

Your Ref:  
Our Ref: Ofgem E-Serve/10/03/cj

28<sup>th</sup> October 2010

Smart Metering Team  
Ofgem E-Serve  
9 Millbank  
London  
SW1P 3GE

For the attention of Ms. M. Coaster

Dear Margaret,

### **Consultation on Smart Metering for Electricity and Gas**

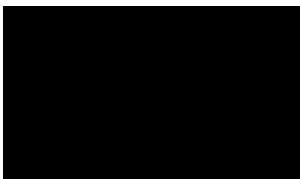
Further to our response to the above consultation (our letter of 27<sup>th</sup> September refers) we are pleased to submit a follow-up document which covers the remaining questions.

We have also contributed to the responses you will receive from our trade associations BEAMA SMA and SBGI.

We trust our views will be of value to Ofgem E-Serve, not only as a global provider of AMI products, systems and services, but also as the leading provider of prepayment electricity smart products, PPMIP services and Pay-As-You-Go solutions to the UK market.

We would be more than happy to discuss our thoughts in more detail at your earliest convenience, however in the meantime if you require further information or clarification of anything contained within our response, please do not hesitate to contact me.

Yours sincerely



## **About Itron**

Itron Inc. is a leading technology provider to the global energy and water industries. Our company is the world's leading provider of intelligent metering, data collection and utility software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimise the delivery and use of energy and water.

Our products include electricity, gas, water and heat meters, data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and related software applications; as well as project management, installation, and consulting services.

## **Itron in numbers**

- 2009 revenue: 1.69 billion \$
- 8,500 employees
- 33 manufacturing facilities, 13 R&D centres and over 60 sales and administrative offices
- Sales in 130 countries to more than 8,000 utilities
- 125 years experience
- 14 million units under AMI contracts

## **Itron in the UK**

In the UK, our combined organisation is c. 550 people strong, providing metering solutions, software solutions, implementation services and customer support to the UK market. These capabilities include Itron Meter Data Management (MDM) consultants and support personnel, who are also located in the UK.

We are also a leading provider to utility companies for Managed Services Solutions in the UK, including our TaleXus™ prepayment managed services solution for electricity PPMIP, which is used throughout the UK by many of the leading utilities.

Our UK headquarters is located in Felixstowe, Suffolk, with responsibility for the manufacture, sales and support of domestic and C&I electricity metering systems into the UK market. This site is also our designated Centre of Excellence for Systems Development, including AMR/AMI, Prepayment and Pay-As-You-Go (PAYG) solutions.

Our UK Gas, Water and Heat metering business is located in Stretford, Manchester.

Further company information is available at [www.itron.com](http://www.itron.com)

## Reference Document: Prospectus

### CHAPTER 2

**Question 1:** Do you have any comments on the proposed minimum functional requirements and arrangements for provision of the in-home display device?

*We consider that the proposed minimum functional requirements and arrangements are adequate at this stage of the programme, however we believe that this area will be the subject of ongoing development.*

**Question 2:** Do you have any comments on our overall approach to data privacy?

*We welcome the Government's approach in this area, but we believe that more clarity is needed on this issue, with guidance on what data must remain within the consumer's home and what is necessary for effective consumer billing, grid management and operation of the competitive market. It is also important to consider these aspects in a wider European context, taking into account emerging standards in this area.*

*We believe that maintaining privacy and security of consumer data will remain key concerns in the smart metering debate going forward and we support the Government's view that managing these aspects is fundamental to the successful implementation of the overall smart metering programme. We believe that informing and empowering consumers to manage their energy consumption are key objectives, but confidence that personal privacy is protected must be preserved.*

*As many technologies require highly detailed data relating to a consumer's energy profile to be processed outside of their meter and in-home display, this must raise doubts about who can access this sensitive life style information.*

**Question 4:** Have we identified the full range of consumer protection issues related to remote disconnection and switching to prepayment?

*We believe that issues relating to remote disconnection and switching to prepayment should be the subject of a specific working group within the smart metering programme.*

**Question 5:** Do you have any comments on the proposed approach to smaller non-domestic consumers (in particular on exceptions and access to data)?

