



Government of **Western Australia**
Office of **Energy**

Amendments to the *Electricity Industry Metering Code 2005*

Issues Paper

June 2010

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1. INTRODUCTION

1.1 Background

In 2005 the Minister for Energy (**the Minister**) made the *Electricity Industry Metering Code 2005 (the Code)* under section 39(2a) of the *Electricity Industry Act 2004 (the EI Act)*. Section 39(2)(b) of the EI Act allows for a Code to be made in respect of the metering of the supply of electricity by licensees.

The Code sets out the rights, obligations and responsibilities of Code participants associated with the measurement of electricity and the provision of metering services; the rules for the provision of metering installations at connection points, and the rules for the provision of metering services, standing data and energy data.

Code participants include:

- Alinta
- Horizon Power
- Economic Regulation Authority
- Independent Market Operator
- Perth Energy
- Synergy
- Verve Energy
- Western Power

It is a condition of every electricity licence that is issued by the Economic Regulation Authority (**the Authority**) that licensees must comply with the Code.

The Code has not been amended since its inception in 2005. Since this time Code participants have raised concerns with the Office of Energy (**the OOE**) that there are potential regulatory gaps and inconsistencies between the Code and other instruments that require addressing. Participants have also identified potential amendments to the Code that they believe will allow them to operate more effectively.

Whilst Part 9 of the Code allows for the Authority to recommend amendment to the Code directly to the Minister for Energy, the OOE is the agency responsible for advising the Minister on and implementing any amendments to the Code. Given the broad range of issues that have been raised and the policy implications of some of these issues, it has been agreed with the Authority that the OOE will manage the consultation and amendment process. However, the OOE will liaise with the Authority's Secretariat to ensure the objectives of the process are achieved.

An electronic version of the EI Act and the Code are available on the [State Law Publisher](#) website.

1.2 Scope and Objectives

The purpose of this process is to assess the suitability of the provisions of the Code to meet its objectives.

The objectives are provided for under clause 2.1 of the Code:

“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 Act¹, 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.”*

To facilitate the objective of this process, the OOE will:

- consult with stakeholders;
- identify amendments to the Code that may be required;
- ensure amendments meet / facilitate the Codes objectives;
- identify consequential amendments to other instruments, such as the *Electricity Industry Customer Transfer Code 2004 (the Customer Transfer Code)*, that may be required;
- ensure the Code is consistent with other associated instruments; and
- ensure the Code facilitates regulatory efficiency.

¹ Part 8 of the Code deals with dispute resolution between Code participants and Part 9 of the Code deals with the amendment and review of the Code.

1.3 Timetable and Work Program

Table 1 – Timetable and Work Program

It is anticipated that the process and timetable for the Code amendment process will be as follows:

Activity	Timeframe
Distribute Issues Paper for public consultation	June 2010
The OOE to receive public submissions on Issues Paper	July 2010
<ul style="list-style-type: none"> The OOE to assess stakeholder feedback on Issues Paper The OOE to develop Amendment Recommendations Paper and release Paper for public consultation 	July / August 2010 September 2010
The OOE to receive public submissions on Amendment Recommendations Paper	October 2010
The OOE to assess stakeholder feedback on Amendment Recommendations Paper and finalise amendments to the Code	November / December 2010
The OOE to seek Ministerial approval to instruct Parliamentary Counsel to draft amendments to the Code	January 2011

1.4 Invitation for Submissions

The OOE invites submissions on this Issue Paper **by 5pm (WST) on 16 July 2010**. Electronic submissions are preferred and should be emailed to metering.code.amendments@energy.wa.gov.au

Submissions in printed form should be sent to:

Metering Code Issues Paper Submissions
 Regulatory Framework Branch
 Office of Energy
 Level 9, Governor Stirling Tower
 197 St Georges Terrace
 PERTH WA 6000

Comments are encouraged on the matters raised in this Issues Paper, as well as on any other issues considered to be of relevance.

Any queries on the Code amendment process should be made to:

- Mr Peter Hawken, Senior Manager - Regulatory Framework Branch, Office of Energy on 9420 5758; or
- Mr Alex Kroon, A/Senior Policy Officer – Regulatory Framework Branch, Office of Energy on 9420 5738.

1.5 Confidentiality

Stakeholders should clearly specify where information they provide is confidential or commercial in confidence (and, where possible, should separate confidential information from other, non-confidential information).

Where an interested party wishes to make a submission in confidence, it should clearly indicate the parts of the submission for which confidentiality is claimed and specify in reasonable detail the basis for the claim. Any claim of confidentiality will be considered on its merits by the OOE.

Confidential information will not be released to third parties without permission.

Submissions will be published on the OOE website (excluding any material identified by the submitting stakeholder as confidential).

Requests for access to information relating to the Code amendment process will be treated in accordance with the *Freedom of Information Act 1992 (WA)*.

2. KEY ISSUES

The Code is divided into the following parts:

- Part 1 – Preliminary
- Part 2 – Code Objectives and Arms-length Treatment
- Part 3 – Meters and Metering Installations
- Part 4 – The Metering Database
- Part 5 – Metering Services
- Part 6 – Documentation
- Part 7 – Notices and Confidential Information
- Part 8 – Dispute Resolution
- Part 9 – Code Amendment and Review
- Appendices

Each of the above parts is discussed below with key issues being identified relating to each part of the Code.

It should be noted that even if an issue has been raised in this paper, its inclusion does not necessarily guarantee that the issue will be able to be resolved as part of this process.

2.1 Part 1 – Preliminary

Code Provisions

Part 1 of the Code deals principally with who the Code applies to and the definitions and terms used in the Code.

Key Issues

The key issues of relevance to Part 1 of the Code appear to be as follows:

- Clause 1.2 prescribes who the Code applies to (a “Code participant”). Documents approved under the Code also apply to Code participants where relevant. There is the potential for non-Code participants (primarily participants in the Western Australian energy market) to participate in operations that are covered by the Code or an approved document. In order to do this they would have to become a Code participant. In order to facilitate requests from non-Code participants to become Code participants it is proposed that clause 1.2 is amended to allow the Minister to approve applications to become a Code participant (this is considered preferable to the Minister amending the Code itself in order to make someone a Code participant). The applicant would become a Code participant on publication of the Minister’s approval in the Government Gazette.
- Some Code participants have indicated that the definitions in clause 1.3 are either inadequate or incorrect. Furthermore, inconsistencies have been identified between the definitions in the Code and definitions in documents approved under the Code by

the Authority, such as the Metrology Procedure, Mandatory Link Criteria, Model Service Level Agreement (**MSLA**) and Communication Rules.

In some circumstances, it may be necessary and appropriate to have different definitions in the Code and approved documents as the Code is a generic document whereas a network operator's approved documents are network specific. However, there may also be circumstances where definitions contained in documents that share a relationship with each other should be the same. Some of these definitional issues are outlined below.

A list of the Code definitions that have been identified as being inconsistent with definitions in documents approved under the Code or containing typographical errors is contained in Appendix A of this Issues Paper. Submissions are invited on whether or not any Code definition should be amended.

- The definition of "day" in the Code is "unless otherwise specified, the 24 hour period beginning and ending at midnight Western Standard Time (WST)". However, the Customer Transfer Code refers to "day" as "trading day" and takes its definition from the Wholesale Electricity Market Rules (**the Market Rules**). "Trading day" in the Market Rules is defined as "a period of 24 hours commencing at 8 AM". This creates an issue for a network operator when a customer transfers from one retailer to another (commonly referred to as customer "churn") and the network operator is required to provide market data to the Independent Market Operator (**the IMO**). It is noted that the National Electricity Market defines the trading day as midnight to midnight.

Under clause 4.11(2) of the Customer Transfer Code if the contestable customer's meter is read on the nominated transfer date, the transfer occurs at the start of the trading day on the nominated transfer date. However, this causes problems for the network operator as they cannot send data for part of a day to a retailer. The NEM12 files (The National Electricity Market standard file format for interval meters, which has been adopted by Western Power) only allow a full day's data commencing and finishing at the metering day (midnight to midnight). This means that in the network operator's Metering Registry the National Metering Identifier (the unique identifier assigned to a connection point) is transferred at midnight prior to the "trading day" and the next day's data is sent to the incoming retailer. In effect, due to the Customer Transfer Code taking its definition of "trading day" from the Market Rules, which define the day as starting at 8 AM, the outgoing retailer will be short 8 hours worth of data. Furthermore, under the Code the outgoing retailer will no longer be the owning retailer so the network operator would be in breach of the Code if it sent them the missing 8 hours of data.

The issue is whether the Code and Customer Transfer Code require aligning on this matter to alleviate this problem of the provision of data to retailers.

- Clause 6.18 states that a network operator must, within 10 days after notification of the Authority's approval of a document, publish the approved document. Clause 1.6 describes the meaning of "publish" as placing the document on an "internet website under the person's control" and notifying various stakeholders of the publication. However, there is no express requirement to maintain the document on the website once it has been published. There is also no mention in the Code of a requirement to publish any amendments to an approved document (although the Authority must publish its final findings under clause 6.20(3)(c)(i) in relation to reviewing a document to determine if it requires an amendment). It may be possible to interpret clause 1.6 as there being an implied requirement to maintain the document on the website but it is not

clearly defined. This uncertainty may affect the validity of an approved document and an amendment to clause 1.6 should be considered to clarify that once a document has been published on a website to comply with clause 1.6, it must be maintained on that website. A further amendment could be considered that requires any revisions to a document to be published (and maintained) on the website under the person's control.

- The issue of publishing approved documents under the Code (and consequently the issue of whether the document is valid) is an issue shared by the Customer Transfer Code. Under the Customer Transfer Code this issue relates specifically to the Communication Rules (the Customer Transfer Code requires a network operator to submit Communication Rules to the Authority for approval). However, the Customer Transfer Code does not require a network operator to publish its approved Communication Rules or maintain the publication of the rules (or any revisions to the Communication Rules). In conjunction with any consideration of amendments to clause 1.6 of the Code, a consequential amendment to the Customer Transfer Code should also be considered to require a network operator to publish and maintain its Communication Rules (and revisions to the Communication Rules) on its website.

Submissions are invited on Part 1 of the Code in relation to:

1. Are there definitions under clause 1.3 of the Code that are inadequate or incorrect? What amendments are required to those definitions (see Appendix A for a detailed list of Code definitions that are potentially inaccurate or inconsistent with definitions in documents approved under the Code by the Authority)?
2. Whether the meaning of “publish” should be expanded to require a document approved under the Code to be maintained on the person's website once it has been published; i.e. to be updated to include any amendments?
3. Whether revised documents should be required to be published and maintained on the person's website?
4. Whether the Customer Transfer Code should require a network operator to publish and maintain its approved Communication Rules (and any revisions to those Rules) on its website?
5. Any other matters relating to Part 1 of the Code.

2.2 Part 2 – Code Objectives and Arms-Length Treatment

Code Provisions

Part 2 of the Code provides the Code's objectives and requires that a network operator treat all Code participants that are its associates (“associates” is defined by the *Electricity Networks Access Code (the Access Code)*) on an arms-length basis.

Key Issues

No issues with Part 2 of the Code are raised at the present time. However, submissions on any matters relating to Part 2, and its possible amendment, are invited.

Submissions are invited on Part 2 of the Code in relation to:

1. Any matters relating to this Part of the Code.

2.3 Part 3 – Meters and Metering Installations

Code Provisions

Part 3 of the Code defines the rules for the provision of meters and metering installations.

