



Consultation on Proposed National Rollout of Electricity and Gas Smart Metering

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Abstract:

This consultation outlines the proposed decision by the CER to proceed with the national rollout of electricity and gas smart metering to all residential consumers and a significant proportion of small-to-medium enterprise (SME) consumers. This proposed decision is based on the positive results of the recently completed electricity and gas smart metering trials and associated cost-benefit analyses.

The consultation outlines the proposed high level design, functionality and implementation approach of the national smart metering rollout and invites feedback on these proposals.

Target Audience:

This paper is for the attention of members of the public, the energy industry, energy consumers and all interested parties.

Responses to this consultation should be returned by **Tuesday 13th December 2011** via email, post or fax and marked for the attention of Gary Martin (gmartin@cer.ie) at the CER.

The CER intends to publish all submissions received. Respondents who do not wish part of their submission to be published should mark this area clearly and separately or enclose it in an Appendix, stating the rationale for not publishing this part of their comments.

Appendix A – List of Substantive Questions

Appendix A provides a list of questions asked throughout this consultation paper - these questions are presented in the table below.

The aim of this section is to allow for a “short-cut” option for respondents to submit their comments to the CER.

Respondents are invited to complete the table to indicate their position on the questions being asked. Respondents should outline YES or NO answers to each of the questions listed. If they have a further comment which will clarify their answer, this should be included in the Comments box. Appendix A will be published alongside the consultation paper in Word format.

Please note: Respondents are in no way obliged to respond to the questionnaire provided and are welcome to submit comments in their preferred format. When preparing responses respondents should indicate which question or proposal their text refers to.

Please note also that, as the majority of questions posed in this consultation address both electricity and gas smart metering issues, respondents should make it explicit in their responses if their comments are applicable to electricity, gas or both.

Question	Yes	No	Comments
<p>Q1. Respondents are invited to comment on the proposed decision by the CER to proceed with the national rollout of electricity and gas smart metering as outlined in Section 2. Are you in favour of this proposal? Outline reasons for agreement or disagreement.</p>	<p>YES</p>		<p>Gemserv agrees with the general position of CER in their assessment of the gas and electricity Cost Benefits Analysis (CBA), Customer Behavioural Trials (CBT) and Technology Trials. The robustness of the trials carried out by the CER can only strengthen the business case being put forward for the assessment of the smart meter rollout.</p> <p>Gemserv advises that the CER should consider developing the initial technical specification for smart meters in line with the informational stimuli which yielded the most positive results during the Customer Behaviour Trials. The programme must also take account of the fast moving and innovative nature of metering and communications</p>

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		<p>technology in developing a technical specification. Such an approach will ensure the extraction of as many benefits as possible.</p>
<p>Q2. Respondents are invited to comment on the proposed objectives of the National Smart Meter Programme outlined in Section 3. Are you in favour of the proposals? Outline reasons for agreement or disagreement.</p>	<p>YES</p>	<p>Gemserv supports the objectives outlined in the consultation response and notes that a number of them are in keeping with the EU's directives, with specific regard to energy efficiency, security of supply, and consumer information provision. We note CER's desire to improve network services and would advise that the objective to improve services to customers should not be limited to fault monitoring, but should also extend to the rectification of faults.</p> <p>We would also consider that there should be a specific objective for the programme to support improvements in theft detection, notification and rectification – in line with the current objective to significantly improve theft prevention.</p> <p>We would also advise that it would be prudent to incorporate an additional objective with regards to the way that costs in relation to the programme are managed. It is important that programme costs are managed in a way that mitigates the risk of increased costs undermining the business case put forward by CER.</p>