*We have no specific comments to make on this question.*

### CHAPTER 3

**Question 8:** Do you have any comments on the proposals that energy suppliers should be responsible for purchasing, installing and, where appropriate, maintaining all customer premises equipment?

*We have no specific comments to make on this question.*

**Question 9:** Do you have any comments on the proposal that the scope of activities of the central data and communications function should be limited initially to those functions that are essential for the effective transfer of smart metering data, such as data access and scheduled data retrieval?

*We support this approach.*

**Question 10:** Do you have any comments on the proposal to establish DCC as a procurement and contract management entity that will procure communications and data services competitively?

*We support this approach.*

**Question 11:** Do you have any comments on the proposed approach for establishing DCC (through a licence awarded through a competitive licence application process with DCC then subject also to the new Smart Energy Code)?

*We support this approach.*

**Question 12:** Does the proposal that suppliers of smaller non-domestic customers should not be obliged to use DCC services but may elect to use them cause any substantive problems?

*We are not aware of any substantive problems that would arise from this approach.*

**Question 13:** Do you agree with the proposal for a Smart Energy Code to govern the operation of smart metering?

*We have no specific comments to make on this question.*

**Question 14:** Have we identified all the wider impacts of smart metering on the energy sector?

*We believe that more areas of impact will be identified as the rollout approaches and during the implementation itself, however we believe that an evolutionary approach is more likely to minimise the wider impacts on the energy sector going forward.*

*We also believe that further ongoing work will be required to ensure appropriate alignment of roadmaps for smart metering and smart grid in order to deliver the overall combined benefits.*

**Question 15:** Is there anything further we need to be doing in terms of our ensuring the security of the smart metering system?

*We believe that a full and independent, end-to-end security assessment should be applied during the development of the requirements of the smart metering system, taken from a CNI standpoint.*

**Reference Document: Consumer Protection (94a/10)**

**CHAPTER 2**

**Question 1:** Do you have any views on our proposed approach for addressing potential tariff confusion? What specific steps can be taken to safeguard the consumer from tariff confusion while maintaining the benefit of tariff choices?

*We have no specific comments to make on this question.*

**Question 2:** Do you agree with our proposed approach for addressing unwelcome sales activities during visits for meter installation?

*We believe that this area should be included within the scope of an industry-defined Installation Code of Practice for smart metering.*

**Question 3:** What do you consider as acceptable and unacceptable uses of the installation visit and why?

*As for Question 2 above.*

**Question 4:** Do you agree with our proposed approach to ensuring that the IHD is not used to transmit unwelcome marketing messages?

*We believe that this area should be covered by a process where consumer consent is required i.e. opt in/out.*

**Question 5:** Do you agree that consumers should be able to obtain consumption information free of charge at a useful level of detail and format? How could this be achieved in practice?

*We believe that consumers should be able to obtain meaningful consumption information which is sufficient for their needs, on a free of charge basis. In practice this can be achieved in different ways, including the use of historical data stored in the meter, accessible through an IHD.*

**CHAPTER 3**

**Question 6:** Do you consider that existing protections in the licence are sufficient to ensure that consumers are not remotely switched to prepayment mode inappropriately?

*We consider that this is an area which should fall within the scope of the Smart Energy Code and it would seem prudent to undertake a review of the existing consumer protections in the context of remote switching, in order to understand the full implications of this functionality and ensure the necessary safeguards are in place.*

**Question 7:** Could provision of an appropriate IHD help overcome meter accessibility issues to facilitate prepayment usage?

*We believe that a higher functionality IHD could help overcome meter accessibility issues to facilitate prepayment usage, however there will be cases where direct meter access may still be required e.g. for local credit top-up. It is also important to recognise that there may be potential safety issues where the IHD is sited remotely from the metering point in terms of supply reconnection.*

**Question 8:** What notification should suppliers be required to provide before switching a customer to prepayment mode?

*We believe that issues relating to the switching of customers to prepayment mode should be the subject of a separate working group within the smart metering programme.*

**Question 9:** Do you believe that suppliers should be required to provide emergency credit and 'friendly credit' periods to prepayment customers or whether, as now, this can be left to suppliers?

*Itron has a wide experience of providing emergency credit and non-disconnect (friendly credit) functionality in its prepayment products, however we consider that Energy Suppliers and Consumer Groups are better placed to provide feedback in this area.*

**Question 10:** Do you consider that an obligation similar to Prepayment Meter Infrastructure Provision (PPMIP) may be required?

