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ELECTRICITY INDUSTRY ACT 2004

ELECTRICITY INDUSTRY (METERING) CODE 2012

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Issued by the Minister

I, PETER COLLIER, Minister for Energy for the State of Western Australia, under section 39(2a) of the *Electricity Industry Act 2004* hereby issue the *Code* contained in this instrument in respect of the matter specified in section 39(2)(a) of the Act.

P. COLLIER.

Dated at Perth this 30th day of November, 2012.

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ELECTRICITY INDUSTRY ACT 2004

ELECTRICITY INDUSTRY (METERING) CODE 2012

Introduction

{This *Code* is made by the Minister under section 39(2a) of the *Electricity Industry Act 2004* (**"Act"**) in respect of the matter mentioned in section 39(2)(a) of the Act.

This *Code* aims to be:

- consistent with the *Electricity Networks Access Code 2004*, the *Electricity Industry (Wholesale Electricity Market) Regulations 2004*, and the *Electricity Industry Customer Transfer Code 2004*; and
- where appropriate given conditions prevailing in Western Australia, consistent with the National Electricity Rules.

This *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*.

This *Code* sets out provisions relating to:

(a) Provision, ownership, installation and maintenance of *meters* and *metering installations*; (Part 3)

(b) Accuracy and specification of *metering installations*; (Part 3)

(c) *Revenue metering installations* and *check metering installations* used for the measurement of *active energy* and where appropriate, *reactive energy*; (Part 3)

(d) The *metering database*, including the *registry* requirements; (Part 4)

(e) Provision of and *charges* for *metering services* provided by the *network operator*; (Part 5)

(f) Collection, processing and provision of *energy data* and *standing data*; (Part 5)

(g) Security of, ownership and rights of access to *energy data* and *standing data*; (Part 5)

(h) *Documents* under this *Code* including *model service level agreements* and *communication rules* for the transfer of *energy data* and *standing data* to the relevant parties; (Part 6) and

(i) A *dispute* resolution process. (Part 8)}

Part 1 – Preliminary

1.1A Citation

This Code may be cited as the *Electricity Industry (Metering) Code 2012*.

1.1 Commencement

(1) This *Code* comes into operation upon the day it is published in the *Government Gazette*.

(2) [Not used]

(3) [Not used]

1.2 Application

(1) This *Code* applies to:

(a) a *network operator*, to the extent that a condition of a licence under Part 2 of the Act, or of an exemption order under section 8 of the Act, requires it to comply with this *Code*; and

(b) a *retailer* to the extent that a condition of a licence under Part 2 of the Act, or of an exemption order under section 8 of the Act, requires it to comply with this *Code*; and

(c) a *generator* to the extent that a condition of a licence under Part 2 of the Act, or of an exemption order under section 8 of the Act, requires it to comply with this *Code*; and

(d) if the *network operator* has elected under clause 5.28 for the *electricity networks corporation* to be its *metering data agent* — the *electricity networks corporation* acting as the *metering data agent*; and

(e) a *user* who:

(i) is not a *Code participant* under clause 1.2(1)(b) or 1.2(1)(c); and

(ii) has an *access contract* at a *connection point* on a *network* of which the *network operator* is a *Code participant*; and

{Note: This clause applies to *users* only if the *network* is "covered" by this *Code*.}

(f) the *IMO*, to the extent that the *market rules* provide; and

(g) the *Authority*,

each of which is a **"Code participant"**.

1.3 Definitions

In this *Code*, unless the contrary intention appears:

"2005 Metering Code" means the *Electricity Industry Metering Code 2005* published in the *Government Gazette* on 23 December 2005 and repealed by clause 10.1.

"access arrangement" has the meaning given to it in the *Access Code*.

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

" **'access arrangement'** means an arrangement for access to a *covered network* that has been approved by the *Authority* under this Code."}

"Access Code" means the Code made by the Minister under Part 8 of the Act.

{Note: At the time this *Code* was made, the *Access Code* was the *Electricity Networks Access Code 2004*.}

"access contract" means 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*".}

{Note: At the time this *Code* was made, the definition of the expression "access contract" in this *Code* is broader than the definition of the same expression in the *Access Code*, because it is not limited to agreements entered into under the *Access Code*. The expression "access contract" in this *Code* is thus basically the same as the expression "contract for services" in the *Access Code*.}

"accumulated energy data" 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 at a *metering point*, which is accumulated for a period longer than a *trading interval*.

"accumulated energy register" means the visible indication displayed on an *accumulation meter*, or the memory location within the *meter*, that records *accumulated energy data.*

"accumulation meter" means 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).

"active energy" means a measure of *electricity*, being the time integral of the product of *voltage* and the in-phase component of electric current flow across a *metering point* expressed in Watt hours (Wh) or multiples thereof.

"actual value" means *energy data* for a *metering point* which has physically been read (or remotely collected by way of a *communications link* or an *automated meter reading system*) from the *meter* associated with the *metering point*, and includes a *deemed actual value*.

"address attributes" has the meaning given to it in clause 5.19(2)(a).

"affected person" is defined in clause 7.4(1A).

"apparent energy" means a measure of *electricity*, being the time integral of the product of *voltage* and the electric current flow across a *metering point* expressed in Volt Amp hours (VAh) or multiples thereof.

"arbitrator" has the meaning given to it in the *Energy Arbitration and Review Act 1998*.

"AS" followed by a designation, means the standard so designated published by Standards Australia Limited, and:

(a) if the designation is followed by a year — means the edition of the standard published in that year; and

(b) if the designation is not followed by a year — means (unless the contrary intention is expressed) the edition of the standard which was current at the commencement time of the enactment which inserted the relevant reference to the standard.

"associate" has the meaning given to it in the *Access Code*.

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

> " **'associate'**, in relation to a person and subject to section 13.2 of the *Access Code*, which extends the meaning of 'associate' to include any other business of the service provider, has the meaning it would have under Division 2 of Part 1.2 of the *Corporations Act 2001* of the Commonwealth if sections 13, 16(2) and 17 of that Act were repealed, except that a person will not be considered to be an *associate* of a service provider solely because that person proposes to enter, or has entered, into a contract, arrangement or understanding with the service provider for the provision of a covered service."

At the time this *Code* was made, the following were examples of persons who are *associates* of a body corporate under the *Corporations Act 2001* of the Commonwealth:

- a director or secretary of the body corporate; and
- a *related body corporate* of the body corporate; and
- another body corporate that can control or influence the composition of the board or the conduct of the affairs of a body corporate.}

"Authority" means the Economic Regulation Authority established under the *Economic Regulation Authority Act 2003*.

"automated meter reading system" means a system operated by the person who has control or management of a premises, to enable *meters* located throughout the premises to be read remotely at a single location within the premises.

"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.

"bulk standing data request" has the meaning given to it in clause 5.14(1).

"business day" means any *day* that is not a Saturday, a Sunday or a public holiday throughout Western Australia.

"CEO negotiations" has the meaning given to it in clause 8.1(3).

"charge" in relation to a *metering service*, means the amount to be paid by a *Code participant* to the *network operator*[1] for the provision of the *metering service.*

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

"check metering data" means *energy data* produced by a *check meter*.

"check metering installation" means a *metering installation* (or, where a partial check *metering installation* is permitted under clause 3.13, that part of a *metering installation*) which contains a *check meter*.

"checksum" means a single digit numeric identifier that is calculated to reduce the frequency of *NMI* data entry errors.

"Code" means this *Electricity Industry (Metering) Code 2012*.

"Code objectives" has the meaning given in clause 2.1.

"Code of Conduct" means the Code approved by the *Authority* under section 79 of the Act.

{Note: At the time this definition was last amended, the *Code of Conduct* was the *Code of Conduct for the Supply of Electricity to Small Use Customers*.}

"Code participant" means a person identified in clause 1.2 of this *Code*.