Key Issues

The key issues of relevance to Part 3 of the Code are as follows:

- Clause 3.2(1) states, “An accumulation meter must conform to the requirements specified in the Metrology Procedure and display, or permit access to a display of, the accumulated electricity production or consumption at the metering point using dials, a cyclometer, an illuminated display panel or some other visual means”. It is unclear in the Code whether a Type 6 accumulation meter on which the network operator is collecting interval data needs to display Time Of Use (**TOU**) registers (both import and export as applicable), or, as clause 3.2(1) states, accumulated electricity production or consumption; which could be interpreted as the total consumption or production using “all time registers”. If only “all time registers” are required and interval data is being collected it negates the need to develop meter programs for variations in TOU tariffs.

In relation to bi-directional metering, it needs to be considered whether “accumulated electricity production” needs clarification as the meter (in Synergy’s current Renewable Energy Buyback scheme configuration) can only display accumulated net production.

- Clause 3.4 states “a network operator owns each meter on its network”. In addition, a written service level agreement between the network operator and user will address the provision, installation, operation and maintenance of a metering installation. Sub-meters are not considered to be on the network and are therefore not owned by the network operator. However, the Code is not explicitly clear on whether sub-meters are classed as being on the network or whether they are the responsibility of the network operator, the user or the customer. Relevantly, clause 3.5(7) of the Code states that “a network operator is not required to maintain any metering equipment owned by user or user’s customer”.

In 2000 Western Power stopped issuing and installing sub-meters and advised customers that if they wanted a sub-meter they would need to purchase, arrange for installation and read it themselves. However, before this time, Western Power issued, installed and read sub-meters; and continues to read the sub-meters that it installed.

It is worth considering whether the Code should be amended to clarify who owns a sub-meter (and is therefore responsible for its maintenance) and whether it is, for the purposes of the Code, connected to the network. If the Code is to specify that sub-meters are owned by the customer and therefore outside the scope of the Code,

transitional arrangements will be required to transfer ownership of Western Power owned sub-meters to customers.

- A further point in relation to clause 3.4 is that while it states that the network operator owns each meter on its network and all communication links associated with the meter, it is silent on who owns other aspects of a metering installation (such as the current transformer (CT), voltage transformer (VT), boards and panels). In relation to Western Power's network, a majority of customers purchase, install and own the CT and / or VT. Under clause 3.5(3) a network operator is required to maintain the metering installation but under clause 3.5(7) a network operator is not required to maintain any metering equipment owned by the user or the user's customer (such as CTs and VTs). Further clarification may be required in the Code to specify that the user or customer is responsible for maintaining metering equipment that it owns but the network operator determines maintenance and testing requirements (this would be similar to the approach applied by Western Power's Technical Rules to small-scale energy systems connected to the network by an inverter – residential photovoltaic systems for example). Potentially, provision would also need to be made to provide the network operator with authority to ensure a user or customer's metering equipment is compliant with the relevant rules and standards. In relation to a user, it is noted that clause 3.5(5) makes provision for a network operator and user to enter into a service level agreement in respect of the provision, installation, operation or maintenance of a metering installation (while this would be relevant for a retailer it may not be relevant for a customer however).
- The requirements for a metering installation under clause 3.5 prescribe the various metering equipment that may make up an installation but do not include the meter itself. It is proposed that clause 3.5 is amended to include reference to the meter, as it forms part of the metering installation.
- Under clause 3.5(9)(b) if a network operator becomes aware that a metering installation does not comply with the Code, the network operator must advise affected parties of the non-compliance and arrange for the non-compliance to be corrected as soon as practicable following the network operator becoming aware of it. The network operator's obligations under this clause are set out in broad terms and the issue is whether the clause provides adequate certainty to retailer and customer that the reason for the non-compliance will be resolved in a timely manner. The lack of certainty about when a metering installation will be made compliant can create commercial, transaction and supply issues for the retailer and customer. However, it is acknowledged that each incident of non-compliance is likely to provide different issues to address for the network operator and an allowance must be made for this to ensure that the obligation on the network operator is reasonable.

It is noted that under clause 6.6 a MSLA must specify the metering services that the network operator must provide Code participants (and may provide on request) and specify a timeframe for the performance of the metering service. For example, Western Power's MSLA states that the repair or replacement of a faulty metering installation is included as a "Standard Service".

It needs to be considered whether the Code is the appropriate mechanism to provide certainty to retailers and customers that a non-compliant metering installation will be corrected in a timely fashion, or whether this is a matter for the service level agreement between the network operator and retailer as it relates to the network operator providing a metering service to a prescribed standard.

It is noted that clause 3.5(9)(b) appears to be incomplete. It is considered that the sentence should finish with “the non-compliance”. Currently it reads, “arrange for the non-compliance to be corrected as soon as practicable following the network operator becoming aware of”.

- Is clause 3.11(1) sufficiently clear regarding the requirements on the metering installation to record data? It appears that the aim of the clause is to require the network operator to ensure its installation is available to record data (and is therefore able to provide data) for a minimum of 99% of the year. However, the clause, as currently drafted, leaves this interpretation open to doubt.
- Clause 3.14 allows for certain transitional matters regarding metering installations commissioned prior to the commencement of the Code. A high voltage capacity metering installation has three components, a CT, a VT and a meter. The Code allows, as a transitional matter, out of specification metering transformers but not out of specification meters, providing that the total installation meets specification. For example, where CTs and VTs do not meet the specifications in Table 3 of Appendix 1 the metering installation does not have to be changed if the total installation is within specification. However, this discretion is not extended to meters that are out of specification but where the CTs, VTs and total installation are within specification. This has the consequence of causing costs where the installation already meets the Code’s accuracy requirements but the meter is out of specification and therefore has to be replaced in order to comply with the Code. This matter could potentially be resolved by amending clause 3.14(3) to allow for the installation not to have to be changed if the meter is out of specification.
- Clause 3.16 provides the requirements for wholesale market metering installations. Clause 3.16(4) requires that the Metrology Procedure must specify how the network operator will produce the “Notional Wholesale Meter” value for the purposes of the Market Rules. However, the Market Rules have subsequently removed this requirement for the network operator and this value is now being determined by the IMO under the Market Rules, which state that the IMO will produce an estimate of this value. This inconsistency between the Code and Market Rules requires addressing to clarify who should be providing the value.
- Clause 3.16(2) states that the network operator must ensure that a Type 1 to Type 4 metering installations on the network includes a communication link. Clause 4.3.1 of Western Power’s Mandatory Link Criteria provides that “Where a communication link is required due to access restrictions that are a consequence of the owner or tenant of the premises of facility being metered, the retailer shall be liable for the costs associated with the link (e.g. if the link is required because there is a fierce dog or the meter is kept locked or otherwise inaccessible)”.

It should be considered whether, to avoid any unnecessary confusion, the Code needs to clarify that where a communication link is required for Types 5 and 6 metering installations because of restricted access to the meter, the retailer is liable for the costs associated with the link (even if the retailer has not requested the link).

- Clauses 3.24, 3.25 and 3.26 refer to the application of the Code in relation to pre-payment meters (**PPMs**), requirements for PPMs and disputes in relation to PPMs respectively, but the Code does not address the deployment of PPMs. One of the Code’s “Objectives” is to facilitate the operation of the *Code of Conduct for the Supply*

of Electricity to Small-Use Customers (the Customer Code). Until 30 June 2010, Part 9 of the Customer Code provides for the operation of PPMs in specified remote communities. The Authority has recently approved amendments to Part 9 and Part 13 of the Customer Code in relation to the operation of PPMs in Western Australia. The amendments which take effect from 1 July 2010 allow PPMs operation in areas published in the Government Gazette by the Minister for Energy.

In order for the Code to meet its objective concerning facilitating the operation of the Customer Code it needs to be considered whether the Code should address the functionality of PPMs by defining how it will regulate PPMs and associated services to support the requirements of the Customer Code.

The Code is the primary instrument to regulate meter functionality, meter installation and meter data provision and therefore the Code would appear to be the most appropriate instrument to address these matters in relation to PPMs. It is proposed that the Code is amended to include details on PPMs installation, operation, maintenance, functionality and testing. For example, Table 3 in Appendix 1 prescribes metering installation types and accuracy requirements but does not include PPMs as a metering installation type. This does not provide certainty to Code participants who install, maintain and operate PPMs.

- Table 3 in Appendix 1 prescribes the different metering installation types and accuracy requirements for Part 3 of the Code. It is proposed in this Issues Paper (page 31) that Table 3 is updated to reflect new metering installation types. However, the inclusion of any new metering installation types may require consequential amendments to Part 3 of the Code.
- Neither Part 3 nor Table 3 in Appendix 1 of the Code specify who decides which metering installation type should be installed at a connection point on the network. Table 3 categorises metering installation types by annual electricity throughput at the connection point and the network operator accepts the user's calculation of annual throughput and therefore the user's choice of metering installation type (as the type relates to the amount of throughput).

The Code addresses this issue by categorising the type of metering installation relevant to the annual throughput (and if there was a dispute over the type of metering installation that should be installed Part 8 of the Code provides for dispute resolution between Code participants). However, the Code is silent on how the annual throughput should be calculated. The issue is whether there is a need to clarify in the Code who determines the metering installation type that must be installed and whether this decision should rest with the network operator because it will be responsible for the installation, operation and maintenance of the metering installation (and will own the meter and any communications links associated with the meter).

It should be noted that this Issues Paper is also asking for comments on whether or not metering installation types should be related to annual throughput or capacity.

- Clause 3.16(1)(b) states that the network operator must ensure that a Type 1 to Type 5 metering installation is capable of separately registering and recording flows in each direction if bi-directional electricity flow occurs, but these metering installations are for connection points that have an annual throughput greater than 50MWh. The Code does not contain provisions for import / export metering (or bi-directional metering) in

relation to metering installations with an annual throughput less than 50MWh (the contestable customer threshold).

To facilitate the mechanisms for exporting energy into a network, including Synergy and Horizon Power's Renewable Energy Buy-back Schemes and the net feed-in tariff (scheduled to be introduced in Western Australia on 1 August 2010), it should be considered whether the Code requires amendment to provide for meters capable of separately measuring imported and exported energy (through import and export registers) for annual throughput less than 50MWh.

- In relation to the above point, electromechanical meters have the capacity to run backwards during periods of net export into the network. This in effect results in the customer being paid for their exports at the full retail price of electricity and no proper mechanism existing to record the amount of energy being exported into the network. Furthermore, if a customer's meter runs backwards when they export energy they will not be able to take advantage of the net feed-in tariff. It should be considered whether the Code should be amended to ensure that meters are not permitted to run backwards and if a customer wishes to export energy into the network their meter must be capable of separately measuring imported and exported energy.
- In relation to the points about exporting energy into the network, the Code does not provide for circumstances where someone commercially generates energy and exports into the network but also draws energy from the network using the same meter (normally for the purpose of supplying electricity to the premises that the generating plant is situated on). This can create accuracy problems as the amount of electricity that is being exported into the network can be significantly greater than the amount of electricity being imported from the network. The metering installation will be designed to record the higher amount being exported and will therefore have difficulty in accurately recording the much smaller amount being imported from the network. This can create a situation where the user is importing energy from the network that is not being accurately metered. This may also have implications for the IMO in terms of measuring generation being exported into the network. Therefore, it should be considered whether the Code needs to stipulate that the output from generating plants must be separately metered from the supply to the premises. This may mean having two connection points (import and export) which are separately metered.

Submissions are invited on Part 3 of the Code in relation to:

1. Whether a Type 6 accumulation meter on which interval data is being collected needs to display "Time of Use" or "all time" registers?
2. Whether "accumulated electricity production" in clause 3.2(1) needs clarifying in relation to bi-directional metering?
3. Whether the Code should be amended to clarify who owns a sub-meter?
4. Whether the Code should clarify that the user or customer is responsible for maintaining metering equipment that it owns but the network operator determines maintenance and testing requirements? And whether provision should be made to give a network operator the authority to ensure metering equipment that it does not own is compliant with relevant rules and standards?