*The use of national PPMIP for key rather than Supplier-based PPMIPs has moved on with the support of intelligent prepayment meters and shows the benefits that can be provided by national independent providers. This knowledge and experience should be built upon to ensure a robust solution for prepayment customers operating in the Smart world. In order to ensure a competitive market in the supply of prepayment services the solution must be open to all Suppliers big or small, on an equal footing.*

*The current processes are driven by meter-related data, hence customers can change Supplier and still retain and use a key/card based on the old Supplier, leading to misdirected payments, and also data errors which can lead to unallocated payments. We believe that new solutions should be developed to avoid these problems, through appropriate customer validation at the point of purchase. Currently the customer is always able to complete their energy purchase and therefore ensure their energy meter remains in credit. In terms of customer satisfaction it would be a detrimental step if the purchase could not be completed under new arrangements even if a Change of Supplier or other event has occurred.*

*These issues could be addressed by a national prepayment provider supporting Suppliers and operating as an entity within the scope of the DCC. The provider could manage the payment authorisation with the appropriate Supplier using the services of the DCC or other agencies that maintain relevant records. Where there was a conflict over the Supplier, the provider could resolve this to ensure the customer is able to credit their meter even if they have provided out of date credentials.*

*We believe that it is essential that there are multiple ways to top-up prepayment meters and Itron is already working in this area to provide in-home top-up solutions. Alongside these new methods, many yet to be developed approaches will become available. An important way of topping up meters will continue to be cash and provision must remain for this approach. Although the WAN and supporting processes will have very high availability, provision must still be available for meter top-up in the event an online method is unavailable. Methods for local top-up will have to be established.*

*During the rollout period, provision will be required to support existing prepayment methods and processes, including management of payment cash, metering messaging, management of debt messaging - meter configuration, emergency credit, non disconnect periods, tariffs etc, as well as the smart meter approach. This must be seamless to the end-consumer in order to avoid penalising consumers with existing prepayment meters, as well as potentially discrediting prepayment with an incomplete solution under the Smart Programme.*

*We believe that prepayment/PAYG will remain an important customer segment going forward and should be the subject of a specific working group within the smart metering programme.*

**Question 11:** Is the obligation which Ofgem is proposing to introduce on suppliers to take all reasonable steps to check whether the customer is vulnerable ahead of disconnection sufficient? If not, what else is needed?

*We have no specific comments to make on this question.*

**Question 12:** What notification should suppliers be required to provide before disconnecting a customer?

*We consider that issues relating to the remote disconnection of customers should be the subject of a separate working group within the smart metering programme.*

**Question 13:** Do you have any views on the acceptability of new approaches to partial disconnection and how they might be used as an incentive to pay bills?

*We believe that in order to assess the acceptability of any new approaches, a clear set of agreed industry definitions and functional requirements is required, so that technical feasibility and practical implications can be determined. Itron has experience in other markets where alternative forms of disconnection have been applied and we would be happy to share our knowledge in this area with Ofgem.*

**Question 14:** Do you agree with our approach for addressing issues related to remote disconnection and switching to prepayment?

*We consider that issues relating to remote disconnection and switching to prepayment mode should be the subject of a separate working group within the smart metering programme. As a minimum requirement it should not be possible to reconnect the supply remotely without some form of local interaction with the meter.*

**Question 15:** Have we identified the full range of consumer protection issues associated with the capability to conduct remote disconnection or switching from credit to prepayment terms? If not, please identify any additional such issues.

*As for Question 14 above.*

#### **CHAPTER 4**

**Question 16:** What information, advice and support might be provided for vulnerable consumers (e.g. a dedicated help scheme)? Who should it be provided to?

*We consider that Energy Suppliers and Consumer Groups are well placed to respond in this area.*

#### **CHAPTER: Five**

**Question 17:** Do you have any comments on our proposals to prevent upfront charging for the basic model of smart meters and IHDs?

*We have no specific comments to make on this question.*



**Reference Document: In-Home Display (94c/10)****CHAPTER 2**

**Question 1:** We welcome views on the level of accuracy which can be achieved and which customers would expect, in particular in relation to consumption in pounds and pence.