"committed", in clauses 3.3A, 3.11A and 3.14, has the meaning given to it in clause 3.14(5).

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

{Note: The **"communication rules"** incorporate and largely comprise the suite of technical documents known as the **"build pack"**.}

"communications link" means 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 (being a location not at the premises where the *meter* is situated) 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

[1] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or a *metering data agent*".

(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,

but does not include a component of an *automated meter reading system.*

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

"confidential information" has the meaning given to it in clause 7.4.

"connect" means to attach by way of a physical link to a *network* and to energise the link.

"connection point":

(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, or to be identified in, a *contract for services* 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*.

"contact details" means the *notified electronic* communication address, *notified* facsimile number, *notified* postal address and *notified* telephone number of a *Code participant.*

"contestable customer" means a *customer* that is "contestable" as defined in the *Customer Transfer Code*.

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

" **'contestable'** in relation to a *customer*, means a *customer* at an *exit point* where the amount of *electricity* transferred at the *exit point* exceeds the amount prescribed under section 93 of the *Electricity Corporation Act 1994* or under another enactment dealing with the progressive introduction of *customer* contestability."

The progressive introduction of customer contestability is now dealt with in the *Electricity Corporations (Prescribed Customers) Order 2007* made under the *Electricity Corporations Act 2005*.}

"covered network" has the meaning given to it under the *Access Code*.

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

" **'covered network'** means a network that is covered."}

"CT" means a *transformer* for use with *meters* and protection *devices* in which the electric current in the secondary winding is, within prescribed error limits, proportional to and in phase with the electric current in the primary winding.

"current user", for a *metering point*, means the *user* recorded as such in the *registry* for the *metering point*.

"customer" has the meaning given to it in section 3 of the Act.

{Note: At the time this *Code* was made, the definition in section 3 of the Act was:

" **'customer'** means a person to whom *electricity* is sold for the purpose of consumption."

Parts 3 and 6 of the Act give the expression "customer" a narrower meaning when it is used in those Parts, being the subset of customers who consume not more that 160 MWh of *electricity* per annum. This *Code* uses the expression **"small use customer"** to describe that subset of *customers* that consume not more than 160 MWh of *electricity* per annum.}

"customer attributes" has the meaning given to it in clause 5.19(2)(c).

"Customer Transfer Code" means the Code made by the Minister under section 39(2a) of the Act in respect of the matter mentioned in section 39(2)(b) of the Act.

{Note: At the time this *Code* was made, the *Customer Transfer Code* was the *Electricity Industry Customer Transfer Code 2004*.}

"data" means *energy data* or *standing data*.

"data logger" means a *metering installation* database, *metering database* or a *device* that collects *electronic* signals from a *measurement element* and records *interval energy data*.

{Note: A *data logger* may contain *data* storage capability, it may be a separate *device* or be combined with the *energy* measuring components within one physical *device* or it may be a combination of the foregoing elements.}

"date for a scheduled meter reading", for a *metering point*, means a date determined in accordance with the *service level agreement* for conducting a scheduled reading (as distinct from a special reading) of the *meter* at the *metering point*.

{Note: The date will either:

(a) be specified in a list *published* under clause 6.6; or

(b) be determined by applying the *reading day number* specified in a list *published* under clause 6.6.}

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

"deemed actual value" means an *estimated* or *substituted* value designated as such for a *metering point* under clause 5.23(1).

"designated source" has the meaning given to it in clause 4.3(2).

"device" includes equipment.

"dispute" means any dispute or difference arising in respect of any matter under or in connection with this *Code* between any *Code participants,* the subject matter of which is not also an access dispute under the *Access Code*, a dispute under the *market rules,* a dispute or a complaint under the *Code of Conduct* or a dispute under the *Customer Transfer Code*.

{Note: A dispute under or in connection with a *document* would be a *dispute* under or in connection with this *Code*.}

"disputing party" has the meaning given to it in clause 8.1(1).

"distribution connection" means a point at which *electricity* is transferred to or from the *distribution system*.

"distribution system" has the meaning given to it in the Act.

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

" **'distribution system'** means any apparatus, equipment, plant or buildings used, or to be used, for, or in connection with, the transportation of *electricity* at nominal voltages of less than 66kV."}

"document" means any or all of the following:

(a) a *model service level agreement*; and

(b) *communication rules*; and

(c) a *metrology procedure*; and

(d) *mandatory link criteria*; and

(e) a *registration process*.

"electing network operator" has the meaning given to it in clause 5.28.

"electricity" has the meaning given to it in the Act.

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

" **'electricity'** includes electrical energy of any kind however produced, stored, transported or consumed."}

"electricity networks corporation" means the body corporate established under section 4(1)(b) of the *Electricity Corporations Act 2005*.

"electricity retail corporation" means the body corporate established under section 4(1)(c) of the *Electricity Corporations Act 2005*.

"electronic":

(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*.

"energy" means *active energy* or *reactive energy* or both as applicable.

"energy data" means *interval energy data* or *accumulated energy data*.

"Energy Data Verification Request Form" has the meaning given to it in clause 5.20(1).

"estimate" means an estimate in accordance with this *Code*.

"General Purpose" means the term applied by the National Measurement Institute constituted under Part 3 of the *National Measurement Act* to refer to the classification of a *meter.*

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

"generator" 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 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 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*.}

"good electricity industry practice" means 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.}

"IMO" means the independent market operator appointed under Part 9 of the Act.

"incoming retailer" has the meaning given to it in the *Customer Transfer Code*.

{Note: At the time this *Code* was made, the definition of *incoming retailer* was:

"in relation to a CTR or transfer, means the retailer that will supply a *contestable customer* after the transfer time".}

"instrument transformer" means either a *CT* or a *VT*.

"interval energy data" means 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 sub-multiple of a *trading interval.*

"interval meter" means 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).

"life support equipment" has the meaning given to it in the *Code of Conduct*.

"load" means:

(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*.

"maintain" includes (as necessary and as applicable) renew, replace or update.

"mandatory link criteria", in relation to a *network operator's network*, means criteria under which the installation of a *communications link* is mandatory under clause 3.6, approved by the *Authority* under Division 6.2.

"market" means the wholesale electricity market established under Part 9 of the Act.

"market customer" means a *rule participant* registered as a *market customer* under clauses 2.28.10, 2.28.11 or 2.28.13 under Chapter 2 of the *market rules*.

"market generator" means a *rule participant* registered as a *market generator* under clauses 2.28.6, 2.28.7, 2.28.8 or 2.28.13 under Chapter 2 of the *market rules*.

"market participant" means a *rule participant* that is a *market generator* or a *market customer*.

"market rules" has the meaning given to it in the Act.

{Note: At the time this *Code* was made, the definition of the Act was:

" **'market rules'** has the meaning given in section 123(1)."

At the time this *Code* was made section 123(1) of the Act read:

"Without limiting section 122, the regulations are to provide for there to be rules (the **"market rules"**) relating to the market and to the operation of the South West interconnected system setting out or dealing with such matters as are prescribed by the regulations."}

"measurement element" means an *energy* measuring component of a *meter* which converts *electricity* into either or both of:

(a) an *electronic* signal; and

(b) a mechanically recorded electrical measurement.

"meter" means a *device* which measures and records *electricity* production or consumption.

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

"Metering Advisory Committee" means the committee established by the *Authority* under clause 6.12.

"metering data agent" of 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*.

"metering data agency agreement" means an agreement between the *network operator* and its *metering data agent* which complies with clause 5.30.

"metering database" means a database under clause 4.1(1).

"metering equipment" means a part of a *metering installation* and includes a *meter.*

{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*.}

"metering installation" means the *devices* and methods for the purpose of metrology 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*.}

"metering point" means:

(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).}

"metering service" means 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.