5. Whether clause 3.5 should be expanded to include the meter itself?
6. Whether clause 3.5(9)(b) should be amended to provide the network operator with a specific timeframe to correct a non-compliant metering installation or whether this is an issue that should be addressed by a service level agreement between the network operator and retailer?
7. Whether clause 3.11(1) is sufficiently clear on the requirements of the metering installation to record data?
8. Whether clause 3.14 should be amended to allow for a metering installation not to have to be changed if the meter does not comply with the Code's requirements because it is over specification?
9. Whether the Code should be amended to clarify the inconsistency between it and the Market Rules regarding who provides the "Notional Wholesale Meter" value?
10. Whether the Code should clarify that where communication links are required on Types 5 and 6 metering installations because of restricted access to the meter, the retailer is liable for the costs associated with the links?
11. Comment is sought on the appropriate amendments to the Code to enable it to effectively facilitate the operation of the Customer Code in relation to the operation of pre-payment meters.
12. Question 1 on page 31 asks whether Table 3 in Appendix 1 should be updated to include new metering installation types. If new metering installation types should be included in Table 3, what amendments, if any, would be required to Part 3 of the Code?
13. Whether the Code should be amended to clarify who determines the type of metering installation that must be installed?
14. Whether provision should be made in the Code for meters capable of separately measuring imported and exported energy; and if a customer wishes to export energy into the network their meter must be capable of separately measuring imported and exported energy?
15. Whether the Code should specify that meters are not permitted to run backwards?
16. Whether the Code should specify that generating plants must have an appropriate metering installation for the import and export of electricity?
17. Any other matters relating to Part 3 of the Code.

2.4 Part 4 – The Metering Database

Code Provisions

Part 4 of the Code deals with the metering database, including the requirement for a network operator to establish, maintain and administer a database.

Key Issues

The key issues of relevance to Part 4 of the Code are as follows:

The “standing data” for a metering point must comprise at least the items prescribed in Table 2 of clause 4.3(1). The items in Table 2 contain non-metering data, such as billing data, which are contained in the electricity network corporation’s Access Arrangement. To avoid potential inconsistencies arising between the Code and Access Arrangement it may be advisable to amend the Code to remove items from Table 2 that relate to non-metering data.

The initial non-metering items that may be appropriate for removal are:

- 2. substation name
- 3. the length of network between the metering point and the substation
- 5. distribution loss factor
- 6. network tariff description
- 9. whether or not the customer associated with the metering point is a contestable customer

Submissions are invited on Part 4 of the Code in relation to:

1. Whether non-metering items should be removed from Table 2 of clause 4.3(1)?
2. Any other matters relating to Part 4 of the Code.

2.5 Part 5 – Metering Services

Code Provisions

Part 5 of the Code deals with metering services, including reading meters, the provision of data, data quality and the appointment of the Electricity Networks Corporation (Western Power) as metering data agent.

Key Issues

The key issues of relevance to Part 5 of the Code are as follows:

- Clause 5.3 requires that the network operator must read meters. Clause 5.4(1) provides that the network operator must use “reasonable endeavours” to do at least one meter reading (of an accumulation meter) that generates an actual value in any 12 month period. Clause 5.4(2) provides that a user must, when reasonably requested by a network operator, use “reasonable endeavours” to assist the network operator to comply with the network operator’s obligation under clause 5.4(1).

Clause 5.6 allows the network operator to provide “estimated, energy data for a metering point to the user of a metering point”. Estimates are often provided by the network operator because it has been unable to obtain access to the meter. A potential consequence of estimated meter readings for retailers is that they create operational difficulties such as delays in billing (which can also cause non-compliance with the

conditions of a retailer's electricity retail licence) and customer complaints. There are also implications for the customer. For example, receiving bills based on estimates may make it difficult to manage electricity consumption and budget from one billing cycle to the next.

Whilst the Code requires the network operator to use reasonable endeavours to provide an actual meter reading at least once in a 12 month period, it is silent on how many times the network operator can provide an estimated meter reading. It is assumed that as long as the network operator provides one actual reading per 12 month period it can provide estimated readings at all other times when a reading is required.

It is acknowledged that gaining access to a meter is not always straightforward and a degree of latitude is required to ensure the obligations on the network operator and retailer are reasonable. However, there is the issue of providing a level of certainty to Code participants and customers that the meter reading will take place. It needs to be considered whether it is appropriate, or indeed fair, to define "reasonable endeavours" considering the different situations that a network operator may be faced with when attempting to undertake a meter reading (and the retailer may experience when called upon to assist the network operator). The Code is not necessarily considered an appropriate mechanism to address this issue as it is primarily a provision of service issue. Consequently, if a network operator or retailer is concerned about whether each other are using "reasonable endeavours" it may be more appropriate to address this in their service level agreement.

Alternatively, providing Code participants and customers with greater certainty that the network operator will endeavour to read the meter may be facilitated by either replacing "reasonable endeavours" with "best endeavours" or making it an absolute requirement that the network operator must undertake a meter reading at least once in any twelve month period.

If the Code was amended by replacing "reasonable" with "best", the amendment would apply to both clauses 5.4(1) and 5.4(2) to ensure there is equality between the obligations imposed on the network operator and those imposed on the user (such as a retailer). There is a correlation between this approach and the obligation on the retailer under clause 4.7 of the Customer Code, which states "A retailer must use its best endeavours to ensure that metering data is obtained, as frequently as required to prepare its bills, and in any event at least once every twelve months in accordance with clause 4.6(1)(a)".

Replacing "reasonable endeavours" with "best endeavours" would ensure a degree of consistency between the Code and the Customer Code by ensuring a network operator and a retailer have to comply with a similar obligation. However, it needs to be considered whether this amendment would ensure that a customer's meter is read at least once every twelve months. Also, if "best endeavours" was not defined it may make it difficult to monitor and enforce compliance with this Code provision.

If the Code was amended to replace "reasonable endeavours" with an absolute requirement, the amendment would apply to clause 5.4(1). The onus would be on the network operator to ensure the meter reading took place. However, under clause 5.4(2) the retailer would still be required to use reasonable endeavours to assist the network operator to comply with clause 5.4(1) if the network operator requested the retailer's assistance.

As mentioned earlier, gaining access to a meter is not always straightforward and obligations on the network operator need to be reasonable. However, it is not necessarily unreasonable to expect a network operator to read a meter once every twelve months..

- To address operational difficulties experienced by Code participants with estimated meter readings, should a network operator be required to undertake a meter reading that provides an actual value more than once in any 12 month period? Alternatively, the Code could provide a requirement that a network operator must provide an actual meter reading once a certain number of estimated meter readings have been provided (as long as the prescribed number of actual readings were still provided in a 12 month period)..
- As a further point in relation to clause 5.4(1), “actual value” is not defined. It is unclear whether the network operator must undertake the meter reading itself or can rely on a customer’s self-reading of the meter. It is noted that clause 5.4(2) states that “if the network operator is unable to access the meter to undertake a meter reading...the user may assist the network operator to obtain access...”. This could be interpreted as implying that the network operator must access the meter and therefore cannot use a customer self-reading as an “actual value”. However, for the avoidance of doubt, it is proposed that “actual value” is clarified to make it clear that the network operator must undertake the meter reading itself (this would be either by physically reading the meter on site or through communication links on the meter).
- In relation to the network operator reading meters, the Code does not address access to metering equipment from the customer’s perspective. It may aid the network operator (and the retailer in assisting the network operator) to fulfil its obligations under clauses 5.3 and 5.4 if the Code set out a customer’s obligation to provide access to their metering equipment. For example, the Code could be amended to provide that a customer must at all times make available to a network operator or retailer unhindered access to metering equipment on the customer’s premises for any purposes associated with the supply, metering or billing of electricity and safe access to and within the customer’s premises for those purposes (provided that the site visit at a reasonable time, official identification is produced on request by the network operator or retailer’s representative and the network operator or retailer give prior notice to the customer of their representative’s visit).
- Clause 5.4 refers only to reading accumulation meters; it does not refer to interval meters. Should clause 5.4 be amended so the provision it provides for accumulation meters is also provided for interval meters?
- Clause 5.6(1)(b) requires a network operator to provide to the IMO validated, and where necessary substituted or estimated, energy data for a metering point before 5pm on the first business day after the network operator obtains energy data for the metering point under clause 5.3(a) (or such other time as is specified in the applicable service level agreement). Clause 5.3(a) requires a network operator to obtain energy data from the metering installation for a metering point, and transfer the data into its metering database, by no later than 2 business days from the date of a scheduled meter reading for the metering point (or such other time as is specified in the applicable service level agreement)..

Under clause 5.7, if a replacement energy data value is inserted in a metering database for a metering point under clause 5.24, the network operator must in accordance with the Code provide the replacement energy data to the IMO.

Under clause 9.16.2(a) of the Market Rules the settlement cycle timeline must include for each settlement cycle, the “Interval Meter Deadline”, which is the “Business Day by which meter data submissions for a Trading Month must be provided to the IMO. This date must be the first Business Day of the second month following the month in which the Trading Month commenced.” For example, if the trading month was January 2010, then the Interval Meter Deadline would be 2 March 2010.

It needs to be considered whether the Code should be amended to require the network operator to provide data to the IMO in accordance with clause 9.16.2(a) of the Market Rules. Whilst the Market Rules do provide for the provision of data to the IMO in order to facilitate the settlement cycle, one of the Code’s objectives (clause 2.1(1)(c)) is to facilitate the operation of Part 8 and Part 9 of the EI Act. Part 9 of the EI Act provides for the establishment and operation of the wholesale electricity market, including the Market Rules. Therefore, should the Code be amended to require a network operator to provide energy data to the IMO in accordance with the Market Rules?

- Clause 5.16 states that if a user (a person who has an “access contract” to access a network) collects or receives energy data from a metering installation then the user must provide the network operator with the data (in accordance with the Communication Rules) within 2 business days of collecting or receiving the data (or such time as is specified in the applicable service level agreement). There may be circumstances where 2 business days does not provide the user with a reasonable timeframe to provide the energy data to the network operator, for example, if the user/metering installation are situated in a remote location.
- Clause 5.22 provides for the validation, substitution and estimation of energy data. To ensure the quality and reliability of the data a network operator must validate it in accordance with the Code’s Appendix 2 – Validation of Data in the Metering Database. Under clause 5.24 a network operator must replace energy data with better data if it is available. However, the Code does not specify whether or not the data that has been replaced by better data should be deleted from the metering database once it has been replaced. The inference in stating that the network operator must “replace” the data is that it will be substituted and therefore no longer be required. However, the Code is not clear on exactly what should happen to the data that has been replaced. It is understood that deleting data from the metering database can create errors between a network operator’s and a retailer’s respective databases and can delay the issuing of bills and effect other electricity transactions such as network billing.

The Code does refer to the retention of data however. Clause 4.9 states that a network operator must retain energy data in its metering database for each metering point on its network for at least 13 months from the date the data was obtained and after that period for at least a further 5 years and 11 months. In addition, clause 5.17 requires a user to provide validated, substituted or estimated data to the user’s customer to which that information relates where the user is required by an enactment or an agreement to do so for billing purposes or for the purpose of providing metering services to the customer.

It is also relevant that the Customer Transfer Code makes an assumption that historical consumption data will be available for contestable customers as it requires a network

operator to provide the data to a retailer on request (the retailer requires the consent of the customer to obtain the data). Furthermore, the Customer Code makes the assumption that historical consumption data will be available to non-contestable customers as it requires the retailer to provide the data to the customer on request. One of the Code's objectives is to facilitate the operation of the Customer Transfer Code and the Customer Code.

To ensure consistency and provide clarity, the Code requires amendment to specify how data that has been replaced by better data should be dealt with once it has been replaced. It is recommended that the Code is amended to make it clear that data that has been replaced by better data should be retained in the metering database in accordance with the timeframes and conditions prescribed in clause 4.9.

