



Consultation on Proposed National Rollout of Electricity and Gas Smart Metering

**RESPONSE FROM: Department of Communications Engineering, DIT Kevin Street.  
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RESPONSES TO:	Gary Martin <a href="mailto:gmartin@cer.ie">gmartin@cer.ie</a>

**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 13<sup>th</sup> December 2011** via email, post or fax and marked for the attention of Gary Martin ([gmartin@cer.ie](mailto: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
<b>Q1.</b> 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.	YES		NONE.

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<p><b>Q2.</b> 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>Qualified YES</p>	<p>Yes to objectives 1 to 5 inclusive.  <b>Objective 6, water metering:</b> Water conservation is becoming critically important. To facilitate conservation, a wide-area unidirectional (at least) communications capability is required. Not to avail of the obvious communications synergies between the 3 meter types would indeed be a lost opportunity, not least in <b>financial terms to the government</b>. New low-cost RF technologies have now removed any technical obstacles to this integration.  Therefore, we respectfully suggest that this objective be more strongly worded by use of terms such as “ CER will proactively endeavour to realise these synergies”</p>
<p><b>Q3.</b> 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>NONE</p>
<p><b>Q4.</b> 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>Qualified YES</p>	<p><b>15. Incorporation of WAN and HAN capability in the electricity meter:</b>  It is perhaps premature at this stage to have decided that WAN and HAN capability will be incorporated in the electricity meter. Three major considerations need to be taken into account:</p> <ul style="list-style-type: none"> <li>- Lack of HAN standardisation</li> <li>- WAN rapid evolution</li> <li>- Security.</li> </ul> <p>The HAN situation today is analogous to the LAN situation prior to the arrival of Ethernet – many incompatible protocols and “standards”. Some dozen prominent proprietary HAN systems are available in the market place today, all incompatible. Some</p>

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		<p>attempts are being made to get these to interoperate, e.g. USNAP. It will probably be many years before a definitive standard emerges.</p> <p>WAN technologies are rapidly evolving. Obsolescence and hence high cost is a real threat here. If the decision to “freeze” the meter design were taken in 2013 and given an operational life of up to 20 years, then no changes to the communications systems are anticipated for a period of some 25 years. Just think back to the communications systems of 1986!</p> <p>Obviously <b>Security</b> is of paramount importance. Many SDOs in several countries are grappling with this. One such body, the German Federal Office for Information Security (BSI) has recently issued a draft document (final version due April 2012) that mandates that there be complete separation between the “Critical Infrastructure Energy Domain” and the “Customer Domain”. The effect of this is that 2 physically separate networks will co-exist; the Local Metrology Network (LMN) and the HAN (customer domain). This requires the use of a Home Gateway to provide access to the WAN for these 2 local networks. It may be possible to incorporate this Gateway in the Electricity meter.</p> <p>If a communications-future-proofed and highly secure Electricity meter without external Gateway is to be proceeded with then it would require to be of a <b>highly modular design</b>.</p>
<p><b>Q5.</b> 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>NONE</p>

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<p><b>Q6.</b> 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>With deployment anticipated to occur between 2015 and 2018 and meter life of up to 20 years, the end of operational life for some meters is 2038 – some 26 years from now! This must be borne in mind when selecting the “<b>most cost effective solution</b>”. Communications technologies and systems are rapidly evolving and the system that is most cost effective over the next few years may very well <b>be obsolete or prohibitively expensive over a longer period.</b></p>
<p><b>Q7.</b> 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? Outline reasons for agreement or disagreement.</p>	<p>YES</p>		<p>See comments above under Question 4.</p>
<p><b>Q8.</b> 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>No view. No doubt stakeholders will debate and argue the structure, including ownership, independence etc., of the entities that will be “responsible for procuring” and will “own the contracts”.</p>
<p><b>Q9.</b> 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>NONE</p>

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**END**