"**metering service order**" has the meaning given in clause 6.6(1)(g) and includes a 'customer transfer request' as defined in the *Customer Transfer Code*.

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

" **'customer transfer request'** means a request by a *retailer* to a *network operator* made using the form *published* under clause 4.1 to *transfer* a *contestable customer* at an *exit point* in the *network operator's network* from one *retailer* to another."}

"method" includes process, arrangement, technique or algorithm.

"metrology procedure", in relation to a *network operator's network*, means a metrology procedure under clause 6.8 and this *Code*, approved by the *Authority* under Division 6.2.

"metropolitan area" means:

(a) the region described in the Third Schedule to the *Planning and Development Act 2005*; and

(b) the local government district of Mandurah; and

(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.

"model service level agreement", 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.

***"*National Measurement Act"** means the *National Measurement Act 1960* of the Commonwealth and any regulations made under that Act.

"network" means the *transmission system*, *distribution system* or both, as applicable, operated by a *network operator.*

"network operator", 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 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*.}

"NMI" means the unique identifier assigned to a *connection point*.

"non-regulated contract" has the meaning given to it in clause 3.18.

"notice" means a notice under clause 7.1 of this *Code.*

"notified", in relation to a telephone number, postal address, facsimile number or *electronic* communication address, means notified under clause 7.1 of this *Code*.

"notify" means to give a *notice.*

"participant", in clause 1.7, has the meaning given to it in that clause.

"power factor" means the ratio of the *active energy* to the *apparent energy* at a *metering point*.

"pre-payment meter" has the meaning given to it in the *Code of Conduct*.

{Note: At the time this *Code* was made, the definition of "pre-payment meter" in the *Code of Conduct* was:

" **'pre-payment meter'** means a *meter* that requires a customer to pay for the supply of electricity prior to consumption."}

"proposed amendment" is defined in clause 6.7(1A) and the definition is extended by clause 6.21(5)(f).

"publish" has the meaning given to it in clause 1.6.

"reactive energy" means 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.*

"reading day number" for a *metering point* means a number specified in a list *published* under the *service level agreement* to denote on which days during a year a scheduled reading (as distinct from a special reading) of the *meter* at the *metering point* will be conducted, and the meter reading frequency.

"registered metering installation provider" means a person registered by a *network operator* under clause 3.28, and who has not been deregistered under the *registration process.*

"registration process", 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.

"registry" means 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*.}

"regulated contract" has the meaning given to it in clause 3.18.

"related body corporate", in relation to a body corporate, means a body corporate that is related to the first-mentioned body corporate under the *Corporations Act 2001* of the Commonwealth.

"representative negotiations" has the meaning given to it in clause 8.1(1).

"retailer" 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 retail licence or integrated regional licence under Part 2 of the Act for the sale of electricity to customers, and if any enactment 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*.}

"revenue meter" means, 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.

"revenue metering installation" means a *metering installation* (or, where a partial *check metering installation* is permitted under clause 3.13, that part of a *metering installation*) which contains a *revenue meter*.

"rule participant" means a member of the class of persons as set out in clause 2.28.1 of the *market rules*.

"SCADA data" means *energy data* the accuracy and quality of which is not required to be determined and which is obtained via a Supervisory Control and Data Acquisition system used to control and operate a *network* and the *generating plant* connected to a *network*.

"senior management negotiations" has the meaning given to it in clause 8.1(2).

"service level agreement" means 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*.}

"site attributes" has the meaning given to it in clause 5.19(2)(b).

"small use customer" means a *customer* who consumes not more than 160 MWh of *electricity* per annum.

{Note: This *Code* uses the expression "small use customer" to refer to this narrower meaning given to the expression "customer" in Parts 3 and 6 of the *Act*.}

"South West interconnected system" has the meaning given to it in the Act.

{Note: At the time this *Code* was made, some parts of the SWIS were owned by the Western Power Corporation and some were privately owned.

At the time this *Code* was made the definition in the Act was:

"the interconnected transmission and distribution systems, generating works and associated works –

(a) located in the South West of the State and extending generally between Kalbarri, Albany and Kalgoorlie; and

(b) into which electricity is supplied by –

(i) one or more of the electricity generation plants at Kwinana, Muja, Collie and Pinjar; or

(ii) any prescribed electricity generation plant."}

"standing data" has the meaning given to it in clause 4.3(1).

[2] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

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

"time band" refers to a period of time within a *time of use tariff* to which a given tariff rate applies.

"time of use tariff" means a tariff structure in which some or all of the tariff varies according to the time at which *electricity* is supplied.

{Note: Typically a *time of use tariff* will comprise a fixed (standing) component, and then a variable usage component which varies with the time of day, week or season; for example the *time bands* might comprise "peak", "off-peak" and "shoulder".

"trading interval" means a 30 minute period ending on the hour (WST) or on the half hour and, where identified by a time, means the 30 minute period ending at that time.

"transfer", in relation to a *customer*, has the meaning given to it in the *Customer Transfer Code*.

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

" **'transfer'** means a transfer from one retailer to another under this Code of rights and obligations at an exit point in connection with the supply of electricity to a *contestable customer*."}

"transformer" means a *device* that reduces or increases alternating *voltage* or electric current.

"transmission connection" means a point at which *electricity* is transferred to or from the *transmission system*.

"transmission system" has the meaning given to it in the Act.

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

" **'transmission system'** means any apparatus, equipment, plant or buildings used, or to be used, for, or in connection with, the transportation of electricity at nominal voltages of 66kv or higher."}

"Type", in relation to a *metering installation* or *connection point*, has the meaning given in clause 3.9(1) or, if applicable, clause 3.9(2).

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

"validation" means validation in accordance with this *Code*.

"verifiable consent" means consent that is given by an *affected person* —

(a) expressly; and

(b) in *writing*; and

(c) if the *affected person* is a *customer* —

(i) after the person obtaining the consent has in plain language appropriate to the *customer* disclosed all matters materially relevant to the giving of the consent; and

(ii) which has not expired under clause 1.9.

"verification" means verification in accordance with this *Code*.

"voltage" means the electric force or electric potential between 2 points that gives rise to an electric current.

"VT" means a *transformer* for use with *meters* and protection *devices* in which the *voltage* across the secondary terminals is, within prescribed error limits, proportional to and in phase with the *voltage* across the primary terminals.

"writing" includes any electronic form capable of being reduced to paper form by being printed.

1.4 Interpretation

(1) Unless the contrary intention is apparent:

(a) a reference in this *Code* to an instrument or a provision of an instrument includes an amendment or supplement to, or replacement or novation of, the instrument or provision; and

(b) a reference in this *Code* to a person includes the person's executors, administrators, successors, substitutes and permitted assigns; and

(c) where a word or expression is given a particular meaning, other parts of speech and grammatical forms of that word or expression have a corresponding meaning; and

(d) where italic typeface has been applied to some words and expressions in this *Code*, it is solely to indicate that those words or expressions may be defined in clause 1.3 or elsewhere, and in interpreting this *Code* the fact that italic typeface has or has not been applied to a word or expression is to be disregarded. Nothing in this clause 1.4(1)(d) limits the application of clause 1.3; and

(e) where information in this *Code* is set out in braces (namely "{" and "}"), whether or not preceded by the expression "Note", "Outline" or "Example", the information:

(i) is provided for information only and does not form part of this *Code*; and

(ii) is to be disregarded in interpreting this *Code*; and

(iii) might not reflect amendments to this *Code* or other instruments or enactments;

and

(f) where information in the Appendices to this *Code* is set out in braces (namely "{" and "}"), whether or not preceded by the expression "Note", "Outline" or "Example", the information:

(i) is provided to assist readers; and

(ii) is to be regarded accordingly in interpreting the Appendices to this *Code*; and

(iii) may not reflect subsequent amendments to this *Code* or other enactments or instruments,

and in the event of an inconsistency between the information and another provision of this *Code*, the other provision is to prevail;

and

(g) footnotes form part of this *Code* and have legal effect under clause 5.29(b) and 5.30(3); and

(h) **"including"** and similar expressions are not words of limitation in this *Code*; and

(i) a reference in this *Code* to **"time"** means Western Standard Time, being the time at the 120th meridian of longitude east of Greenwich in England, or Co-ordinated Universal Time, as required by the *National Measurement Act*.