- Division 5.4 provides that a network operator may elect for the Electricity Networks Corporation to be its metering data agent. However, the Code does not clearly specify whether the electing network operator is required to submit documents to the Authority pursuant to Part 6 of the Code or whether the Electricity Networks Corporation can submit documents to the Authority on behalf of a network operator if appointed as its metering data agent.

Under clause 6.1 a network operator must in relation to its network comply with a number of documents, including its MSLA, Communication Rules, Metrology Procedure and Mandatory Link Criteria. However, the Code implies that an electing network operator must submit to the Authority its own documents even if it has appointed another network operator to be its metering data agent.

For example, where the network operator elects to have the Electricity Networks Corporation as its metering data agent, clause 5.30(1)(b) states that the "metering data agency agreement" must deal with "whether the electricity networks corporation is to adopt the electing network operator's MSLA and Metrology Procedure in relation to the network". This implies that such documents that apply to the network operator's network will exist.

In addition, if the Electricity Networks Corporation does not elect to adopt the network operator's MSLA and Metrology Procedure pursuant to clause 5.30(1)(b)(ii), then the Electricity Networks Corporation and the network operator "are to cooperate in developing and having approved under Division 6.2 the electricity networks corporation's own approved document for the network". Similarly, even if the electricity network's corporation adopts the network operator's documents, clause 5.30(b)(i) provides that the electing network operator may seek amendments to the document.

It should also be noted that clause 5.29(g) states that unless the metering data agency agreement provides otherwise, the electing network operator must consult the Electricity Networks Corporation in preparing the MSLA, Communication Rules and Metrology Procedure for the network and making any submissions to the Authority under clause 6.20(3)(b) in relation to the network. Although clause 5.29(g) is subject to a provision in the metering data agency agreement, it still indicates that the documents are separate from the Electricity Network Corporation's documents (and the documents relate to the network operator's network).

In conclusion, it would appear that the Code assumes that the network operator will have documents that relate to its network and the appointment of the Electricity Networks Corporation as its metering data agent does not divest it of the responsibility

to have those documents. In circumstances where a network operator has appointed the Electricity Networks Corporation as its metering data agent, these documents may, in substance, be identical to the Electricity Networks Corporation's documents but they must be separate documents that apply to the network operator's network.

It should be considered whether an amendment to the Code is required clarifying that a network operator, who has elected to appoint the Electricity Networks Corporation as its metering data agent, is still required to comply with its own documents and submit them to the Authority for approval pursuant to Part 6 of the Code.

- Under clauses 4.18 and 4.19 of the Customer Code, where a customer has been undercharged (4.18) or overcharged (4.19) due to an act or omission by the distributor (including where a meter has been found to be defective) the retailer is liable for the act or omission. If there has been an undercharge the retailer must limit the amount to be recovered to no more than the amount undercharged in the 12 months prior to the date on which the retailer notified the customer that undercharging occurred. If there has been an overcharge the retailer must repay the overcharge amount to the customer.

Under the Customer Code, if the act or omission is due to the distributor, there is no specific provision for the retailer to recover from the distributor any financial loss the retailer makes in complying with clauses 4.18 and 4.19. There is concern that it is inequitable for the retailer to be financially liable for an act or omission by the distributor but there is no specific provision for the retailer to recover its loss from the distributor. The OOE understands that this matter was raised before the Electricity Code Consultative Committee (**the ECCC**) as part of its statutory review of the 2008 Customer Code and the ECCC agreed that this issue was best dealt with via contractual negotiations between the distributor and retailer and/or as part of a review of the Code.

It needs to be considered whether the Code is the most appropriate instrument to address this inconsistency. Section 39 of the EI Act allows a code to be issued that makes provision for and in relation to the metering of the supply of electricity by licensees including the provision, operation and maintenance of metering equipment; and ownership of and access to metering data. There are also the Code's objectives to be considered (see clause 2.1 of the Code) which include promoting access to and confidence in data of parties to commercial electricity transactions and facilitating the operation of the Customer Code. Therefore, it remains to be seen whether the Code is able to address this issue, or indeed whether it should, as the issue does not immediately appear to fall under the provisions set out in section 39 of the EI Act or within the parameters of the Code's objectives.

A potential alternative is for this issue to be addressed by way of a service level agreement or other contractual arrangement between the network operator and retailer (clause 5.1 allows a network operator and a Code participant to negotiate a service level agreement).

- The Code does not specifically provide for Full Retail Contestability (**FRC**). FRC means that all electricity customers are able to choose their retailer in a deregulated energy market. However, Western Australia does not have FRC for customers that consume less than 50MWh of electricity per annum at a connection to a distribution network served by Synergy or Horizon Power. These customers are known as 'non-contestable' and must purchase their electricity from Synergy or Horizon Power, depending on their location. The issue of amending the Code to provide for FRC is not

being addressed as part of this process. It is considered more appropriate to address this issue at a time when there is greater awareness of any potential FRC model that Western Australia may adopt. At the current time there is insufficient information to support amending the Code.

Submissions are invited on Part 5 of the Code in relation to:

1. Whether clause 5.4 should be amended so the provision it makes for accumulation meters is also made for interval meters?
2. Whether the term “reasonable endeavours” in clauses 5.4(1) and 5.4(2) should be defined in the Code? If so, how should it be defined?
3. Whether the term “reasonable endeavours” in clauses 5.4(1) and 5.4(2) should be replaced with the term “best endeavours”?
4. Whether there should be an absolute requirement on a network operator to undertake a meter reading that provides an actual value at least once in any twelve month period?
5. Whether a network operator should be required to undertake a meter reading that provides an actual value more than once in any 12 month period?
6. Whether the term “actual value” in relation to taking a meter reading should be defined? If so, how should it be defined?
7. Whether the Code should be amended to require a network operator to provide energy data to the IMO in accordance with the Market Rules?
8. Whether clause 5.16 should be amended to provide a user with more time to provide energy data that it has collected to a network operator?
9. Whether provision should be made to specify that data that has been replaced by better data should be retained in the metering database in accordance with the timeframes and conditions prescribed in clause 4.9?
10. Whether it should be clarified that a network operator, who has elected to appoint the Electricity Networks Corporation as its metering data agent, is still required to comply with its documents and submit them to the Authority for approval?
11. Whether the Code should require a network operator (referred to as “distributor” in the Customer Code) to compensate the retailer for losses incurred under clauses 4.18 and 4.19 of the Customer Code due to an act or omission by the network operator?
12. Any other matters relating to Part 5 of the Code.

2.6 Part 6 - Documentation

Code Provisions

Part 6 of the Code deals primarily with the requirements for all documents approved under the Code, the approval procedure for these documents, the publication of approved documents and the review and amendment of these documents.

Key Issues

The key issues of relevance to Part 6 of the Code appear to be as follows:

Division 6.1 - The Documents

- Clause 6.2 requires a network operator to establish specific documents and submit them to the Authority for approval. The documents include Communication Rules. Since the Code was gazetted in 2005 a further document has been introduced as a requirement of the Communication Rules. Part 4 of the Communication Rules requires the development and publication of a “Build Pack”, which consists of a number of documents that set out specific details as to how the data and information exchange processes will be implemented, including information relating to the design and development of information systems to enable the communication processes to occur.

Whilst the Code requires the Authority to approve a network operator’s Communication Rules, the Authority does not have the power under the Code to approve the Build Pack. Indeed, there is no clear obligation on a particular person to approve documents that make up the Build Pack and the capacity of the Build Pack to be changed by the network operator in consultation with Code participants (provided for in the Communication Rules) seems to be inconsistent with any requirement that they be approved by the Authority.

To ensure consistency it needs to be considered whether the Code should be amended to include the specific documents that make up the Build Pack (thereby removing the term “Build Pack”) as documents that must be submitted by a network operator to the Authority for approval or whether the Code should be amended to clarify how the Communication Rules may incorporate a Build Pack concept.

If the Code was amended to clarify how the Communication Rules incorporate a Build Pack concept, a proposed amendment could be that the Communication Rules would remain a document approved by the Authority without any reference to the Build Pack but would refer to the details of the information transfers and protocols which are the subject of agreements between the network operator and relevant retailers. In effect, the Communication Rules approved by the Authority would consist of high level principles and outcomes and the detail would be contained in the documents that constitute the Build Pack and are agreed between a network operator and a retailer.

- Clause 6.6 sets out the requirements for a network operator’s MLSA. Clause 6.6(b) stipulates that a MLSA must “for each metering service referred to in clause 6.6(1)(a),

specify (i) a detailed description of the metering service; and (ii) a timeframe, and where appropriate other service levels, for the performance of the metering service". However, the Code does not require the network operator to prepare or publish information on its performance in meeting those metering service levels. A network operator has to report on its performance in other areas of its operations, such as the reporting requirements on the quality and reliability of supply under section 27 of the *Electricity Industry (Network Quality and Reliability of Supply) Code 2005*, and it should be considered whether a network operator should be required to report on the provision of its metering services.

It is noted that Western Power's MSLA states "A quarterly review of performance targets (ie. turnaround days) is undertaken to ensure targets are realistic and address any issues around non-compliance". In addition, in accordance with the *Electricity Corporations Act 2005*, Western Power provides the Minister with a quarterly performance report for the first three quarters and an Annual Report for the whole financial year and publishes these reports on its website. Western Power's Statement of Corporate Intent (**SCI**) prescribes the Key Performance Indicators and Targets that it will report on in its performance reports. However, metering services are not included in the SCI and consequently are not reported on.

Therefore, whilst Western Power makes provision, through its MSLA, for performance reporting in relation to its metering services, it does not appear that metering services are covered in its quarterly and annual performance reports. The issue is whether the preparation and publication of metering performance reports by network operators should be a Code requirement in order to ensure that performance reporting on metering services is carried out.

To ensure there is transparency in a network operator's metering operations it should also be considered whether any metering performance report must be made public, possibly through publication on the network operator's internet website, and a copy given to the Minister and the Authority. It should also be considered whether such a report should be prepared quarterly and annually or annually only.

- In relation to performance reporting on metering services, it is also worth noting that a network operator may not need to use its MSLA (and therefore have to comply with it) if it has negotiated individual service level agreements with Code participants (see clauses 5.1 and 5.2). Therefore, it should be considered whether the Code already makes adequate provision for performance reporting. Clause 5.1 allows a network operator and a Code participant to negotiate a service level agreement, which can include metering services. A service level agreement can contain performance reporting provisions if the parties to the agreement consider it appropriate. However, this does not necessarily mean the performance reports will be made public (unless the service level agreement stipulates that the reports must be made public). Also, it is unlikely to provide for reporting on the network operator's overall performance in relation to the provision of metering services as the network operator is likely to report only on the metering services that it provides to a Code participant under their service level agreement.

- Clause 6.8 sets out the requirements for a network operator’s Metrology Procedure (it is noted that Western Power and Horizon Power have both adopted the document titled “Western Australian Electricity Market Metrology Procedure for Metering Installations” and therefore have the same Metrology Procedure). Clause 6.8(d) states that a Metrology Procedure must at least be consistent with the approved asset management system required by section 14 of the EI Act (under section 14 it is a condition of every licence, other than a retail licence, that the licensee must have an asset management system that is approved by the Authority). Under clause 2.7.4 of the Metrology Procedure a network operator must ensure that a Metering Management Plan is established and maintained for the testing and inspection requirements of whole-current (direct connected) meters. When the Authority approved the Metrology Procedure it also approved the Metering Management Plan. Regulation 9 of the *Electricity (Supply Standards and System Safety) Regulations 2001* (**the Supply Standards Regulations**) requires a network operator to submit its metering management plan to the Director of EnergySafety for approval. The metering management plan is therefore approved by both the Authority and EnergySafety.