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<p>Q3. Respondents are invited to comment on the proposed working assumptions outlined in Section 4 relating to data ownership, display and provision. Are you in favour of the proposals? Outline reasons for agreement or disagreement.</p>	<p>YES</p>	<p>Gemserv supports the working assumptions and agrees that the consumer should be the ultimate data owner. Gemserv considers Information Security of paramount importance in the smart metering program and agrees that robust end-to-end security is essential to ensure the safety and security of consumer data.</p> <p>We would advise that a holistic approach is implemented for Information Security to ensure that not only technical controls are implemented but also governance across the smart metering program, for example in the UK, this also encompasses the central Data Communications Component (DCC) and the users of the DCC, as outlined in the current draft Smart Metering Security Requirements.</p> <p>Consideration should also be given to ongoing management of overall Information Security management across the programme, and not just for rollout.</p> <p>We would advise that the additional risks are considered in prepayment schemes, as this will add an additional threat vector for fraud and data theft.</p>
<p>Q4. Respondents are invited to comment on the proposals outlined in Section 5.2.1 in relation to the electricity smart meter functionality requirements. Are you in favour of the proposals? Outline reasons for agreement or disagreement.</p>	<p>YES</p>	<p>We agree with the functionality set out in the consultation; however we would advise that the proposals explicitly include a requirement for the meter to be operable for a defined period of time in the event of a loss of power, if not at least to enable the meter to send out a 'last gasp' notification to the network/ supplier.</p> <p>If there is a defined period for which the electricity meter will be expected to be able to operate without electricity supply (i.e. on a backup battery) it would be expected that the meter should have some functionality to send out a battery warning flag/ code.</p>

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		<p>This may especially be relevant in relation to the CER’s objectives regarding theft prevention and fault identification – it is unclear whether this is what is being referred to where the consultation mentions a ‘tamper alert function’.</p> <p>Gemserv has been heavily involved in the GB smart metering implementation programme and would be pleased to provide you with further details on this specific point.</p>
<p>Q5. Respondents are invited to comment on the proposals outlined in Section 5.2.2 in relation to the gas smart meter functionality requirements. Are you in favour of the proposals? Outline reasons for agreement or disagreement.</p>	<p>YES</p>	<p>Gemserv is generally in agreement with the gas meter functionality set out in the consultation document. Where the alarm/ event codes have been set as an output of the gas smart meter, we would also advise that these attributes be configurable and updateable to take account of future developments.</p> <p>We also note the CER’s intention to only transmit interval data from the gas meter to the MDMS once a day – would this mean that any read requests from a supplier will only return values from the previous 24 hour period, where the cache on the electricity meter has not been updated? We would also be interested to see how this would work should the supplier (or any other authorised party) wish to obtain an on-demand meter reading.</p> <p>It is clear that the CER has provided for this data to be made available at the IHD level, but it is not clear why the wider communication of this data would be limited to once a day.</p>

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<p>Q6. Respondents are invited to comment on the proposals outlined in Section 5.2.3 in relation to the Wide Area Network (WAN) functionality and technology. Are you in favour of the proposals? Outline reasons for agreement or disagreement.</p>	<p>YES</p>	<p>Gemserv support the proposed functionality requirements for the WAN technology appear to cover all operational requirements with the exception of supporting prepayment activities. The WAN technology must be able to support the latency requirements for sending prepayment commands from the supplier backend systems if “thin prepayment” is agreed.</p> <p>In addition to these requirements, Gemserv believes that there should be specific requirements relating to security and privacy. The inclusion of these requirements may alleviate consumer concerns which have impacted a number of smart meter programmes worldwide and are still subject to discussions within the GB Smart Metering Implementation Programme. The inclusion of “secure” in the first requirement would add an element of security – “facilitate secure two-way communication with the backend smart metering infrastructure”.</p> <p>The Technology Trials indicate that a number of technologies may need to be deployed to ensure coverage across both urban and rural premises and may also be dependent on meter location. The choice of WAN technology should:</p> <ul style="list-style-type: none"> - Include a review of technology developments which may benefit the long-term outcome of the programme; - Review the cost effectiveness in both the short and long-term, including the cost and impact of subsequent consumer site visits; and - Review the developments in worldwide smart rollout programmes.
<p>Q7. Respondents are invited to comment on the proposals outlined in Section 5.2.5 in relation to the Home Area Network (HAN) functionality and technology. Are you in favour of the proposals?</p>	<p>YES</p>	<p>Gemserv supports the proposals related to the HAN especially with regards to open standards and protocols to allow innovation within the market for in-home devices.</p>