(2) In this *Code*:

(a) a reference to the *connection point:*

(i) "associated with" a *metering point* means the *connection point* for which *electricity* production or consumption is measured at the *metering point*; and

(ii) "associated with" a *load* means the *connection point* at which the *load* is supplied with *electricity*; and

(iii) "associated with" *energy data* means the *connection point* associated with the *metering point* to which the *energy data* relates; and

(iv) "associated with" a *customer* means that the *customer* is supplied with *electricity* by a *user* associated with the *connection point*;

and

(b) a reference to a *metering point:*

(i) "associated with" or "for" a *connection point* means a *metering point* at which *electricity* production or consumption is measured for the *connection point*; and

(ii) "on" a *network* means a *metering point* associated with a *connection point* on the *network*;

and

(c) a reference to the *current user*:

(i) "associated with", "for" or "at" a *metering point* means the *user* which is recorded in the *registry* as the *current user* in respect of the *metering point*; and

(ii) "associated with", "for" or "at" a *connection point* means the *user* which is recorded in the *registry* as the *current user* for a *metering point* associated with a *connection point*;

and

(d) a reference to a *user*:

(i) "associated with", "for" or "at" a *connection point* means a *user* who has an *access contract* in respect of the *connection point*; and

(ii) "associated with", "for" or "at" a *metering point* means the *user* at the *connection point* associated with the *metering point*; and

(iii) "on" a *network* means a *user* who has an access contract in respect of the *network*;

and

(e) a reference to a *customer*:

(i) "associated with" a *metering point* means a *customer* who is supplied with *electricity* by the *user* associated with the *metering point*; and

(ii) "associated with" a *connection point* means a *customer* who is supplied with *electricity* by the *user* associated with the *connection point*; and

(iii) "associated with" a *meter* means a *customer* who is supplied with *electricity* by the *user* associated with the *metering point* at which the *meter* measures and records *electricity* production and consumption;

and

(f) in relation to a *network operator*, a reference to:

(i) "its" *network* means the *network* in respect of which the *network operator* is the "network operator" within the meaning of clause 1.3; and

(ii) "its" *metering installation* means a *metering installation* on its *network*; and

(iii) "its"[3] *metering database* means the *metering database* containing *standing data* and *energy data* for *metering points* on its *network*; and

(iv) "its"[4] *registry* means the *registry* contained in its[5] *metering database*;

and

(g) a reference to a, or the, *metering installation*:

(i) "for" a *metering point* means the *metering installation* which contains the *meter* which measures and records *electricity* production and consumption at the *metering point*; and

(ii) "for" a *connection point* means a *metering installation* for a *metering point* associated with the *connection point*; and

(iii) "on" a *network* means a *metering installation* for a *connection point* on the *network*;

and

(h) a reference to *metering equipment* "for" or "associated with" a *metering point* means the *metering equipment* in the *metering installation* for the *metering point*; and

(i) a reference to *standing data* "for" a *connection point* means the *standing data* for a *metering point* associated with the *connection point*; and

(j) a reference to *energy data* "for" a *connection point* means the *energy data* for a *metering point* associated with the *connection point*.

1.5 Inconsistency with other enactments

(1) For the purposes of this clause 1.5, two enactments are not inconsistent with each other merely because they prescribe different standards of conduct if a person is able to comply with both enactments by complying with the one which prescribes the highest standard of conduct.

{Example: If one enactment permits a maximum 2% error level, and another enactment permits a maximum 1% error level, then a *device* with a 1% error level would comply with both enactments, and there would be no inconsistency for the purposes of this clause 1.5.}

(2) To the extent that this *Code* and the *National Measurement Act* are inconsistent, this *Code* does not operate to the extent of the inconsistency.

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[3] If clause 5.29(b) applies, read "its" as "its or its *metering data agent's*".

[4] If clause 5.29(b) applies, read "its" as "its or its *metering data agent's*".

[5] If clause 5.29(b) applies, read "its" as "its or its *metering data agent's*".

(3) To the extent that this *Code* and the *Electricity Act 1945* or any enactment made under the *Electricity Act 1945* are inconsistent, this *Code* does not operate to the extent of the inconsistency.

(4) To the extent that this *Code* and the *Energy Operators (Powers) Act 1979* or any enactment made under the *Energy Operators (Powers) Act 1979* are inconsistent, this *Code* does not operate to the extent of the inconsistency.

(5) To the extent that this *Code* and the *Code of Conduct* are inconsistent, this *Code* does not operate to the extent of the inconsistency.

(6) To the extent that this *Code* and a provision of Part 6 of, or Schedules 5 or 6 to, the *Electricity Corporation Act 1994* or any enactment made under Part 6 of, or Schedules 5 or 6 to, the *Electricity Corporation Act 1994* are inconsistent, this *Code* does not operate to the extent of the inconsistency.

1.6 Meaning of 'publish'

If a person is required by this *Code* to **"publish"** a thing, the person must:

(a) place the thing upon an internet website under the person's control; and

(aa) retain the thing placed upon the internet website under clause 1.6(a) until the later of:

(i) the time the person ceases to be a *Code participant*; and

(ii) the 7th anniversary of its being placed on the website; and

(b) if the person is the *Authority* — send an *electronic notice* to the *IMO* and to each *Code participant* who has registered with the *Authority* for the purposes of this clause 1.6, advising that the thing has been placed on the internet website; and

(c) if the person is the *network operator*[6] —

(i) send an *electronic notice* to the *Authority*, each *user* of the *network operator's network* and the *IMO*, advising that the thing has been placed on the internet website;

(ii) make available a hardcopy of the thing for inspection by the public, without cost, during normal office hours at its principal place of business in Western Australia; and

(iii) if reasonably requested by a person, make available within a reasonable time frame, and at a reasonable cost to the person (which cost is limited to the *network operator's* direct costs and is to exclude any allowance for overheads and profit margin), a hard copy of the thing for removal from its principal place of business.

[6] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

1.7 How this Code applies to multiple users

(1) This clause 1.7 applies if there is more than one *user* with an *access contract* in respect of a *connection point*.

(2) In such a case each *user* in relation to the *network* is referred to in this clause 1.7 as a **"participant"**.

(3) If this *Code* requires or permits something to be done by the *user*, that thing may be done by one of the *participants* on behalf of all the *participants*, provided that each *participant* complies with this *Code*.

(4) If a provision of this *Code* refers to the *user* bearing any costs, the provision applies as if the provision referred to any of the *participant*s bearing any costs.

(5) If a provision of this *Code* refers to the *user* doing something, the provision applies as if the provision referred to one or more of the *participant*s doing the thing on behalf of all the *participant*s.

(6) If responsibility for complying with the obligations imposed by this *Code* on the *user* is allocated among them by their *access contracts* or their *service level agreements*, then each *user* is responsible for complying with the obligations allocated to it.

1.8 [Not used]

1.9 Expiry of verifiable consent

(1) *Verifiable consent* expires at the earlier of—

(a) the time specified in or ascertainable from the *verifiable consent* as the time of its expiry; or

(b) 1 month after renewal is sought under clause 1.9(2), unless it is renewed under clause 1.9(3).