In 2008 EnergySafety undertook a review of its legislation, which included the Supply Standards Regulations. During this process metering provisions within the Supply Standard Regulations (including regulation 9) were identified that are now potentially outside EnergySafety’s remit because the Code provides for the metering of the supply of electricity.

The preferred option is for the Authority, under the Code, to retain approval over the metering management plan (through the Authority’s approval of the Metrology Procedure). The Code provides for metering quality and accuracy provisions and consequently a requirement no longer exists for EnergySafety to be involved in the approval of the metering management plan.

It is proposed that a minor amendment is made to clause 6.8(d) to add a requirement for the systematic treatment of populations of meters in accordance with Australian Standard AS 1284. 13:2002 “Electricity metering – In-service compliance testing”. Such an amendment would allow the repeal of regulation 9 of the Supply Standards Regulations that requires EnergySafety to approve the metering management plan. The OOE and EnergySafety are currently considering repealing Part 3 (which contains regulation 9) of the Supply Standards Regulations and it is understood that there will be no impact on network operators, who are also licensees under the EI Act, if Part 3 is repealed. This is because they will still be required to comply with the Code.

It is noted that with the repeal of regulation 9 of the Supply Standards Regulations, the statutory requirement for a “metering management plan” will no longer exist. However, it is also noted that under the Code, the Metrology Procedure will need to cover those matters set out in the metering management plan currently (and will have to address how the network operator will comply with Australian Standard 1284 if the proposed amendment to clause 6.8(d) is implemented). This is not to say that the Metering Management Plan cannot be retained and continue to form part of the Metrology Procedure however.

- Clause 6.9(1) states that a network operator may establish a proposed registration process and submit it to the Authority for its approval under Division 6.2. The use of the word “may” suggests that this process is discretionary. This is consistent with clause 6.1(1)(f) which states that a network operator must comply with “its registration process (if any)”. However, clause 3.27 states that a person cannot install a metering

installation on a network unless they are the network operator or a registered metering installation provider for the network operator. The term “registered metering installation provider” is defined as “a person registered by a network operator under clause 3.28, and who has not been deregistered under the registration process”. “Registration process” is defined as a process under clause 6.9, approved by the Authority under Division 6.2.

Consequently, the process in clause 3.28 (which determines whether a person is a registered metering installation provider and therefore can install metering installations on a network) is linked to clause 6.9. It could be interpreted that the network operator must establish a registration process in order to comply with clauses 3.27 and 3.28. However, this is contradicted by clause 6.9, which indicates that establishing a registration process is not mandatory for a network operator. In effect, a network operator has no choice but to establish a registration process if it wants to use a person other than the network operator to install a metering installation on a network.

In order to avoid any uncertainty in relation to the operation of clause 3.27, and to clarify whether network operators are obligated to submit to the Authority a proposed registration process that complies with clause 6.9, an amendment to the Code should be considered.

- To ensure consistency between the Code and the documents approved by the Authority under the Code, it is recommended that the approved documents are reviewed by the Authority in line with the Code’s procedural requirements once any Code amendments have been made.

Division 6.2 - Approval procedure for documents

- Under clause 6.13, if a network operator submits a proposed document to the Authority, the Authority must within 30 business days of submission make a decision whether or not to approve the document (and if the Authority’s decision is not to approve the document it must notify the network operator of the amendments which would have to be made in order for the Authority to approve the document). The Authority may extend the time limit by no more than an aggregate of 30 business days. In total, the Authority may take 60 business days to make a determination. Documents that are approved under the Code can be lengthy and complex and it should be considered whether it is in the interests of the Code’s objectives to provide the Authority with more time to determine whether a document should be approved or not.
- Clauses 6.16 and 6.17 relate to the submission by a network operator of an amended document and the ability of the Authority to draft and approve its own document if the network operator fails to submit an amended document or the Authority makes a decision not to approve an amended proposed document. Clause 6.17 permits the Authority to draft and approve its own proposed MSLA and Communication Rules but the Code does not allow the Authority to draft its own proposed registration process, Metrology Procedure or Mandatory Link Criteria. The issues this raises is that the Code is silent on what the consequences are if the network operator fails to submit an amended document (or the Authority decides not to approve it) of the type that the Authority is not allowed to draft and approve itself. The network operator would not have an approved document and would be in breach of the Code and its electricity licence. The Code does not stipulate what action is subsequently required to be taken by the network operator or Authority to be compliant with the Code. Is the network operator required to resubmit amended documents until approval is obtained or does

the approval process start again from the beginning? An amendment to clause 6.17 should be considered to clarify the process that must be followed if a network operator fails to submit an amended document (or the Authority does not approve the amended document) in cases where the Authority is not permitted to draft and approve its own document.

- Clause 6.20 allows the Authority to require a network operator to amend a document approved by the Authority under the Code. Before requiring an amendment to a document, the Authority must initiate a review of the document. Within 50 business days of initiating the review the Authority must publish its draft findings and allow a period of at least 20 business days after publication of the findings for persons to make submissions. Within 10 business days after the end of the period allowed for submissions, the Authority must publish its final findings.

It should be considered whether the timeframes provided under clause 6.20 (in number of business days) are sufficient for the Authority to review an approved document, effectively conduct a detailed consideration of the submissions it receives, conduct discussions with Code participants that may be required and draft and publish final findings. It may be of benefit to allow the Authority to extend the deadlines under clause 6.20 providing it publishes notice of, and reasons for, its decision to extend the particular deadline. It also needs to be considered whether the Authority should be allowed to extend a deadline more than once (whenever it considers necessary, for example). Depending on the circumstances, the Authority may also require the ability to extend the submission period if it receives a request to do so or to facilitate procedural fairness in allowing parties the opportunity to comment on new information.

Deadlines that cannot be extended may create procedural difficulties for the Authority and Code participants, especially a network operator, as amendments to an approved document that are not finalised by the due date would not be implemented. This may leave the Authority open to having to review the approved document again in order to implement amendments in line with the Code's requirements.

Submissions are invited on Part 6 of the Code in relation to:

1. Whether the documents that constitute the Build Pack should be submitted by the network operator to the Authority for approval or the Code should clarify how the Communication Rules may incorporate a Build Pack concept?
2. Whether the Code should be amended to require network operators to prepare and publish performance reports on metering service levels?
3. Whether clause 6.8(d) should be amended to add a requirement for the systematic treatment of populations of meters in accordance with Australian Standard AS 1284.13:2002 "Electricity metering – In-service compliance testing"?
4. Whether clause 6.9 requires clarification, to address uncertainty with the operation of clauses 3.27 and 3.28, that a network operator "must" establish a registration process?
5. Whether provision should be made to allow the Authority more time to determine whether a document should be approved or not?
6. Whether clause 6.17 should be amended to clarify the process that must be followed if

a network operator fails to submit an amended document to the Authority (or the Authority does not approve the amended document) in cases where the Authority is not explicitly permitted to draft and approve its own document?

7. Whether provision should be made to allow the Authority to extend a deadline under clause 6.20?
8. Any other matters relating to Part 6 of the Code.

2.7 Part 7 – Notices and Confidential Information

Code Provisions

Part 7 of the Code deals primarily with the sending of notices by Code participants and confidential information obligations. Clause 7.4(1) defines “confidential information” as “metering database information” or “other information which is confidential or commercially sensitive”.

Key Issues

The key issues of relevance to Part 7 of the Code appear to be as follows:

- Clauses 7.4, 7.5 and 7.6 place restrictions on the disclosure of metering data and limits what metering data may be used for. A Code participant may only use metering data for the purpose it was disclosed for, such as billing for example. There is little flexibility in these clauses and consequently they may place an onerous burden on Code participants in terms of the disclosure of data on a day to day basis. For example, a network operator may have restrictions in terms of entering national programs as they cannot share their metering data with other parties, such as the Commonwealth Government.

It should be noted that clause 7.5 allows a Code participant to use metering database information “for the purposes for which it was disclosed or another purpose contemplated by this Code”. It may be interpreted that “another purpose contemplated by this Code” includes the supply of electricity, therefore providing Code participants with a less restrictive capacity to use metering data.

- The Code’s restrictions on the disclosure of metering data do not allow for the customer to provide consent to a Code participant to disclose the customer’s metering data to a third party. It may be practical to expand the scope of Part 7 of the Code to permit the customer to be able to provide consent (on request from a Code participant) to disclose metering data to a third party, providing the reasons for the disclosure are explained to the customer. This would provide greater flexibility on the use of metering data (such as the sharing of data with meter data agents nationally or analysis by government agencies) whilst providing the customer with certainty that the data will only be disclosed with their agreement.

Submissions are invited on Part 7 of the Code in relation to:

1. Whether clauses 7.4, 7.5 and 7.6 should be amended to allow Code participants greater flexibility in the use of “confidential information” by allowing the disclosure of metering data to a third party, providing the customer consents to the disclosure?
2. Any other matters relating to Part 7 of the Code.

2.8 Part 8 – Dispute Resolution

Code Provisions

Part 8 of the Code provides the procedure for dispute resolution when a dispute arises between Code participants, including setting out the Authority’s powers in relation to handling those disputes.

Key Issues

The key issue of relevance to Part 8 of the Code appears to be as follows:

- The Authority is a Code participant and is required by Part 6 of the Code to approve documents submitted to it by a network operator. Also, it is a condition of every electricity licence that is issued by the Authority that licensees must comply with the Code. The performance of licensees is monitored through a compliance and performance reporting regime and the completion of regular performance audits and asset management reviews. The EI Act provides a range of mechanisms by which the Authority is able to enforce licensee compliance.

Under Part 8 of the Code, the Authority acts as the arbitrator of disputes which arise between network operators and Code participants (other than the Authority). It needs to be considered whether it is appropriate for the Authority to be the arbitrator of disputes between Code participants when it has a role under the Code in approving a network operator’s documents and monitors and enforces electricity licensees’ compliance with the Code.

An alternative arbitrator to the Authority may be the Western Australian Electricity Review Board or the Western Australian Energy Disputes Arbitrator (**the Energy Arbitrator**), both of whom are established under the *Energy Arbitration and Review Act 1998* (**the EAR Act**). As a comparison, section 105 of the EI Act provides for the Access Code to make provision for “the arbitration by the arbitrator of disputes between a network service provider and person who has made a proposal for access to services”. Part 10 of the *Electricity Networks Access Code 2004* contains such provisions. Furthermore, section 73 of the EAR Act sets out the functions of the Energy Arbitrator, which include functions conferred “by or under the *Electricity Industry Act 2004*”. Whilst it needs to be considered whether this can include any functions conferred by the Code (which is subsidiary legislation made under the EI Act), the Energy Arbitrator may be a suitable alternative to the Authority as the arbitrator of disputes between Code participants.

Submissions are invited on Part 8 of the Code in relation to:

1. Whether the Authority should be replaced as the arbitrator of disputes under the Code? If so, who should replace the Authority?
2. Any other matters relating to Part 8 of the Code.

2.9 Part 9 – Code Amendment and review

Code Provisions

Part 9 of the Code sets out the process for the Authority to recommend to the Minister for Energy amendments to the Code.

Key Issues

No issues with Part 9 are raised at the present time. However, submissions on any matters relating to Part 9, and its possible amendment, are invited.

Submissions are invited on Part 9 of the Code in relation to:

1. Any matters relating to this Part of the Code.

2.10 Appendices (1 – 5)

Code Provisions

There are five appendices to the Code. They are as follows:

1. Appendix 1 - Metering installation Types and accuracy requirements in Part 3;
2. Appendix 2 - Validation of Data in the Metering Database;
3. Appendix 3 - Data Substitution and Estimation;
4. Appendix 4 - Details of Available Metering Services; and
5. Appendix 5 - Transitional – metering services provided by the electricity networks corporation.

