEC governance structures having been put in place which are in a sufficiently robust state to manage the process for SMETS modifications efficiently.

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

We fully support Option 1 – A standing sub-committee

Option 1: A standing sub-committee with responsibility for both SMETS modification and assurance. Modifications would be assessed by a standing sub-committee with responsibility for broader SMETS governance issues including assurance and certification. These areas are likely to be inter-related and will call on particular technical knowledge; and

Option 2: A non-standing sub-committee convened as necessary when modifications to SMETS are proposed. The remit of this sub-committee would be limited purely to SMETS modifications. Relevant expertise would be called upon when required, as SMETS modifications.

We support option 1 – any signatory to the SEC could propose a change/modification, therefore the committee must have the relevant technical knowledge/ability to assess any changes to ensure that time is not wasted on changes that could/will never be assured. The process needs to be robust with the right people who understand assurance rationale.

In addition, we would support the notion that the standing committee should also include representation from both CSPs and DSPs as we believe that it is likely that during the early period, as the Programme settles down, some of the issues arising will require these parties involvement for resolution.

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

Required is expert understanding of accreditation, assurance, metering, commercials, holistic smart policy, industry, codes.

We believe that now would be a good time to think about recruiting such expertise in order to retain and maximise the knowledge developed during the SMIP