(2) A *network operator* may seek renewed *verifiable consent*, not earlier than 12 months after it is (as the case may be) given or last renewed.

(3) *Verifiable consent* is renewed by obtaining another *verifiable consent* from the *affected person.*

Part 2 – Code Objectives and Arms-length Treatment

2.1 Code Objectives

(1) The *Code objectives* are to:

(a) promote the provision of accurate metering of *electricity* production and consumption;

(b) promote access to and confidence in *data* of parties to commercial *electricity* transactions;

(c) facilitate the operation of Part 8 and Part 9 of the Act, the *Customer Transfer Code* and the *Code of Conduct*.

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

2.2 Network operator must treat associates at arms-length

(1) Subject to clause 2.2(2) and (3), a *network operator*:[7]

(a) must treat all *Code participants* that are its *associates* on an arms-length basis; and

(b) without limiting clause 2.2(1)(a), must ensure that no *Code participant* that is its *associate* receives a benefit in respect of this *Code*, unless either:

(i) the benefit is attributable to an arm's length application of this *Code* to the *Code participant*; or

(ii) the *network operator*[8] also makes the benefit available to all other *Code participants* on the same terms and conditions.

(2) Subject to:

(a) the 'ring-fencing objectives' (as defined in the *Access Code*) and any 'ring-fencing rules' (as defined in the *Access Code*) made under the *Access Code*; and

(b) any regulations made under section 62 of the *Electricity Corporations Act 2005*,

[7] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and a *metering data agent*".

[8] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

if a *network operator*[9] is an 'integrated provider' (as defined in the *Access Code*), a reference in clause 2.2(1) to an *associate* of the *network operator*[10] does not include the integrated provider.

(3) Clause 2.2(1) does not apply in respect of a *network*, while there is no more than one *user* on the *network*.

[9] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[10] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

Part 3 – Meters and Metering Installations

Division 3.1 – Meters

3.1 Meters must comply with metrology procedure and *National Measurement Act*

A *network operator* must ensure that its *meters* meet the requirements specified in the applicable *metrology procedure* and also comply with any applicable specifications or guidelines (including any transitional arrangements) specified by the National Measurement Institute under the *National Measurement Act*.

3.2 Accumulation meters

(1) An *accumulation meter* must, at least, conform to the requirements specified in the applicable *metrology procedure* and display, or permit access to a display of:

(a) the accumulated *electricity* production or consumption at the *metering point*; and

(b) if the supply of *electricity* to a *customer* associated with a *metering point* is subject to a *time of use tariff* — the total accumulated *electricity* production or consumption for each *time band* in the *time of use tariff*,

using dials, a cyclometer, an illuminated display panel or some other visual means.

(2) A *network operator* may install a *meter* with *interval energy data* storage capability and other enhanced technology features but (by recording it as an *accumulation meter* in the *registry*) declare it to be an *accumulation meter* and only record the *accumulated energy data* registered by the *meter*.

(3) Despite clause 3.2(2), Division 3.4 applies in respect of the enhanced technology features of a *meter*.

3.3 Interval meters

(1) An *interval meter* must, at least, have an interface to allow the *interval energy data* to be downloaded to a portable hand held *device* or laptop computer. The interface must be compatible with the requirements specified in the applicable *metrology procedure*.

(2) Subject to the security protocols in clause 3.8 and the licensing requirements in clause 3.22(a), the interfaces in clause 3.3(1) may be used to install or update the operating software contained in the *meter*.

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

3.3A Network operator must prevent bi-directional electricity flows

(1) A *network operator* must ensure that bi-directional *electricity* flows do not occur at a *metering point* unless the *metering installation* for the *metering point* is capable of separately measuring and recording *electricity* flows in each direction.

(2) Despite clause 3.14, clause 3.3A(1) applies in respect of all *metering installations* (regardless of when they were commissioned or *committed* to) except *metering installations* which were *subject to bi-directional electricity flows* at the time this clause 3.3A commences.

(3) For the purposes of clause 3.3A(2) and 3.3B, a *metering point* is **"subject to bi-directional electricity flows"** at a time, if any of the following apply at the time:

(a) bi-directional *electricity* flows occur at the *metering point*; or

(b) any *generating works* are installed at the *customer's* premises without adequate equipment being installed to ensure that bi-directional *electricity* flows cannot occur at the *metering point.*

3.3B User must notify network operator if metering installation becomes subject to bi-directional electricity flows

A *user* who is aware of:

(a) bi-directional *electricity* flows occurring at a *metering point* which was not previously *subject to bi-directional electricity flows*; or

(b) any change occurring in a *customer's* or *user's* circumstances which will result in a *metering point* being *subject to bi-directional electricity flows*,

must notify the *network operator* within 2 *business days* after the *day* it becomes aware of the fact.

3.3C Metering of bi-directional electricity flows

An *accumulation meter* or an *interval meter* that separately measures and records bi-directional *electricity* flows at the *metering point* must record:

(a) the net *electricity* production transferred into the *network* that exceeds *electricity* consumption; and

(b) the net *electricity* consumption transferred out of the *network* that exceeds *electricity* production.

3.4 Ownership of meters and communications links

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

{Example: An agreement regarding the financial aspects of providing the *metering installation* may purport to make provision to the contrary to clause 3.4.}

{Note: See also clause 4.8(1) which deals with ownership of *data*.}

Division 3.2 — Metering Installations

3.5 Requirements for a metering installation

{Note: A *metering installation* may consist of various combinations of *metering equipment* including:

- a *CT*;
- a *VT*;
- secure and protected wiring from the *CT* and the *VT* to the *meter*;
- an appropriately constructed panel on which the *meter* is mounted;
- an appropriately constructed panel on which the *data logger* is mounted;
- a facility to keep the *metering installation* secure from interference;
- test links and fusing;
- summation equipment; or
- one or more *metering points* to derive the *energy data* for a *connection point*.}

(1) A *network operator* must ensure that there is a *metering installation* at every *connection point* on its *network* which is not a *Type 7 connection point.*

(2) Unless it is a *Type 7 metering installation*, a *metering installation* must:

(a) contain a *device* which has a visible or otherwise accessible display as detailed in clause 3.2(1); and

(b) have a *measurement element* for *active energy*; and

(c) if required by Table 3 in Appendix 1, have a *measurement element* for *reactive energy*; and

(d) permit collection of *data* at the level of accuracy required by clause 3.9.

(3) A *network operator* must, for each *metering installation* on its *network*, on and from the time of its *connection* to the *network*:

(a) unless otherwise agreed between the *network operator* and a *user*, provide, install, operate and, subject to clause 3.5(7), *maintain* the *metering installation* in accordance with:

(i) this *Code*; and

(ii) *good electricity industry practice*; and

(iii) the *metrology procedure* for the *network*; and

(iv) the *service level agreement* between the *network operator* and the *user* in respect of the *metering installation*; and

(b) ensure that the *metering installation* complies with clause 3.9; and

(c) without limiting clause 3.5(3)(a) ensure that the *metering equipment* in the *metering installation*:

(i) is suitable for the range of operating conditions to which it will be exposed (e.g. temperature, impulse levels); and

(ii) operates within the defined limits for that *metering equipment* as specified in the approved *metrology procedure*.

(4) Except for a *Type 7 metering installation,* a *network operator* must ensure that the *metering point* for a *revenue metering installation* is located as close as practicable in accordance with *good electricity industry practice* to the *connection point*.

(5) If there is no written *service level agreement* in place between the *network operator* and the *user* in respect of the provision, installation, operation or *maintenance* of a *metering installation*, the *network operator* or the *user* may require the other to negotiate and enter into a written *service level agreement* in respect of (as applicable) the provision, installation, operation or *maintenance*, in accordance with clause 5.1.

