Electricity Industry Metering Code 2005

Mandatory Link Criteria

Produced by:
Horizon Power
ABN: 579 550 11697

23 June 2006

Date Printed: 28 June 2006

About this document

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Document version history

Version	Date	Change request no.	Amendment
V1	23 June 06		Release to ERA

Review and approval

Name	Role	Signature	Date
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1. Preliminary

1.1. Commencement

1.1.1. This document is provided in accordance with part 6 of the Electricity Industry Metering Code 2005 (**"Metering Code"**).

1.1.2. These criteria come into operation at the same time as the WA Metrology Procedure.

1.2. Application

1.2.1. These criteria apply to *Code participants*.

1.3. Definitions

Unless defined otherwise below, terms in italics have the same meaning as in the *Metering Code*.

Definitions to be applied to these criteria are:

"**CDMA**" means the acronym for **C**ode **D**ivision **M**ultiple **A**ccess, and is a mobile phone system that may give reception in more remote or rural areas where a GSM phone would not pick up a signal.

"**communication link**" means all communications equipment, processes and arrangements that facilitate the collection of energy data from a data logger or a measurement element so as to enable a remote interface to be established that lie:

a) if the data logger is internal to the device containing the measurement elements — between the data logger and the telecommunications network; and

b) if the data logger is external to the device containing the measurement elements but is located at the same site — between the meter and the data logger and between data logger and the telecommunications network; and

c) if the data logger is not located at the same site as the device containing the measurement elements — between the meter and the telecommunications network.

"**GPRS**" means the acronym for **G**eneral **P**acket **R**adio **S**ervice, and provides high speed data services across a GSM network.

"**GSM**" means the acronym for **G**lobal **S**ystem for **M**obile Communications, and is a standard for digital mobile phone networks using radio frequency.

"**Interval meter**" means a meter that measures interval *energy data* and records it in a data logger.

"**Modem**" means a device that converts data into a signal that is compatible with a telephone or radio network and back again.

"**PSTN**" means the acronym for **P**ublic **S**witched **T**elephone **N**etwork, and is a means of telephone communication using fixed landline.

"**WAER**" means the acronym for WA Electrical Requirements. This document is issued by the Office of Energy Safety and provides reference to technical requirements for the safe and efficient connection of consumers' installations to electricity networks, in Western Australia.

2. Objective

2.1.1. The objective of this document is to establish, under clause 3.6 of the *Metering Code*, the mandatory requirements by which the *Network Operator* may require the installation of a *communication link* as part of the *metering installation*. These requirements are in addition to those required under clause 3.16(2).

3. Communication link criteria

3.1.1. Notwithstanding clause 3.16(2) of the *Metering Code* which, mandates that *Network Operator* must ensure a *type 1* to *type 4 metering installation* includes a *communication link* so at to enable a meter of a metering point to be read from a remote location, the *Network Operator* may also require the installation of a *communication link* for *types* other than *types 1 to 4*.

3.1.2. Situations that may require the installation of a *communication link* are:

a) the geographical remoteness of a *metering installation*, whereby, the manual collection of *interval energy data* (*type 5*) or *accumulated energy data* is not economically feasible.

b) the *metering installation* meets the criteria for the installation of an Automatic Meter Reading (AMR) system given in sections 13.8.6.7 and 13.8.6.9 of the *WAER*.

4. Communication link provisions

4.1. Link Requirements

4.1.1. If a *metering installation* is required to include a *communications link*, then the *communications link* must, where necessary, include a modem and isolation device approved under the relevant telecommunications regulations, to allow accumulation and *interval energy data* to be downloaded to the *metering database* via a telecommunications network.

4.1.2. Where a *communication link* has been installed, the *metering installation* must include facilities for the on-site storage of *energy data* for a period of at least 35 calendar days from the time of the last successful read of the meter, or the maximum period between scheduled meter readings, whichever is greater.

4.2. Ownership of communication links

4.2.1. The *Network Operator* owns the *communications link* in accordance with Clause 3.4 of the *Metering Code*.

{ clause 3.4 states:

"A network operator owns each meter on its network and all communications links associated with the meter despite any purported agreement to the contrary." }

4.3. Access to data

4.3.1. Access to data associated with or originating through the link is in accordance with the provisions laid out in Clause 4.8 of the *Metering Code*.

{Clause 4.8 of the code details ownership, security and rights of access to data. At the time of writing clause 4.8(3) states, in relation to a metering installation with a communication link:

"Network operator must allow a user who supplies, purchases or generates electricity to have local and (where a suitable communications link is installed) remote access to the energy data for metering points at its associated connection points, using a 'read only' password provided by the network operator."

Furthermore, clause 4.8(4) states

"A network operator must have devices and methods in place that ensure that energy data held in its metering installation is secured from unauthorised local access or remote access, by electronic password and electronic security controls which are sufficient to the standard of good electricity industry practice" }

Table 1. Identification of Compliance to Metering Code Requirements

Metering equipment component	Equipment characteristics	Requirement	Metering Code Clause or Table
Communication link	Location	The electronic connection between the data logger and the telecommunications network boundary is classified as a *communications link*.	1.3
	Equipment	A *communications link* may consist of a metallic cable (PSTN) connecting to the telecommunications network and require isolation equipment, modem and associated connections	3.3(3)
	Equipment	A *communications link* may include a radio communications system, a microwave communications system, a GSM or CDMA communication system or a satellite communications system or a combination of systems	3.3(3)
	Equipment	A *communications link* may include a metering database.	3.3(3)
	Modem	Used to connect the *metering installation* to the telecommunications network at a data logger or metering database.	
	Security	The communication link is to be secure and associated links, circuits and information storage and processing systems are to be secured by means of seals or other devices.	3.8
	Access to data	To be provided on a device and to display as a minimum the accumulated total Active energy measured by that *metering installation*.	4.5
	Access to data	The data held in the *metering installation* is to be protected from direct or remote electronic access by suitable password and security controls.	4.8(3), 4.8(4)(a)
	Performance	Metering data is required for all trading intervals at a level of availability of at least 95% per annum from the *communications link*.	3.11(1)(b)
	Outages	If an outage or malfunction occurs to a *communications link*, repairs must be made as soon as practicable in accordance the applicable service level agreement.	3.11(2)