<p>Outline reasons for agreement or disagreement.</p>		<p>From our involvement within the GB Smart Metering Implementation Programme, we believe that a number of HAN solutions, potentially both wireless and wired, will be required to ensure coverage in all residential premises and the proportion of SME consumers covered within the scope. There are discrete differences between the requirements for a residential and a SME premise, such as the potential distance between meters.</p> <p>Other factors that will require additional analysis include:</p> <ul style="list-style-type: none"> • The location of the meter points within the portfolio of properties. The Technology Trials have already indicated a difference in performance levels between meters installed indoors and outdoors depending on the technology used. • The technology solution for premises located within a block of flats, for example, may be different from that deployed within a “standard” two storey house. • The building materials used within the construction of the premises may also impact on the choice of HAN technology to be installed. Certain technologies may have difficulty transmitting through certain materials. • The installing party will only be in a position to choose the most suitable technology once a pre-installation survey has taken place during the installation visit. Without a choice of HAN technology, the scope of the project will not be met and there may be an impact to the consumer experience with aborted site visits. <p>The option of allowing the consumer to use an external port on a meter would require careful consideration and analysis for inclusion. Gemserv does not support this option due to the security implications which could arise. We believe that providing a pluggable port on the meter would give an opportunity for potential misuse of this port in some cases. In addition to the security concerns, there is reliance on the consumer to initially plug</p>
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		<p>in the device and leave it connected long term. Without this device installed, the benefits of smart metering will be lost as data will not be capable of being transmitted back to the IT systems and manual collection of data will need to be reinstated.</p> <p>The GB implementation programme has initiated analysis relating to building types requiring installation of meters and the impacts of various HAN technologies. The GB trial programmes undertaken by the suppliers will also provide additional insight into the trialed HAN solutions.</p>
<p>Q8. Respondents are invited to comment on the proposals outlined in Section 5.3.1 in relation to the procurement model. Are you in favour of the proposals? In particular, which of the two IHD provision responsibility options outlined do you prefer? Outline reasons for agreement or disagreement.</p>	<p>YES</p>	<p>Gemserv supports the proposals relating to responsibility for procurement and management of the gas and electricity smart meters, WAN contracts and backend IT systems appear sensible with clear responsibilities and ownership.</p> <p>Interoperability is a key requirement on all procurement options to allow the end-to-end solution to function effectively and to also allow innovation within the market.</p> <p>With regards to the IHD, the option for the network operator to be mandated to provide, install and maintain would appear to be the most cost effective due to economies of scale and cost of installation for consumers. The option for the supplier to procure, install and maintain the IHD, as detailed within the consultation, would present several concerns.</p> <p>The consultation states that the IHD would be installed at the same time as the electricity smart meter or shortly afterwards. This would require either ESB Networks, installing on behalf of the supplier, or the suppliers being informed of the rollout schedules by ESB Networks and arranging individual installations shortly after. If ESB Networks were to install on</p>

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		<p>behalf of the suppliers, it would require the installation agent to carry stock of all supplier IHDs and to know which supplier was registered on the installation date. If the supplier were to follow the ESB Network installation, the consumer may require two separate installation visits, which may be costly and disruptive.</p> <p>The only negative aspect of a network operator led rollout is the two year maintenance requirement. This would restrict supplier competition for two years post installation and this maintenance period requires review. The GB Smart Metering Implementation Programme mandates a 12 month maintenance period, which we believe will allow market innovation to develop without delay. In either case, the date of installation will need to be recorded on a premises basis in order for the maintenance period requirement to be monitored.</p>
<p>Q9. Respondents are invited to comment on the proposals outlined in Section 6 relating to the implementation approach and timelines. Are you in favour of the proposals? Outline reasons for agreement or disagreement.</p>	<p>YES</p>	<p>Gemserv supports the phased implementation approach defined within the consultation. Other smart implementation programmers have adopted similar phased approaches and Gemserv has been involved with the GB Smart Metering Implementation Programme since Phase 1 in 2010.</p> <p>Our experience of the GB Smart Metering Implementation Programme has highlighted that transparency is key when communicating with multiple stakeholders across a wide range of workstreams involving manufacturers, suppliers, network operators and the industry as a whole. Information and outputs of workstreams will need to be provided in a timely manner in order to achieve maximum effect within the timescales.</p> <p>The indicative timescales for each of the four phases appear to be achievable and note the aspiration of CER to accelerate timescales where feasible. Strong programme management will also be required to ensure that timescales do not slip and that stakeholder and programme</p>

		<p>representatives have the appropriate skills and knowledge for the specific tasks/ discussions.</p> <p>In order to achieve the planned completion date of 2018, Gemserv suggests that Phase 3 include an obligation on ESB/ BG Networks to submit rollout schedules which are monitored by CER. This activity will provide early indications of any deviation from the rollout schedules which may result in a delay to programme completion.</p> <p>As previously stated, Gemserv has been involved in the phased GB Smart Metering Implementation Programme, particularly the areas of the technical requirements and drafting of the Smart Energy Code. We would be happy to share our experience with CER to date.</p>
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