{Note: If there is no written *service level agreement*, any *metering services* provided will be governed by an unwritten *service level agreement* under clause 5.2.}

(6) A *network operator* may only impose a *charge* for providing, installing, operating or *maintaining* a *metering installation* in accordance with the applicable *service level agreement* between it and the *user.*

(7) Unless otherwise agreed, a *network operator* is not required to *maintain* any *metering equipment* owned by a *user* or *user's customer*.

{For example: Equipment owned by the *user* or its *customer* might include *CTs*, meter panels and secondary wiring installed as part of a switchboard.}

(8) Nothing in this clause 3.5 limits a *network operator's* responsibility under any other enactment or agreement in relation to a *metering installation* prior to the time of its *connection* to the *network*.

(9) If the *network operator* becomes aware that a *metering installation* does not comply with this *Code*, the *network operator* must:

(a) advise affected parties of the non-compliance; and

(b) arrange for the non-compliance to be corrected as soon as practicable following the *network operator* becoming aware of it.

3.6 When network operator may require facilities for remote meter reading

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

3.7 Requirements for equipment connected to a telecommunications network

All *devices* that may be connected to a telecommunications network must:

(a) be compatible with the telecommunications network*;* and

(b) comply with all applicable State and Commonwealth enactments.

{Note: for example, *devices* connected to a telecommunications network must be approved by the Australian Communications Authority established under the *Australian Communications Authority Act 1997* of the Commonwealth.}

3.8 Security of metering installations

Subject to clause 3.27, a *network operator* must, for each *metering installation* on its *network*, ensure that the *metering installation* is secured by means of *devices* or methods which, to the standard of *good electricity industry practice*, hinder unauthorised access to the *metering installation* and enable unauthorised access to be detected.

{Note: *Energy data* held in a *network operator's metering installation* must be secured in accordance with clauses 4.8(4)(a) and 4.8(5).}

3.9 Metering installation types and accuracy requirements

(1) Subject to clause 3.9(2), the **"Type"** for a *connection point* (and for a *metering installation* for the *connection point*) is shown in the first column in Table 3 in Appendix 1, on the row in which the *connection point's* annual *load* is shown in the second column.

(2) A *connection point* is *Type 7* if it is associated with one or more of the following *loads*:

(a) street, traffic, park, community, or security lighting; or

(b) ticket issuing machines, parking meters, or community watering systems; or

(c) telephone service requirements; or

{Example: Telephone service requirements may include telephone boxes, fibre optic cable routers and *devices* that connect pay television services.}

(d) *loads* consuming less than the starting electric current of a *meter*; or

(e) other *loads* of a similar nature.

(3) Subject to clauses 3.9(4), 3.9(5) and 3.9(7), each *metering installation* must meet at least the requirements for that *Type* of *metering installation* specified in Table 3 in Appendix 1.

{Note: Without limiting clause 3.9(3), a *network operator* must ensure that the incidence and magnitude of burden changes on any secondary winding supplying its *metering installation* do not cause the accuracy of the *metering installation* to fail to meet the requirements of Table 3 in Appendix 1 for that *Type* of *metering installation*.}

(3A) If the *user* and the *network operator* cannot agree on the *Type* of *metering installation* to be installed at a *connection point*, then subject to clause 5.1 the *network operator* may make a determination on the matter.

(3B) A *network operator's* determination under clause 3.9(3A) may be the subject of a *dispute* under this *Code*, or if applicable an access dispute under the *Access Code*, a dispute under the *market rules,* a dispute or a complaint under the *Code of Conduct* or a dispute under the *Customer Transfer Code*.

(4) A *network operator* (acting in accordance with *good electricity industry practice*) may determine that the maximum allowable clock error for a *Type* 4 or *Type* 5 *metering installation* is to be greater than that specified in Table 3 in Appendix 1 in order to accommodate evolving whole-electric current technologies, provided that such relaxation is consistent with the *Code objectives*.

{Note: Under clause 1.5 this ability to relax the clock error will be subject to the *National Measurement Act* and other enactments.}

(5) A *network operator* (acting in accordance with *good electricity industry practice*) may determine that the maximum allowable clock error for a *Type* 6 *metering installation* is greater than that specified in Table 3 (read with Table 4 to Table 7 in Appendix 1) providing that such relaxation is consistent with the *Code objectives*.

{Note: Under clause 1.5 this ability to relax the clock error will be subject to the *National Measurement Act* and other enactments.}

(6) Subject to clause 3.1, it is acceptable to use direct connected *meters* for *Type* 4 to *Type* 6 *metering installations*.

(7) For a *metering installation* used to supply a *customer* with requirements above 1000 volts that require a *VT* and whose annual consumption is below 750 MWh, the *metering installation* must meet the relevant accuracy requirements of a *Type* 3 *metering installation* for *active energy* only.

{Note: The 1000 volt limit derives from *AS* 3000-2000.}

(8) For the purposes of this clause 3.9, the method for calculating the overall error of a *metering installation* is the vector sum of the errors of each component part, i.e. $\underline{a} + \underline{b} + \underline{c}$, where:

$\underline{a}$ = the error of the *VT* and wiring
$\underline{b}$ = the error of the *CT* and wiring
$\underline{c}$ = the error of the *meter*.

(9) If compensation is carried out within the *meter* then the resultant metering system error must be as close as practicable to zero.

(10) All measurements in Table 3 in Appendix 1 are to be referred to 25 degrees Celsius.

3.10 Programmable settings which affect resolution and accuracy of displayed or captured data

A *network operator*[11] must ensure that any programmable settings within any of its *metering installations, data loggers* or peripheral *devices*, that may affect the resolution of displayed or stored *data*, meet the relevant requirements specified in the applicable *metrology procedure* and comply with any applicable specifications or guidelines (including any transitional arrangements) specified by the National Measurement Institute under the *National Measurement Act*.

3.11 Reliability of metering installations

(1) A *network operator* must ensure that a *metering installation* on its *network* is operating consistently with *good electricity industry practice* to measure and record *data*, and to permit collection of *data* within the time specified in the applicable *service level agreement*, for at least:

(a) if the *metering installation* does not have a *communications link* – 99% of the year; and

(b) if the *metering installation* has a *communications link*:

(i) for the *communications link* – 95% of the year; and

(ii) for the rest of the *metering installation* – 99% of the year.

(2) If an outage or malfunction occurs to a *metering installation,* the *network* operator must (subject to clause 3.5(7)) make repairs to the *metering installation* in accordance with the applicable *service level agreement*.

(3) A *Code participant* who becomes aware of an outage or malfunction of a *metering installation* must advise the *network operator* as soon as practicable.

3.11A Accuracy of metering installations

(1) A *network operator* must ensure that the *meters* on its *network* are systematically sampled and tested for accuracy in accordance with *AS* 1284.13.

(2) Subject to clause 3.11A(3), if a "population" (as that expression is defined in *AS* 1284.13) is deemed to have failed under *AS* 1284.13, the *network operator* must ensure that all the *meters* that make up the population are removed and replaced with new *meters* within 3 years of the testing of the population.

[11] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and a *metering data agent*".

(3) The *Authority* may, upon the *network operator's* request, extend the time limit specified in clause 3.11A(2) if:

(a) the *Authority* is satisfied that the *network operator* will not be able to complete the removal and replacement within 3 years despite acting in accordance with *good electricity industry practice*; or

(b) the *network operator* proposes, in accordance with *good electricity industry practice*, to undertake the removal and replacement as part of a proposed substantial program to install on the *network meters* or *metering installations* with enhanced technology features, and the *Authority* is satisfied that a longer time limit is appropriate in order to allow the *network operator* to do so.

(4) Despite clause 3.14, this clause 3.11A applies in respect of all *meters* regardless of when they were commissioned or *committed* to.