Key Issues

The key issues in relation to the Code's appendices appear to be as follows:

Appendix 1 – Metering installation Types and accuracy requirements in Part 3

- Table 3 in Appendix 1 prescribes metering installation types and accuracy requirements for Part 3 of the Code. Since the Code was gazetted in 2005, Table 3 has not been updated. There are now metering installation types used by the network operator that are not listed in Table 3, such as installations that include Smart Meters and PPMs. It

is proposed that Table 3 is updated to provide a complete list of meter installation types that are being installed and connected to the network.

- The metering installation types in Table 3 in Appendix 1 are based on throughput rather than capacity. The throughput amount is nominated by the user and accepted by the network operator as the true amount. However, the user could potentially nominate a lower throughput amount than is required in order to have a cheaper class of metering installation. Basing the metering installation types on capacity instead of throughput may resolve this issue as the user would have to choose a metering installation type commensurate with the total capacity that they required. If metering installation types were based on capacity it is noted that consequential amendments to Tables 4 – 7 in Appendix 1 may be required as they are based on throughput.

Appendix 5 – Transitional – metering services provided by the electricity networks corporation

Appendix 5 prescribes the Electricity Network Corporation's metering services and charges. These services and charges are also prescribed in the electricity network corporation's MSLA (approved by the Authority under the Code). The issue is whether Appendix 5 is still required if the metering services and charges are included in the MSLA. It is noted that since the Code was gazetted the charges in the MSLA have increased compared to those in the Code. Furthermore, the process for amending the MSLA is less onerous than for amending the Code.

To avoid duplication and the potential for inconsistency between the two documents, it is proposed that Appendix 5 be removed from the Code.

Submissions are invited on the Code's appendices in relation to:

1. Whether Table 3 in Appendix 1 should be updated to include new metering installation types? If so, what should the new types and accuracy requirements be?
2. Whether the metering installation types in Table 3 in Appendix 1 should be based on capacity or throughput?
3. Whether Appendix 5 should be removed from the Code?
4. Any other matters relating to the Code's appendices.

Appendix A – Code definitions

Some Code participants have indicated that the definitions in clause 1.3 of the Code are either inadequate or incorrect. Furthermore, inconsistencies have been identified between the definitions in the Code and definitions in documents approved under the Code, such as the Metrology Procedure, Mandatory Link Criteria, Model Service Level Agreement (**MSLA**) and Communication Rules.

In some circumstances, it may be necessary and appropriate to have different definitions in the Code and approved documents as the Code is a generic document whereas a network operator's approved documents are network specific. However, there may also be circumstances where definitions contained in documents that share a relationship with each other should be the same.

It is noted that Western Power and Horizon Power have both adopted the document titled "Western Australian Electricity Market Metrology Procedure for Metering Installations" and therefore have the same Metrology Procedure. Western Power and Horizon Power have also adopted the same Mandatory Link Criteria. Communication Rules and MSLA are Western Power documents, approved under the Code.

The following Code definitions require consideration:

1. "access contract" –

The Code defines "access contract" as:

"an agreement between a *network operator* and a person for the person to have 'access' (as defined in section 103 of the Act) to 'services' (as defined in section 103 of the Act) on a network.

{Note: The person who has the contract with the *network operator* is called a "user".}

The MSLA defines "access contract" as:

"an agreement between Western Power and the *user*, under which Western Power agrees to provide access to services to the *user*."

It is considered that the Code's definition does not require amendment as it is accurate and appropriate for the purposes of the Code. It is also noted that the Metrology Procedure shares the same definition of "access contract" as the Code.

It is recommended that the next review of the MSLA by the Economic Regulation Authority (**the Authority**) considers whether this definition requires amendment to align with the Code and Metrology Procedure.

2. "accumulation meter" –

The Code defines "accumulation meter" as:

“a meter that measures *accumulated energy data* and records it in one or more *accumulated energy registers*, and includes a *meter* with *interval energy data* storage capability which is deemed to be an *accumulation meter* under clause 3.2(2).”

The Metrology Procedure defines “accumulation meter” as:

“a *meter* that measures *accumulated energy data* and records it in one or more *accumulated energy registers*.”

It needs be considered whether the definition of “accumulation meter” in the Metrology Procedure should include a meter with interval data storage capability which is deemed to be an accumulation meter. It is recommended that the next review of the Metrology Procedure by the Authority considers whether this definition requires amendment.

3. “average daily consumption” –

The Code defines “average daily consumption” as:

“average daily consumption for a *metering point* is to be expressed as a measure of *energy* over time, and means a measurement (including an *estimated* or *substituted* measurement) of *electricity* production or consumption over a period at the *metering point*, divided by the number of days in the period.”

The Metrology Procedure defines “average daily consumption as”

“average daily consumption for a *metering point* is to be expressed in energy units per day, and means a measurement (including an estimated or substituted measurement) of electricity production or consumption over a period at the *metering point*, divided by the number of days in the period.”

There is a minor difference between the two definitions but it does not provide for a material difference in meaning. Therefore, it is considered that an amendment to the Code is not justified in this instance.

4. “check meter” –

The Code defines “check meter” as:

“subject to clause 3.13(5), a *meter* that meets the requirements of clause 3.13 and used under this *Code* as a secondary source of *energy data*.”

The Metrology Procedure defines “check meter” as:

“a *meter* used as the source of *energy data* for validation and substitution purposes but not routinely used as a source of billing data except where the revenue and check meters are of equal accuracy.”

It is considered that the Code's definition does not require amendment as the difference between the definitions arises from the Code's definition being Code specific. Clause 3.13 of the Code sets out the requirements for check metering installations and, by referencing that clause, the Code's definition includes the necessary detail regarding the description of a check meter.

5. "Code of Conduct" –

The Code defines "Code of Conduct" as:

"the Code made by the Minister under section 79 of the Act.

{Note: At the time this Code was made, the Code of Conduct was the Code of Conduct (For the Supply of Electricity to Small Use Customers) 2004.}

The Metrology Procedure defines "Code of Conduct" as:

"the Code made by the Minister under Schedule 3, section 1 of the Act."

Section 79 of the Act provides the Authority with the power to approve a code of conduct under that section. However, Schedule 3, section 1 of the Act states, "The initial code of conduct under section 79 is to be approved by the Minister instead of by the Authority."

The *Code of Conduct For the Supply of Electricity to Small Use Customers (the Customer Code)* was the initial Customer Code and was made in 2004 (and approved by the Minister in accordance with Schedule 3, section 1 of the Act). However, since the initial Customer Code was made, it has been amended several times by the Authority and is now the *Code of Conduct For the Supply of Electricity to Small Use Customers 2008*. On 1 July 2010, further amendments to the Customer Code will be implemented by the Authority. Therefore, it is recommended that the definition for "Code of Conduct" in the Code is amended to reflect that the Customer Code is now approved by the Authority and has been updated since the initial Customer Code was made by the Minister.

6. "communication rules" –

The Code defines "communication rules" as:

"in relation to a *network operator's network*, means (subject to clause 6.4) rules governing the file formats, protocols and timeframes for the communication of information and *data* under clause 6.7 and this Code, and between *Code participants*, which have been approved by the *Authority* under Division 6.2."

The Metrology Procedure defines "Communication Rules" as:

“the rules governing the file formats, protocols and timeframes for the communication of information and data between *Code* participants, which have been approved by the *Authority*”.

The Code’s definition is Code specific and more prescriptive than the Metrology Procedure’s definition, which is primarily because the Code’s definition references clauses and divisions within the Code. The difference in the definitions does not provide for a material difference in meaning and it is considered that the Code’s definition does not require amendment.

7. “communications link” –

The Code defines “communications link” as:

“all communications devices and methods which comply with this Code so as to enable a meter of a metering point to be read from a remote location 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 the 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.

{Note: Clause 3.7 specifies the minimum requirements for communications devices connected to a telecommunications network.}

The Metrology Procedure defines “communications link” as:

“all communications equipment, processes and arrangements which 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.”

The Mandatory Link Criteria defines “communications link” as:

“all communications equipment, processes and arrangements which 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.”

The definitions in the Metrology Procedure and Mandatory Link Criteria are identical but there is a difference between that definition and the Code’s definition. However, the difference in the definitions does not provide for a material difference in meaning. To ensure consistency it may be appropriate to align the definitions by amending the Code’s definition but there is no material need to do so.

8. “connect” –

The Code defines “connect” as:

“to attach by way of a physical link to a *network* and to energise the link.”

The Metrology Procedure defines “connect” as:

“to form a physical link to or through a *network*.”

Whilst “connect” is defined in the definitions under clause 1.3 of the Code, the term is not used in the Code. It is recommended that if there is no requirement to define “connect” in the Code that the term and its definition be removed from clause 1.3.

9. “connection point” –

The Code defines “connection point” as:

“(a) in relation to a *network* that is a ‘*covered network*’ — has the meaning given to it in the *Access Code*; and

{Note: At the time this *Code* was made, the definition in the *Access Code* was:

“ ‘**connection point**’ means a point on a *covered network* identified in an *access contract* as an *entry point* or *exit point*.”}

(b) otherwise — means a *transmission connection* or a *distribution connection* on a *network*, but does not include a point at which *electricity* is transferred between the *transmission system* and the *distribution system*,

but under clause 3.24 does not include an *entry point* or an *exit point* for which the *metering installation* includes a *pre-payment meter*.”

The Metrology Procedure defines “connection point” as:

“an *exit point* or an *entry point* identified or to be identified as such in an electricity transfer access contract.”

The Code’s definition may require amendment if the Code is amended to address the functionality of prepayment meters. Otherwise, the Code’s definition is considered appropriate for the Code’s purposes.

10. “current user” –

The Code defines “current user” as:

“for a *metering point*, means the *user* recorded as such in the *registry* for the *metering point*.”

The Metrology Procedure defines “current user” as:

“the *user* recorded as such in the *registry*”.

It is considered that an amendment to the Code’s definition is not required. Whilst there is a minor difference in the definitions, it is not material and the Code’s definition provides a degree of clarity that is appropriate for the Code’s purposes.

11. “day” –

The Code defines “day” as:

“unless otherwise specified, the 24 hour period beginning and ending at midnight Western Standard Time (WST).”

The Customer Transfer Code defines “trading day” as:

“the meaning given to it in the *market rules*.”

{Note: At the time this *Code* was made, the definition in the *market rules* was—“ **‘trading day’** A period of 24 hours commencing at 8 AM on any after Energy Market Commencement, except where the IMO declares that part of a Trading Day is to be treated as a full Trading Day under clause 9.1.1, in which case that part is a Trading Day.”}

The definition in the Wholesale Electricity Market Rules (**Market Rules**) remains the same as the definition quoted in the Customer Transfer Code.

Analysis of this definition is included in section 2.1 of the Issues Paper (page 7).

12. “electricity networks corporation” –

The Code defines “electricity networks corporation” as:

“subject to clause 1.8, the body corporate established under section 4(1)(b) of the *Electricity Corporations Act 2005*.”

The Metrology Procedure defines “electricity networks corporation” as:

“the body corporate established under section 4 of the *Electricity Corporation Act 1994*.”

The *Electricity Corporations Act 2005* amended and replaced the *Electricity Corporation Act 1994*. One of the principal changes was the restructure of Western Power (the *electricity networks corporation*) into four Government owned entities, including the new *electricity networks corporation* (which retained the name Western Power). Therefore, the Code’s definition is accurate and the Metrology Procedure’s definition requires amending to reflect that the *Electricity Corporation Act 1994* has been replaced and the existing *electricity networks corporation* was established under the *Electricity Corporations Act 2005*.