*Depending on the frequency of consumption information update from meter and also pricing information there could technically be a relatively close alignment between the actual bill and the consumers view of their real time consumption in pounds and pence. However, in practice, it is prudent to be aware that in situations of communications failure in the HAN or WAN inaccuracies may occur. It may not be practical to continuously synchronise IHD's with the head end system and billing systems in order to ensure that the bill amount is the same as that displayed on the IHD.*

*We believe that more work will need to be done in assessing exactly what level of accuracy will be required for pricing information on in home displays. In order for the system to remain robust, the price should be fed to the IHD rather than relying on the consumer updating it manually when they hear of a price change. It could still be possible to give the consumer an indication of their usage which would be beneficial to them and assist them in reducing their usage, without necessitating the exact correlation with the bill.*

*There is also the issue of Calorific Value and Volume Conversion Factor which would affect the pricing of gas. It is not clear how the process of updating these values would work currently unless retrospective values were applied to consumption data over a period, which could potentially prove confusing to customers with near real time data. This is also difficult to reconcile with certain consumption based tariffs currently in existence.*

*We would suggest that IHD's did not show information that was directly correlated with an actual bill due to the potential confusion created by different values on the display and on the bill, plus the extra overhead in attempting to keep the 2 correlated. An IHD should be designed to give enough information about cost and consumption in order to change behaviour.*

**Question 2:** We welcome evidence on whether information on carbon dioxide emissions is a useful indicator in encouraging behaviour change, and if so, how it might be best represented to consumers.

*We have no specific comments to make on this question.*

**Question 3:** We welcome views on the issues with establishing the settings for ambient feedback.

*We have no specific comments to make on this question.*

**Question 4:** Do you think that there is a case for a supply licence obligation around the need for appropriately designed IHDs to be provided to customers with special requirements, and/or for best practice to be identified and shared once suppliers start to

roll out IHDs?

*We have no specific comments to make on this question.*

**Question 5:** We welcome evidence on whether portability of IHDs has a significant impact on consumer behavioural change.

*We have no specific comments to make on this question.*

**Question 6:** Do you agree with the proposed minimum functional requirements for the IHD?

*We consider that the proposed minimum functional requirements and arrangements are adequate at this stage of the programme, however we believe that this area will be the subject of ongoing development.*

### **CHAPTER 3**

**Question 7:** Do you have any views or evidence relating to whether innovation could be hampered by requiring all displays to be capable of displaying the minimum information set for both fuels?

*We have no specific comments to make on this question.*

**Question 8:** Do you agree with the proposals covering the roles of and obligations on suppliers in relation to the IHD?

*We have no specific comments to make on this question.*

**Reference Document: Communications Business Model (94d/10)**

**CHAPTER 2**

**Question 1:** Do you agree that access control to secure centrally-coordinated communications, translation services and scheduled data retrieval are essential as part of the initial scope of DCC?

*We support this view.*

**Question 2:** Do you agree that meter registration should be included within DCC's scope and, if so, when?

*We support the view that meter registration should be included within the scope of the DCC, however further cost/benefit analysis is required to establish the optimum timing of its inclusion.*

**Question 3:** Should data processing, aggregation and storage be included in DCC's scope and, if so, when?

*We believe that data processing, aggregation and storage should not be included within the scope of the DCC, but provided through contracted service provision.*

**Question 4:** Do any measures need to be put in place to facilitate rollout in the period before DCC service availability and the transition to provision of services by DCC, for example requiring DCC to take on communications contracts meeting certain pre-defined criteria?

*We believe that it is unavoidable that interim industry measures will be required to facilitate rollout pre-DCC. This will result in additional cost, risk and support overhead during the transition to full DCC service-availability.*

**CHAPTER 3**

**Question 5:** Do you agree that the licensable activity for DCC should cover procurement and management of contracts for the provision of central services for the communication and management of smart metering data?

*We support this view.*

**Question 6:** Do you consider that DCC should be an independent company from energy suppliers and/or other users of its services and, if so, how should this be defined?

*We support this view and the proposals made within the Prospectus.*

**Question 7:** Do you have any comments on the steps DCC would need to take to be in a position to provide its services and the likely timescales involved?