3.12 Metering installation design requirements

(1) A *network operator* must ensure that each *metering installation* complies with at least the following requirements:

(a) the *CT* core forming part of the *revenue metering installation* must not be used for any purpose other than revenue metering and *check metering*; and

(b) the *CT* secondary wiring forming part of the *revenue metering installation* must not be used for any other purpose; and

(c) subject to clause 3.13(3), the *CT* secondary wiring forming part of a *check metering installation* must not be used for other purpose (e.g. local metering, indication or protection) unless with the written approval of the *network operator*, which must not be unreasonably withheld; and

{Note: If the conditions of clause 3.13(3) apply, *network operator's* written approval is not required under this clause 3.12(1)(c).}

(d) if a *VT* is required as part of a *revenue metering installation* and only one secondary winding is provided from it, then the *voltage* supply to the *metering point* must be separately fused and located in an accessible position as near as practicable to the *VT* secondary winding; and

(e) if more than one *VT* is available, a *voltage* changeover scheme must be provided; and

(f) secondary wiring must be by the most direct route and the number of terminations and links must be kept to a minimum.

(2) A *network operator* must ensure that *instrument transformers* in its *metering installation*s comply with the relevant requirements of any applicable specifications or guidelines (including any transitional arrangements) specified by the National Measurement Institute under the *National Measurement Act* and any requirements specified in the applicable *metrology procedure*.

(3) A *network operator* must provide isolation facilities, to the standard of *good electricity industry practice*, to facilitate testing and calibration of the *metering installation*.

(4) A *network operator* must *maintain* drawings and supporting information to the standard of *good electricity industry practice*, detailing the *metering installation* for *maintenance* and auditing purposes.

3.13 Requirements for check metering installations

(1) A *network operator* must procure the *user* or the *user's customer* to install (or arrange for the installation of) a full *check metering installation* or partial *check metering installation* in accordance with the requirements set out in Table 1.

Table 1 Check Metering Installation Requirements

Type	Energy (GWh pa) per metering point	Check Metering Requirements
1	greater than 1000	Full *check metering installation*
2	100 to 1000	Partial *check metering installation*
3	0.75 to less than 100	No requirement
4, 5 and 6	Less than 0.75	No requirement

(2) A full *check metering installation* is a *metering installation* separate from the *revenue metering installation*, using separate *CT* cores and separately fused *VT* secondary circuits supplied from separate secondary windings.

(3) A partial *check metering installation*:

(a) may be supplied from secondary circuits used for other purposes; and

{Note: If this clause 3.13(3) applies, then a partial *check metering installation* may be supplied from secondary circuits used for other purposes without the written approval of the *network operator* as required under clause 3.12(1)(c).}

(b) may involve the use of other *energy data* or *SCADA data* for *trading intervals* available to the *network operator*[12] in *electronic* format as part of a *validation* process; and

(c) must be physically arranged in a manner determined by the *network operator*, acting in accordance with *good electricity industry practice*.

(4) A *check metering installation* for a *metering point*:

(a) must not exceed twice the error level permitted under clause 3.9 for the *revenue metering installation* for the *metering point*; and

(b) must be *connected* in such a way that it measures the same *load* conditions as the *revenue metering installation* for the *metering point*; and

[12] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(c) must be otherwise consistent with the requirements of Table 3 in Appendix 1 and clause 3.12(1)(c).

{Note: See also clause 3.12(1) which deals with what may be common between *revenue metering* and *check metering*.}

(5) Where a *check metering installation* for a *metering point* satisfies the requirements under this *Code* for a *revenue metering installation* for the *metering point*, the average of the 2 *validated data* sets may be used to determine the energy measurement.

3.14 Transitional – Metering installations commissioned prior to commencement of the 2005 Metering Code

(1) Subject to clauses 3.3A(2) and 3.11A(4), nothing in this *Code* requires a *Code participant* to upgrade, modify or replace a *metering installation* or any part of a *metering installation* which was commissioned before the *2005 Metering Code* commenced.

(2) Subject to clauses 3.3A(2), 3.11A(4), 3.14(3) and 3.14(4), nothing in this *Code* requires a *Code participant* to upgrade, modify or replace a *metering installation* or any part of a *metering installation* which was *committed* to before the *2005 Metering Code* commenced and commissioned no later than 18 months after the *2005 Metering Code* commenced.

{Note: For example:

- *Type* 1 *metering installations* and *Type* 2 *metering installations* commissioned or *committed* to before the *2005 Metering Code* commenced that do not incorporate *check metering installations* are not required to install *check metering installations* retrospectively.
- *Type 3 metering installations* and *Type 4 metering installations* commissioned or *committed* to before the *2005 Metering Code* commenced that are not equipped with a *communications link* are not required to have a *communications link* installed retrospectively.}

(3) If under clause 3.14(2) a *metering installation* uses metering class *CTs* and *VTs* that do not comply with Table 3 in Appendix 1, then the *network operator* must either or both:

(a) install *meters* of a higher class accuracy; and

(b) apply accuracy calibration factors within the *meter* to compensate for *CT* and *VT* errors,

in order to achieve the overall accuracy requirements set out in Table 3 in Appendix 1.

(4) If under clause 3.14(2) a *metering installation* does not contain suitable metering class *CTs* at an appropriate location in the circuit, then the *network operator* may use protection *CTs* but the *metering installation* must still comply with Table 3 in Appendix 1.

(5) Subject to clause 3.14(6), a person has "**committed**" to a metering installation if the person, intending to install or upgrade a *metering installation*, begins to

put their intention into effect by doing an act which is more than merely preparatory to undertaking the installation or upgrade by:

(a) making a substantial financial commitment in respect of the installation or upgrade of the *metering installation*, such as committing to:

(i) a significant obligation which is legally binding; or

(ii) an obligation which would have significant commercial repercussions if cancelled, discontinued or dishonoured;

or

(b) commencing, or procuring the commencement of, the installation or upgrade of the *metering installation*.

(6) A person will not be considered to have *committed* to a *metering installation* merely because the person has:

(i) undertaken preparatory system or other studies in respect of the installation or upgrade of the *metering installation*; or

(ii) engaged in preparatory planning, design or costing activities in respect of the installation or upgrade of the *metering installation*; or

(iii) obtained an approval in respect of the installation or upgrade of the *metering installation*, unless the approval comes within the description in clauses 3.14(5)(a) or 3.14(5)(b).

Division 3.3 — Metering Requirements for the Wholesale Electricity Market and Customer Transfer

3.15 Application of this Division 3.3

This Division 3.3 applies to the *network* described in Part 9 of the Act.

3.16 Wholesale market metering installation requirements

(1) The *network operator* must ensure that a *Type* 1 *metering installation* to *Type* 5 *metering installation* on the *network*:

(a) has *electronic data* recording facilities to measure and record *interval energy data*; and

(b) is capable of separately measuring and recording flows in each direction if bi-directional *electricity* flows occur; and

(c) includes facilities on site for storing the *interval energy data* for a period of at least 35 *days* from and including the *day* that *data* is first recorded.

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

(3) If a *device* is used as a *data logger*, the *energy data* for a *metering point* on the *network* must be collated in *trading intervals* or sub-multiples of a *trading interval* within the *metering installation.*

(3A) If, under clause 3.16(3), *energy data* for a *metering point* on the *network* is collated in sub-multiples of a *trading interval*, then unless the *Code participant* agrees otherwise, the *network operator* must aggregate the *energy data* into *trading intervals* before providing it to a *Code participant*.

(4) [Not used]

(5) [Not used]

(6) [Not used]

3.17 No transfer under the Customer Transfer Code without interval meter (for Types 1 to 5)

For the purposes of clause 4.9(1)(c) of the *Customer Transfer Code*, a *customer* associated with a *connection point* may not *transfer* under the *Customer Transfer Code* unless the *metering installation* at each *metering point* for the *connection point* complies with clause 3.16.