13. “electronic” –

The Code defines “electronic” as:

“(a) in connection with a *notice* (including matters related to a *notice* such as an address), means (subject to the *communication rules*) a communication of information by means of guided or unguided electromagnetic energy, or both, by way of packet transfer between and within computer networks using the TCP/IP or other widely-accepted protocol for packet transfer; and

(b) in connection with a *meter*, means the transfer of information into or out of the *meter* by way of a telecommunications network or pulsing signals or other widely accepted communications protocols used for the transfer of *data* between computerised devices.”

The Metrology Procedure defines “electronic” as:

“in relation to connection with a *meter*, means the transfer of information into or out of the *meter* by way of a telecommunications network for the delivery of *energy data* or pulsing signals or other widely accepted communications protocols used for the transfer of data between computerised equipment.”

The material difference between the two definitions is section “(a)” in the Code’s definition, which is not included in the Metrology Procedure’s definition. This part of the Code’s definition is required in the Code as the Code provides for the issuing of a “notice” under Part 7. The issuing of a “notice” is not provided for in the Metrology Procedure. Therefore, it is considered that neither the Code nor the Metrology Procedure’s definition requires amendment.

14. “estimate” –

The Code defines “estimate” as:

“an estimate in accordance with this *Code*.”

The Metrology Procedure defines “estimate” as:

“an estimate calculation of *energy data* electricity production or consumption at a *metering point* for a period which is not yet scheduled to be read, such calculation being made in compliance with the schedules to this *Metrology Procedure*.”

Whilst the definitions of “estimate” are different, the Code’s definition is considered accurate and appropriate for the Code’s purposes. Therefore, it is considered that the Code’s definition does not require amendment.

15. “generating plant” –

The Code defines “generating plant” as:

“in relation to a *connection point*, means all equipment involved in generating *electricity* at the *connection point*.”

The Metrology Procedure defines “generating plant” as:

“in relation to a *connection point*, means all equipment involved in generating electricity.”

The difference between the definitions is minor and it is considered that the Code’s definition is accurate and appropriate for the purposes of the Code and therefore does not require amendment.

16. “generator” –

The Code defines “generator” as –

“a person who holds (or but for an exemption order under section 8 of the Act would be required by section 7 of the Act to hold) a generation licence or integrated regional licence under Part 2 of the Act for either or both of the construction and operation of generating works, and if any enactment (including regulations made

under section 31A of the *Electricity Corporation Act 1994*) has the effect of deeming such a licence to be held by a part of the person, means that part.

{Note: The definition of ‘generator’ includes all *generators* but under clause 1.2, this *Code* only applies to certain *generators*.}

The Metrology Procedure defines “generator” as:

“a person who generates electricity and who holds a generation licence issued by the *Authority*.”

The Code’s definition requires amendment. The *Electricity Corporation Act 1994* has been amended and replaced by the *Electricity Corporations Act 2005* (see point 12 for further information). However, with the exception of the reference to an Act that has been replaced, the Code’s definition is considered accurate and appropriate for the Code’s purposes.

17. “good electricity industry practice” –

The Code defines “good electricity industry practice” as:

“the exercise of that degree of skill, diligence, prudence and foresight that a skilled and experienced person would reasonably and ordinarily exercise under comparable conditions and circumstances consistent with applicable enactments and statutory instruments and applicable recognised codes, standards and guidelines.

{Note: The determination of comparable conditions is to take into account factors such as the relative size, duty, age and technological status of the relevant facility and the applicable regulatory instruments.}

The Metrology Procedure defines “good electricity industry practice” as:

“the exercise of that degree of skill, diligence, prudence and foresight that a skilled and experienced person would reasonably and ordinarily exercise under comparable conditions and circumstances consistent with applicable written laws and statutory instruments and applicable recognised codes, standards and guidelines.”

It is recommended that “enactments” in the Code’s definition is replaced with “written laws”. Whilst this will provide for the same definition as the Metrology Procedure, it is considered that there is merit in referring to “written laws” to ensure consistency with the Interpretation Act 1984, which refers to “written law” being “enacted” rather than to “enactments”.

18. “interval energy data” –

The Code defines “interval energy data” as –

“a measurement (including an *estimated* or *substituted* measurement) of *electricity* production or consumption at a *metering point* which is accumulated for each *trading interval* or, if applicable under clause 3.16(3), each submultiple of a *trading interval*.”

The Metrology Procedure defines “interval energy data” as:

“is to be expressed in *energy units* or multiples thereof, and means a measurement (including an *estimated* or *substituted* measurement) of the production or consumption of electricity production or consumption at a *metering point* which is accumulated for each *trading interval*, or such sub-interval as has been previously agreed between the *Network Operator* and relevant *Code Participant*.”

There is a minor difference between the definitions but this is primarily because the Code’s definition references Code clause 3.16(3), which provides for an agreement to be reached between the network operator and Code participant to allow for the energy data to be recorded in submultiples of a trading interval. A similar clause does not exist in the Metrology Procedure, but rather, is contained within the Metrology Procedure’s definition of “interval energy data”.

It is considered that the Code’s definition does not require amendment as the difference between the definitions arises from the Code’s definition being Code specific.

19. “interval meter” –

The Code defines “interval meter” as:

“a *meter* that measures *interval energy data* and records it in a *data logger*, and excludes a *meter* with *interval energy data* storage capability which is deemed to be an *accumulation meter* under clause 3.2(2).”

The Metrology Procedure and Mandatory Link Criteria define “interval meter” as:

“a *meter* that measures *interval energy data* and records it in a *data logger*.”

It is considered that the Code’s definition does not require amendment as the difference between the definitions arises from the Code’s definition being Code specific. Clause 3.2(2) of the Code allows for the installation of a meter with interval energy data storage capability which can be declared as an accumulation meter in the registry. This needs to be, and is, reflected in the Code’s definition.

20. “load” –

The Code defines “load” as:

“(a) for a *metering point*, the amount of electrical energy transferred out of a *network* at the *metering point* at a specified time or across a specified period; and

(b) for a *connection point*, the aggregate of such loads across all *metering points* for the *connection point*.”

The Metrology Procedure defines “load” as:

“the amount of electrical power energy transferred out of a network at *connection point* at a specified time or across a specified period.”

It needs to be considered whether the Code’s definition should be amended to reflect the Metrology Procedure’s definition. The Code’s definition does not necessarily need to include “(a)” for the Code to be effective. Electrical power is delivered to a person from the network at a connection point, not a metering point. The metering point (or metering points) measures the amount of load transferred out of the network at the connection point.

21. “meter” –

The Code defines “meter” as:

“a device complying with this *Code* which measures and records *electricity* production or consumption but under clause 3.24 does not include a *prepayment meter*.”

{Note: A *meter* contains one or more *measurement elements*.}

The Metrology Procedure defines “meter” as:

“a device [complying with the relevant requirements of the AS 1284 series of standards] which measures and records the production or consumption of electrical energy, electricity production or consumption.”

It needs to be considered whether the Code’s definition should be amended to reflect the Metrology Procedure’s definition. The Issues Paper asks whether the Code should be amended to address the functionality of prepayment meters by defining how it will regulate pre-payment meters and associated services to support the requirements of the Customer Code. If such amendments were made to the Code the definition of “meter” would need to be amended. Also, the Issues Paper recommends an amendment to clause 6.8(d) to add a requirement for the systematic treatment of populations of meters in accordance with Australian Standard AS 1284. If this amendment is made then there would be further reason for the Code to adopt the Metrology Procedure’s definition of “meter”.

22. “metering data agent” –

The Code defines “metering data agent” as:

“a *network operator* for a *network*, means the *electricity networks corporation* appointed under clause 5.29(a) as the *network operator’s metering data agent* for the *network*.”

The Metrology Procedure defines “metering data agent” as:

“a *Network Operator* for a *network* means the body appointed the *Network Operator’s metering data agent* for the *network* in accordance with the *Metering Code*.”

The difference between the definitions is minor and arises from the definitions being specific to their respective documents. It is considered that an amendment to the Code’s definition is not required.

23. “metering database” –

The Code defines “metering database” as:

“a database under clause 4.1(1).”

The Metrology Procedure defines “metering database” as:

“a database containing the *registry* and *energy data*.”

Clause 4.1(1) of the Code requires a network operator to “establish, maintain and administer a “metering database” containing, for each metering point on its network, standing data and energy data”. However, clause 4.2 of the Code states, “The *registry* forms part of the *metering database* and holds *standing data* for *metering points*”. It needs to be considered whether the Code’s definition should be amended to include reference to the registry, as it forms part of the metering database under the Code.

24. “metering equipment” –

The Code defines “metering equipment” as:

“a part of a *metering installation* and includes a *meter* but under clause 3.24 does not include a *pre-payment meter* or any part thereof.

{Note: *Metering equipment* may include manual reading facilities, clocks and, where required, *CTs* and *VTs* and computing or communications devices designed to facilitate *electronic* access and the connections between these items. The *communications link* is *metering equipment*.}

The Metrology Procedure defines “metering equipment” as:

“one or more parts of a *metering installation*.”

The Code’s definition may require amendment if the Code is amended to address the functionality of prepayment meters. It is also noted that the Issues Paper recommends that “meter” is added to the list of “metering equipment” that a “metering installation” may consist of under clause 3.5 of the Code.

25. “metering installation” –

The Code defines “metering installation” as:

“the devices and methods for the purpose of metrology (excluding under clause 3.24 any of the devices and methods for the purpose of metrology in connection with a *pre-payment meter*) which lie between:

(a) at one boundary, a *metering point*; and

(b) at the other boundary, either:

(i) if a telecommunications network is used for the delivery of *energy data* from the *metering point* — the point of connection to the telecommunications network; or

(ii) if there is no such telecommunications network — the interface port of either the *meter* or *data logger* or both.

{Note: A *metering installation* may include the combination of several *metering points* to derive the *energy data* for a *connection point*. Alternatively, in some instances where there is more than one *metering point* for a *connection point*, each *metering point* will have its own *metering installation*. A *metering installation* must be classified as a *revenue metering installation* or a *check metering installation*.}

The Metrology Procedure defines “metering installation” as:

“the equipment, processes and arrangements for the purpose of metrology which lie between:

at one boundary, either:

a) for a *connection point* of Type 1 to 6 — the *metering point*; or

b) for a *connection point* of Type 7 — the *connection point*; and

at the other boundary, either:

a) if a telecommunications network is used for the delivery of *energy data* from the *connection point* or *metering point* — the point of connection to the telecommunications network; or

- b) if there is no such telecommunications network — the interface port of either the *meter* or *data logger* or both.”

It needs to be considered whether the Code’s definition requires amendment. The Code includes provisions for Type 7 metering installations that are an un-metered load (the metering point for Type 7 installations is the connection point) but this is not reflected in the Code’s definition. Furthermore, the Code’s definition may require amendment if the Code is amended to address the functionality of prepayment meters.

26. “metering point” –

The Code defines “metering point” as:

- “(a) for a *connection point* of Type 1 to Type 6 — a point at which a *revenue meter* measures *electricity* production or consumption for the *connection point*; and
 (b) for a *connection point* of Type 7 — the *connection point*.”

{Note: A *metering point* for a *revenue metering installation* is to be located as close as possible to the *connection point*. clause 3.5(4).}

The Metrology Procedure defines “metering point” as:

- “a) for types 1-6, the point at which electricity is measured by a *revenue meter*
 b) for a type 7 *meter*, the *connection point*.”

It is considered that the Code’s definition does not require amendment as the difference between the definitions arises from the Code’s definition being Code specific.

27. “metering service” –

The Code defines “metering service” as:

“a service in connection with the measurement of *electricity* production or consumption, including in connection with:

- (a) the provision, installation, operation and *maintenance of metering equipment*; and
 (b) the obtaining, provision, storage and processing of *data*; and
 (c) services ancillary to the services listed in paragraphs (a) and (b) of this definition.”

The MLSA defines “metering service” as:

“the Standard Metering Services or the Extended Metering Services.”

