



# Electricity Industry Metering Code Mandatory Link Criteria Technical Assessment



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# Electricity Industry Metering Code – Mandatory Link Criteria Technical assessment

## ***Executive Summary***

The proposed mandatory link criteria meets the requirements of the *Electricity Industry Metering Code (2004)* and is recommended for approval by the *Authority*.

## ***Introduction***

The requirement is to assess the proposed mandatory link criteria submitted by Western Power and Horizon Power for compliance with statutory and other requirements. The relevant Codes and related documents have been examined and the proposed mandatory link criteria assessed against the applicable requirements.

## ***Background***

The *Electricity Industry Metering Code 2005* (Code) sets out the need for the mandatory link criteria. The requirement in the Code is:

### **3.6 When network operator may require facilities for remote meter reading**

*A network operator may in accordance with its mandatory link criteria require the installation of a communications link (in circumstances in addition to those required under clause 3.16(2)).*

And clause 3.16(2) says:

- (2) The network operator must ensure that a Type 1 *metering installation* to Type 4 *metering installation* on the network includes a communications link.

And clause 6.2 says:

### **6.2 Network operator must establish documents**

Subject to clause 6.3, a *network operator* must as soon as practicable and in any event within 6 months after the date this *Code* applies to the *network operator* submit to the *Authority* for its approval under Division 6.2:

- (a) a proposed *model service level agreement*;
  - (b) proposed *communication rules*;
  - (c) a proposed *metrology procedure*; and
  - (d) proposed *mandatory link criteria* under clause 3.6,
- each of which is a proposed “**document**”.

## ***Recommendation***

Clause 6.5 of the Code requires all documents to meet the following requirements:

- (a) The mandatory link criteria must comply with the Code. Western Power has made adjustments to the proposed mandatory link criteria to meet the requirements of the Code.

- (b) Does not impose unreasonable barriers to entry. The mandatory link criteria requirements apply where it is reasonable due to access to the meter or remoteness to provide ready metering readings;
- (c) Is consistent with *good electricity industry practice*.
- (d) Is reasonable. The proposed mandatory link criteria is reasonable;
- (e) Is consistent with Code objectives.

2.1 Code Objectives

(1) The *Code objectives* are to:

- (a) promote the provision of accurate metering of *electricity* production and consumption;
- (b) promote access to and confidence in *data* of parties to commercial *electricity* transactions;
- (c) facilitate the operation of Part 8 and Part 9 of the Act, the *Customer Transfer Code* and the *Code of Conduct*.

(2) *Code participants* must have regard to the *Code objectives* when performing an obligation under this *Code*, whether or not the provision under which they are performing refers expressly to the *Code objectives*.

The mandatory link criteria meet these objectives;

- (f) is consistent with market rules;
- (g) is consistent with other enactments.

It is considered that the proposed mandatory link criteria meets the requirements of clause 6.5 of the Code and is therefore recommended for approval by the *Authority*.

### ***Mandatory link criteria***

The Code requires the network operator to set out in a document, to be approved by the *Authority*, where it requires facilities for remote meter reading in addition to where the Code requires such facilities (types 1 to 4 metering installations).

Western Power proposes the appropriate criteria to be:

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*.

And the relevant sections of the Western Australian Electrical Requirements (WAER) are:

#### **13.8.6.7 Automated Meter Reading Facility requirements for Multiple and Distributed Master Metering**

Meters suitable for automated meter reading (AMR) remote reading and the associated remote reading facilities shall be installed where Multiple Master and Distributed Master metering is installed and any of the following criteria apply:

- where access to the meters is restricted by a security system or process;

or

- where any of the multiple master or distributed master meters are located on more than 3 levels, including below, on or above ground level.

#### **13.8.6.9 Automated Meter Reading (AMR) System Installations**

Western Power will only permit approved AMR systems to be connected to its master meter network.

The approval process and technical requirements for AMR systems are detailed in the Western Power document “WPC Policy and Technical Requirements for Automated Meter Reading (AMR) Systems”.

The type of AMR system required will depend on the particular installation. The basic technologies are: telephone, power line carrier, pulse collecting, local area network and radio. Some technologies require data collection from the master meter on the site with a single communication link to a central reading location whilst others involve individual communications at each meter to the central reading location.

Telephone, pulse counting and local area network systems require the developer to provide and install appropriate cabling to each meter from the data-collecting device or site Telephone Building Distributor. Telephone systems will usually share the customer's telephone service.

Prior to the installation of any AMR system, Western Power requires an “Automated Meter Reading System (AMR) Application” form to be completed and submitted by the developer/installer. This form provides the installation details, the type of AMR system to be used, number of units and the meters required. The form is available from Western Power's Metering Services Group and a copy is included in the “WPC Policy and Technical Requirements for Automated Meter Reading (AMR) Systems” document.

Meters suitable for the particular AMR system must be ordered by Western Power, therefore it is essential that the AMR system application form is completed and forwarded to Metering Services well in advance of the estimated project completion date.

It may be possible to provide a facility, which would allow a customer to read the master meter at any time from a remote location. This will be dependant on the type of meter installed and the type of remote meter

reading technology being used. The customer will be charged for any expenditure incurred in providing this facility.

The WAER is a document issued by the Director of Energy Safety and sets out requirements for electrical installations in Western Australia. The document is mandated in general by being called up as a requirement for electrical installations in the *Electricity (Licensing) Regulations 1991*. However not everything in the document is mandated. The preface to the WAER states:

The requirements of Sections 1 to 12 are mandatory and apply in all electricity networks in Western Australia. The contents of Section 12 are additional to, or override, the requirements detailed in Australian Standards.

Section 13 is not mandatory, but specifies those requirements, which are necessary for an installation to be connected to a particular network. Although non-compliance does not constitute a breach of the *Electricity (Licensing) Regulations 1991*, it may result in connection to a network being refused by the Network Operator.

## **Communication link criteria**

### **Remoteness**

The criterion is that a communication link is required where it is not economical to manually read type 5 interval data or accumulation data. This is not an unreasonable criterion in principle with the issue being what the test is for economical?

Most of the customers in this category will be small use consumers under the Code of Conduct for the supply of electricity for small use consumers. The Code of Conduct requires the retailer to have the meter read at least every 3 months so for this group the issue is between the retailer and the network operator as to what is economical.

The Obligation to connect regulations sets limits for extensions of the distribution system so it could be hard to claim that the extension is remote unless all customers on that section are “geographically remote”.

The inclusion in this mandatory link criteria mandates the provision of links but the criteria could be improved by a visible indication of what distance constitutes “geographically remote”.

### **WAER**

The criteria in the WAER are reasonable in principle. Where entry for meter reading is disabled then the customer should make arrangements for the reading of the meter, either to place the meter where it can be read or to provide remote facilities.

There is limit to the climbing of stairs for meter readers and while the limit stated is arguable at least it is a clear limit.

The inclusion of the criteria from the WAER as an appendix in the mandatory link criteria document brings this information within the direct approval of the *Authority*.

## **Communication link provisions**

The Link Requirements as set out in section 4.1 of the proposed mandatory link criteria are considered reasonable.