*This area is covered by the ongoing work of the SMDG, DCG and the COTEs, in which Itron is actively participating.*

**Question 8:** Do you have any comments on the proposed approach to cost recovery and incentivisation for DCC?

*We have no specific comments to make on this question.*

**Reference Document: Data Privacy and Security (94e/10)**

**Question 1:** Do you have any comments on our overall approach to data privacy?

*Please refer to our comments on page 3 (Prospectus Chapter 2, Question 2).*

**Question 2:** We seek views from stakeholders on what level of data aggregation and frequency of access to smart metering data is necessary in order for industry to fulfil regulated duties.

*We have no specific comments to make on this question.*

**Question 3:** Do you support the proposal to develop a privacy charter?

*We support the proposal.*

**Question 4:** What issues should be covered in a privacy charter?

*We consider that given its high level of importance, a specific sub-group should be tasked with addressing issues in this area.*

**CHAPTER 4**

**Question 5:** Do you agree with our approach for ensuring the end-to-end smart metering system is appropriately secure?

*We generally agree with the approach to assessing security risks as outlined in the prospectus documentation, and are pleased to see that reference has been made to privacy requirements as well as security.*

*The mechanism proposed for assessing risks is well recognised. However it is important to take a pragmatic view on security based on the capacity of the devices/software/service in question, to cause widespread harm. For example if a head end system with unlimited control for a large population of meters were compromised the impact would be huge and should be protected with a commensurate level of security. On the other hand if a single meter/node were compromised the consequence would not be as great and less critical, so long as the mechanism to compromise the meter/node was not sufficiently easy to repeat by the man in the street. It would indeed be a disaster if the meters were so secure that they became unreachable by the DCC/Supplier after a change of supplier process or other standard industry operation, as this would potentially cost the industry greatly.*

*There is a need to create or identify a number of security levels appropriate at each interface/tier of a smart metering system, and also a process/standard to audit against these security levels as is the case in the banking world. Currently there is work going on in Europe in order to address some of these issues through standardisation, and the UK should be aware of this work so as to avoid repetition, or develop a mechanism that is not aligned.*

**Reference Document: Regulatory and Commercial framework (94h/10)**

**CHAPTER 2**

**Question 1:** Have we identified all of the key elements that you would expect to see as part of the Smart Metering Regulatory Regime?

*We believe that all the immediately foreseeable elements are in place, however a flexible regulatory regime is needed such that the transitions from the non-smart, early rollout and full-DCC can be actively managed in real time.*

**CHAPTER 3**

**Question 2:** Do you agree with the proposal to establish a Smart Energy Code?

*We support this approach.*

**Question 3:** Do you have any comments on the indicative table of contents for the Smart Energy Code as set out in Appendix 3?

*We have no specific comments to make on this question.*

**Question 4:** Do you have any comments on the most appropriate governance arrangements for the Smart Energy Code?

*We believe that the Code should be governed by industry consensus and have a clear, managed appeals procedure.*

**CHAPTER 4**

**Question 5:** Do you agree with the proposals concerning the roles and obligations of suppliers in relation to the WAN communications module?

*We support the proposals in this area.*

**Question 6:** We welcome views as to which other additional data items should be included in the mandated HAN data set beyond the list for the IHD.

*We have no specific comments to make on this question.*

**Question 7:** Do you agree with the proposal that the WAN and the HAN in customer premises should be shared infrastructure, with the installing supplier retaining responsibility for ongoing maintenance? If not, would you prefer to have an arrangement by which if the gas supplier is the first to install, responsibilities for the common equipment is transferred to the electricity supplier when the electricity smart meter is installed?

*We have no specific comments to make on this question.*

## CHAPTER 5

**Question 8:** Are there additional measures that should be put in place to reduce the risks to the programme generated by early movers?

*We believe that a risk assessment should be carried out to identify and quantify the risks to the overall programme.*

**Question 9:** What is needed to help ensure commercial interoperability?

*We believe that commercial interoperability can be delivered if an appropriate commercial framework is put in place, which is supported by the necessary technical and regulatory certainties.*

**Question 10:** Can current arrangements for delivering technical assurance be developed to gain cost effective technical assurance for the smart metering system? If so, how would these procedures be developed and governed?

