

## Smart Metering implementation programme response to questions from;

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### Overview

It is important that the Smart Metering initiative delivers both a quality user experience and reliable fault reporting. Long term success will depend on winning the “Hearts and Minds” of users. Key to this is ease of use and “five 9s” reliability particularly in fault situations.

Having been involved with energy monitoring projects and seen what works successfully and what fails to provide a good user experience I would like to submit the responses as detailed below.

### Responses

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

The in-home display unit is the primary user interface and the “face of smart metering”. Having observed users interacting with existing energy monitoring interface units one key feature that has been overlooked is portability. Equipment that needs a wired connection will generally be placed where convenient to plug it in and then soon forgotten about. Also disabled users are likely to find using a portable device much easier than a wired device.

Suggest that the minimal functional requirements for the in-home display device should include the requirement that it be “wires free” and portable so that the user can easily use the display device anywhere around their home that is convenient for the user.

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?

The WAN communication network should not depend on the integrity of the power distribution network so that in the event of a power distribution failure the Smart Meter should still be able to communicate to the DCC and report the failure.

The DCC should also be able to send commands to the smart meter during a power outage. Being able to send commands to the meter during an outage will enable load shedding so that when power is restored the initial load is lower and power surges are less likely. Reducing power surges can help prevent equipment damage.

Suggest that the WAN radio system chosen should be able to operate independently of the power distribution network.

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

One attack vector is “Denial of Service”. This is when a communications channel experiences interference which prevents (denies) communication (service). Detecting and eliminating interference is easiest when licensed radio frequencies are used and sources of interference can be rapidly tracked and a legal framework exists for the rapid resolution of any issues. The most difficult communications channel to resolve problems with is PLT (data over powerline). Tracking the source of powerline interference is difficult and it is possible the cause is unintentional e.g. a faulty power supply. In addition the legal remedies are very limited as PLT uses unlicensed frequencies.

Suggest that the DCC be required to use licensed radio frequencies for the WAN.