The difference between the definitions arises from the definitions being specific to their respective documents. In particular, the Code does not provide for “Standard Metering Services” or “Extended Metering Services”. These are names (or categories) of services assigned by the network operator in its MSLA to the various “metering services” that a network operator has to provide under the Code. Therefore, it is considered that an amendment to the Code’s definition is not required.

28. “metropolitan area” –

The Code’s defines “metropolitan area” as:

“(a) the region described in the Third Schedule to the *Metropolitan Region Town Planning Scheme Act 1959*; and

(b) the local government district of Mandurah; and

(c) the local government district of Murray.

(d) the townsite of Albany, in the local government district of City of Albany; and

(e) the area constituted by the townsite of Bunbury, in the local government district of City of Bunbury; and

(f) the area constituted by the townsite of Geraldton, in the local government district of City of Geraldton; and

(g) the area constituted by the townsites of Kalgoorlie and Boulder, in the local government district of City of Kalgoorlie-Boulder; and

(h) the area constituted by the townsite of Karratha, in the local government district of Shire of Ashburton; and

(i) the area constituted by the townsites of Port Hedland and South Hedland, in the local government district of Town of Port Hedland.”

The Customer Code defines “metropolitan area” as:

“(a) the region described in Schedule 3 of the *Planning and Development Act 2005*;

(b) the local government district of Mandurah;

(c) the local government district of Murray; and

(d) the townsites, as constituted under section 26 of the *Land Administration Act 1997*, of –

- (i) Albany;
- (ii) Bunbury;
- (iii) Geraldton;
- (iv) Kalgoorlie;
- (v) Karratha;

- (vi) Port Hedland; and
- (vii) South Hedland.”

The Code's definition refers to “the region described in the Third Schedule to the *Metropolitan Region Town Planning Scheme Act 1959*”. This Act has been repealed and the definition should refer to Schedule 3 of the *Planning and Development Act 2005*.

The definition also lists townsites contained within their respective local government districts. To improve the clarity of the definition by referencing the primary legislation that the townsites are constituted under, it is recommended that the definition adopt the approach taken by the Customer Code and list the townsites “as constituted under section 26 of the *Land Administration Act 1997*”. This would also have the additional benefit of the Code and Customer Code's definitions being consistent.

29. “model service level agreement” –

The Code defines “model service level agreement” as:

“in relation to a *network operator's network*, means a *model service level agreement* under clause 6.6 and this *Code*, and approved by the *Authority* under Division 6.2.”

The Metrology Procedure defines “model service level agreement” as:

“in relation to a *Network Operator's network*, means:

- a) if the network is a covered network with an *access arrangement*— the part or parts of the *access arrangement* which deal with metering as a “supplementary matter” under the *Access Code*; and
- b) otherwise — a *model service level agreement* approved by the *Authority* under the provisions of the *Metering Code*.”

It is considered that the Code's definition does not require amendment as the difference between the definitions arises from the Code's definition being Code specific. The Code sets out the requirements for the MSLA and its approval by the Authority, and therefore the Code's definition needs to be consistent with these provisions.

30. “network operator” –

The Code defines “network operator” as:

“in relation to a *network*, means a person who holds (or but for an exemption order under section 8 of the Act would be required by section 7 of the Act to hold) a distribution licence, integrated regional licence or transmission licence under Part 2 of the Act for either or both of the construction and operation of the *network*, and if any enactment (including regulations made under section 31A of the *Electricity Corporation Act 1994*) has the effect of deeming such a licence to be held by a part of the person, means that part.

{Note: The definition of ‘network operator’ includes all *network operators* but under clause 1.2, this *Code* only applies to certain *network operators*.}

The Metrology Procedure defines “network operator” as:

“in relation to a network means a person who holds (a distribution licence, integrated regional licence or transmission licence issued by the *Authority*.”

The Code’s definition requires amendment. The *Electricity Corporation Act 1994* has been amended and replaced by the *Electricity Corporations Act 2005* (see point 12 for further information). However, with the exception of the reference to an Act that has been replaced, the Code’s definition is Code specific and considered appropriate for the Code’s purposes.

31. “NMI” –

The Code defines “NMI” as:

“the unique identifier assigned to a *metering point*.”

The Metrology Procedure defines “National Metering Identifier” or “NMI” as:

“the reference number required by the *Metering Code*, which uniquely identifies a *connection point* and which is issued under the Western Australian NMI Allocation Procedures”

It needs to be considered whether the Code’s definition requires amendment. The NMI Allocation Procedure for the Western Australia Electricity Market (**NMI Allocation Procedure**) utilises NMI numbering system developed and implemented across the National Electricity Market by NEMMCO (from 1 July 2009 NEMMCO ceased operations. NEMMCO’s roles and responsibilities have transitioned to the Australian Energy Market Operator).

The NMI Allocation Procedure states, “The National Metering Identifier (NMI) provides a unique identifier for each connection point within the NEM”. The NMI Allocation Procedure also states, “The general rule is: “A NMI will be allocated at the exit point or entry point”.” Therefore, it needs to be considered whether the Code’s definition should be amended to ensure it is consistent with the NMI Allocation Procedure.

32. “reactive energy” –

The Code defines “reactive energy” as:

“a measure in varhours (varh) of the alternating exchange of stored *electricity* in inductors and capacitors, which is the time-integral of the product of *voltage* and the out-of-phase component of electric current flow across a *metering point*.”

The Metrology Procedure defines “reactive energy” as:

“a measure in volt-ampère reactive hours (VARh) of the alternating exchange of stored energy in inductors and capacitors, which is the time-integral of the product of voltage and the out-of-phase component of electric current flow across a *metering point*.”

There is a minor difference between the definitions but it does not provide for a material difference in meaning. Furthermore, it is considered that the Code’s definition is accurate and appropriate for the purposes of the Code and therefore does not require amendment.

33. “registered metering installation provider” –

The Code defines “registered metering installation provider” as:

“a person registered by a *network operator* under clause 3.28, and who has not been deregistered under the *registration process*.”

The Metrology Procedure defines “registered metering installation provider” as:

“a person registered by a *Network Operator* in accordance with the *registration process* to undertake some or all of the Activities relating to the installation of *metering installations*, and who has not been deregistered under the *registration process*.”

There is a minor difference between the definitions but this is primarily because the Code’s definition references Code clause 3.28, which provides for the register or deregister of a person to undertake activities relating to the installation of metering installations. Therefore, it is considered that the Code’s definition does not require amendment as the difference between the definitions arises from the Code’s definition being Code specific.

34. “registration process” –

The Code defines “registration process” as:

“in relation to a *network operator’s network* means a registration process under clause 6.9 and this *Code*, approved by the *Authority* under Division 6.2.”

The Metrology Procedure defines “registration process” as:

“the approved *registration process* established by a *Network Operator* and approved by the *Authority* under the provisions of the *Metering Code*.”

It is considered that the Code’s definition does not require amendment as the difference between the definitions arises from the Code’s definition being Code specific. It is also

noted that the Metrology Procedure's definition refers to the registration process approved by the Authority under the Code.

35. "registry" –

The Code defines "registry" as:

"the part of the *metering database* which contains *standing data* in accordance with this *Code*.

{Note: The *registry* is the "meter registry" referred to in the *market rules*.}

The Metrology Procedure defines "registry" as:

"a registry containing standing data in accordance with the *Metering Code*."

It is considered that the Code's definition does not require amendment as the difference between the definitions arises from the Code's definition being Code specific. It is also noted that the Metrology Procedure's definition refers to the Code.

36. "retailer" –

The Code defines "retailer" as:

"a person who holds (or but for an exemption order under section 8 of the Act would be required by section 7 of the Act to hold) a retail licence or integrated regional licence under Part 2 of the Act for the sale of electricity to customers, and if any enactment (including regulations made under section 31A of the *Electricity Corporation Act 1994*) has the effect of deeming the relevant licence to be held by a part of the person, means that part.

{Note: The definition of 'retailer' includes all *retailers* but under clause 1.2, this *Code* only applies to certain *retailers*.}

The Metrology Procedure defines "retailer" as:

"a person who holds a retail licence or integrated regional licence issued by the *Authority*."

The Code's definition requires amendment. The *Electricity Corporation Act 1994* has been amended and replaced by the *Electricity Corporations Act 2005* (see point 12 for further information). However, with the exception of the reference to an Act that has been replaced, the Code's definition is Code specific and considered appropriate for the Code's purposes. It should also be considered whether "enactment" should be replaced with "written law" (see point 17 for further information).

37. "revenue meter" –

The Code defines "revenue meter" as:

“subject to clause 3.13(5), a *meter* that is used under this *Code* as the source of *energy data*, unless this *Code* permits an alternative source of *energy data* to be used.”

The Metrology Procedure defines “revenue meter” as:

“the *meter* that is used for obtaining the primary source of *energy data*.”

There is a difference between the two definitions but it does not provide for a material difference in meaning. The Code’s definition is also Code specific and therefore it is considered that the Code’s definition does not require amendment.

38. “service level agreement” –

The Code defines “service level agreement” as:

“a written or unwritten agreement that sets out the terms and conditions under which a *network operator*² provides *metering services* to a *user*, whether or not that agreement also contains other provisions governing the parties’ rights, liabilities and obligations, and in respect of a *metering point*, *metering installation* or a *metering service* means the agreement which relates to, as applicable, the *metering point*, *metering installation* or *metering service*.”

{Note: A *service level agreement* may be contained in an *access contract*. Clause 5.2 deals with the terms of an unwritten *service level agreement*.}

The Metrology Procedure defines “service level agreement” as:

“a written agreement that sets out the terms and conditions under which a *Network Operator* must provide *metering services* to a *user*, whether or not that agreement also contains other provisions governing the parties’ rights, liabilities and obligations.”

There is a difference between the two definitions but it does not provide for a material difference in meaning. Furthermore, it is considered that the Code’s definition is accurate and appropriate for the purposes of the Code and therefore does not require amendment.

39. “standing data” –

The Code defines “standing data” as:

“the meaning given to it in clause 4.3(1).”

The Metrology Procedure defines “standing data” as:

“the periodically updated information about a *connection point* that is maintained in accordance with the *Metering Code* and the associated *Communication Rules*.”

It is considered that the Code's definition does not require amendment as the difference between the definitions arises from the Code's definition being Code specific. Code clause 4.3(1) sets out the description and designated source of "standing data" and it is therefore appropriate that the Code definition refer to it. It is also noted that the Metrology Procedure's definition refers to the Code.

40. "substitute" –

The Code defines "substitute" as:

"a substitute in accordance with this *Code*."

The Metrology Procedure defines "substitute" as:

"the a substitution of *energy data* obtained, or scheduled to be obtained, from an actual *meter* reading with *energy data* determined in accordance with the data substitution procedures defined in clause 4.4 under the circumstances described in the *Metering Code*."

It is considered that the Code's definition does not require amendment as the difference between the definitions arises from the Code's definition being Code specific. The Code addresses the substitution of energy data under a number of clauses, including clause 5.22 and Appendix 3 (which sets out the data substitution and estimation rules that a network operator may use) and it is therefore appropriate that the Code's definition be broad enough to ensure all the Code provisions relating to the substitution of data are covered by the definition.

41. "user" –

The Code defines "user" as:

"a person who has an *access contract*."

The Metrology Procedure defines "user" as:

"[in respect of a *connection point*] means a person who has an *Access Contract* in respect of the *connection point* for the transfer of electricity [at the *connection point*]."

It is considered that the Code's definition does not require amendment. It is noted that the Code and Metrology Procedure share the same definition of "access contract".

42. "validation" –

The Code defines "validation" as:

"validation in accordance with this *Code*."

The Metrology Procedure defines “validation” as:

“validation in accordance with this *Metrology Procedure*.”

An amendment to the Code's definition is not required. Both definitions relate to the requirements of their respective document.