*Itron, through its trade association membership of BEAMA SMA and SBGI is participating in the work of the Governance group of SMDG and is examining how technical interoperability can be assured over the life-cycle of the in-home components of the metering system.*

**Question 11:** Are there any other regulatory and commercial issues that the programme should be addressing?

*We believe that whilst none are currently apparent, it is to be expected that a flexible regulatory approach is essential to those issues that arise during the programme.*

## CHAPTER 6

**Question 12:** What evolution do you expect in the development of innovative time-of-use tariffs? Are there any barriers to their introduction that need to be addressed?

*We believe that there will be considerable scope for the development of innovative TOU tariffs within the smart metering programme, driven by the competitive energy supply market and the need for greater demand-side participation. It is important at the outset to establish the overall system requirements in order to support this evolution.*

**Question 13:** Are there changes to settlement arrangements in the electricity or gas sectors that are needed to realise the benefits of smart metering?

*We believe that there may be overall benefits if NHH settlement was based on accurate and timely consumption data, rather than profiled data. The opportunity and extent to which settling on 'real' data could lead to reduced settlement risk, cost and shorter settlement time window, should be further investigated.*

**Question 14:** What arrangements would need to be put in place to ensure that customers located on independent networks have access to the same benefits of smart metering as all other customers?

*Where the customer has natural gas via a mainstream Supplier there should be no additional requirement. However, customers on LPG or other private networks with some monopoly supply arrangements – for example, static caravan parks – may need additional arrangements.*

**Question 15:** Are there any other industry processes that will be affected by smart metering and which the programme needs to take into account?

*Please refer to our comments on Question 10, page 6 (re. PPMIP role);*



**Reference Document: Non-Domestic Sector (94i/10)**

**CHAPTER 3**

**Question 1:** Are there any technical circumstances where only advanced rather than smart metering would be technically feasible? How many smaller non-domestic customers have U16 or CT meters and what scope is there for full smart meter functionality to be added in these cases?

*We have no specific comments to make on this question.*

**Question 2:** Do you agree with our proposed approach to exceptions in the smaller non-domestic sector?

*We have no specific comments to make on this question.*

**Question 3:** Are there technical circumstances that we have not considered that would justify further flexibility around installation of either smart or advanced meters?

*The SMDG technical issues group is examining circumstances in this area. However, the risks around opening the gas valve at any location other than at the front of the meter need very careful scrutiny.*

**CHAPTER 4**

**Question 4:** Do you agree with the proposed approach that use of DCC should be optional for non-domestic participants in the sector?

*We support this view.*

**Question 5:** If use of DCC is not mandated for non-domestic customers, do you agree with the proposed approach as to how it offers its services and the controls around such offers?

*We support the proposed approach.*

**Question 6:** To what extent does our proposed approach to the use of DCC for non-domestic customers present any significant potential limitations for smart grids?

*We believe that this area requires further consideration and should fall within the smart grid scope of work of the ENSG.*

**Question 7:** Is a specific licence condition required to ensure that metering data for non-domestic customers can be provided to network operators or DCC, and should any provision be made for charging network operators for the costs of delivering such data?

*We have no specific comments to make on this question.*

**Question 8:** How can interoperability best be secured in the smaller non-domestic sector?

*We believe that interoperability can be achieved at different levels within the smart metering system and can be secured through compliance testing, certification and testing between manufacturers. In the case of the smaller non-domestic sector, this process could be simplified if this group of consumers was included within the same framework as domestic consumers, subject to any necessary exemptions.*

## **CHAPTER 5**

**Question 9:** What steps are needed to ensure that customers can access their data, and should the level of data provision and the means through which it is provided to individual customers or premises be a matter for contract between the customer and the supplier or should minimum requirements be put in place?

*We believe that minimum requirements should be put in place between the customer and the Energy Supplier.*

**Question 10:** Do you agree with our approach to data privacy and security for non-domestic customers?

*Please refer to our comments on page 3 (Prospectus Chapter 2, Question 2).*

**Question 11:** Is the proposed approach to rollout (for example in terms of targets and a requirement for an installation code of practice) appropriate for the non-domestic sector?

*We believe that there should be a requirement for an Installation Code of Practice which includes the non-domestic sector.*