{Note: In accordance with clause 3.14(1), this *Code* does not compel the installation of an *interval meter*. However, the practical outworking of this clause 3.17 and the *Customer Transfer Code* is that if the *metering installation* at the *metering point* for the *connection point* does not contain an *interval meter* in accordance clause 3.16, then the *customer* associated with the *connection point* may not transfer under the *Customer Transfer Code*.}

3.18 Interval meter requirements (for Types 1 to 5) applicable to the Electricity Retail Corporation

(1) If the e*lectricity retail corporation* supplies *electricity* to a *contestable customer* at a *connection point*:

(a) under a *non-regulated contract*; and

(b) in circumstances where immediately before entering into the contract, the e*lectricity retail corporation* supplied *electricity* to the *contestable customer* under a *regulated contract*,

then the *metering installation* for the *connection point* must comply with clause 3.16.

(2) In this clause 3.18:

"non-regulated contract" means a contract other than a *regulated contract*; and

"regulated contract" means:

(a) a "standard form contract" as defined in section 47 of the Act; or

(b) a contract referred to in section 55(6) of the Act between the *electricity retail corporation* and a *customer* (including a *customer* who consumes more than 160 MWh of *electricity* per annum); or

(c) a contract in the form of a "prescribed form of contract" (as defined in section 55 of the Act) entered into by the *electricity retail corporation* and a *customer* (including a *customer* who consumes more than 160 MWh of *electricity* per annum) other than a contract referred to in paragraph (b) of this definition.

{Note: After clause 31 of Schedule 1 to the *Energy Corporations Act 2005* commences, references in this definition to section 55 of the Act will be read as references to section 54A of the Act.}

Division 3.4 – Enhanced Technology Features of Metering Installations

{Note: This Division 3.4 details the additional requirements that apply to *meters* and *metering installations* with enhanced technology features. The requirements in this Division 3.4 apply in addition to the general *metering* requirements contained in Part 3.

Code participants and the *network operator* may agree to use any evolving technologies, whether or not those technologies have enhanced features, provided that the agreed evolving technology meets or exceeds the performance and functional requirements of this *Code*.}

{Examples: *Meters* with enhanced technology features may include any one or more of the following:

- solid state *electronic measurement elements*; or
- internal real time clock; or
- software that enables the *network operator* to develop and upload tariff schedules as required by a *user*; or
- multiple registers for accumulated Wh, on-peak Wh, off-peak Wh, VAh, varh, kW, kVA; or
- bi-directional (multi quadrant) energy measurement; or
- *interval energy data* storage *device* (referred to as a *data logger*); or
- load control equipment; or
- externally generated tariff switching inputs (the external clock must meet the same accuracy levels as would apply to an internal clock – see 3.21(1)); or
- *customer* signals for load management; or
- *communications link* for remote reading; or
- pre-payment facilities.

Metering installations with enhanced technology features may include any one or more of the following:

- a *meter* and a *data logger* that may be either internal or external to the *meter*; or
- subject to clause 3.7, a *meter* with an interface to allow the *interval energy data* to be downloaded to a remote location via a telecommunications network; or
- *communications link* equipment such as a modem, isolation equipment, telephone service, radio transmitter and data link equipment; or

- one or more *communications links*; or
- auxiliary *electricity* supply to the *meter*; or
- an alarm circuit and monitoring facility.}

3.19 Application of this Division 3.4

(1) This Division 3.4 applies in addition to the general metering requirements contained in Part 3.

(2) The specific requirements contained in clause 3.21 apply only to each enhanced technology feature as may be provided in a *metering installation*.

3.19A Bi-directional capability is an enhanced technology feature

(1) The ability to measure and record bi-directional *electricity* flows as contemplated in clause 3.3A is an enhanced technology feature.

(2) Clause 3.19A(1) does not limit what may be an enhanced technology feature.

3.20 Network operator must provide enhanced technology features

(1) A *network operator* must, if reasonably requested by a *Code participant,* provide enhanced technology features in a *metering installation*.

(2) If there is no written *service level agreement* in place between the *network operator* and the *user* in respect of the provision of *metering installations* with enhanced technology features, the *network operator* or the *user* may require the other to negotiate and enter into a written *service level agreement* in respect of the provision of *metering installations* with enhanced technology features.

{Note: If there is no written *service level agreement*, any *metering services* provided will be governed by an unwritten *service level agreement* under clause 5.2.}

(3) A *network operator* may only impose a *charge* for the provision of *metering installations* with enhanced technology features in accordance with the applicable *service level agreement* between it and the *user*.

3.21 Requirements for metering installations with enhanced technology features

{Note: In addition to the requirements in this clause 3.21, *meters* with an internal *data logger* must comply with the requirements in clause 3.3.}

(1) *Meter*s containing an internal real time clock must maintain time accuracy as shown in Table 3 in Appendix 1 for each *Type* of *metering installation*. Time drift must be measured over a period of 1 month.

{Note: A *Type* 6 *metering installation* contains an *accumulation meter* and therefore no real *time* clock.}

(2) If a *metering installation* includes *measurement elements* and an internal *data logger* at the same site and:

(a) a *communications link* has been installed – must include facilities on site for storing the *interval energy data* for a period of at least 35 *days* from and including the *day* that *data* is first recorded; or

(b) a *communications link* has not been installed – must include facilities on site for storing the *interval energy data* for a period of at least 200 *days* from and including the *day* that *data* is first recorded.

3.22 Network operator must have license to metering software

A *network operator* providing one or more *metering installations* with enhanced technology features must:

(a) be licensed to use and access the metering software applicable to all *devices* being installed; and

(b) be able to program the *devices* and set parameters, including 'read only' and 'write' passwords.

3.23 Customer signals for load management must be isolated from meter

Where signals are provided from the *meter* for a *user* or a *user's customer's* use:

(a) the *network operator* must ensure that the signals are isolated by relays or *electronic* buffers to prevent accidental or malicious damage to the *meter*; and

(b) the *network operator*[13] must provide the *user* or the *user's customer* with sufficient details of the signal specification to enable the *user* or the *user's customer* to comply with clause 3.23(c); and

(c) the *customer* must ensure that a *device* to be connected to the signal output is compatible with the signal.

[13] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

Division 3.5 – Pre-payment meters

3.24 [Not used]

3.24A Network operator must install and operate pre-payment meter consistently with retailer's Code of Conduct obligations

{Note: Clause 9.2(2) of the *Code of Conduct* restricts the use of *pre-payment meters* to only *Gazetted* areas.)

(1) If a *retailer* requests a *network operator* to install a *pre-payment meter* at a *connection point*, then the *pre-payment meter* must be sufficient to enable the *retailer* to comply with the *retailer's* obligations under the *Code of Conduct.*

(2) The *network operator* may comply with clause 3.24A(1) by activating the pre-payment functionality of a *meter* at the *connection point.*

3.24B Network operator must replace pre-payment meter

(1) If a *retailer* requests a *network operator* to replace a *pre-payment meter* at a *connection point* with a *meter* that is not a *pre-payment meter* (**"standard meter"**), then the *network operator* must do so in accordance with this *Code* and the *Code of Conduct.*

(2) The *network operator* may comply with clause 3.24B(1) by:

(a) deactivating the pre-payment functionality of a *meter* at the *connection point* and activating functionality so that the *meter* operates as a *standard meter*; and

(b) rendering non-operational a *pre-payment meter*, and rendering operational a *standard meter*, at the *connection point*.

3.25 [Not used]

3.26 [Not used]

Division 3.6 – Registered Metering Installation Providers

3.27 Prohibition on installing metering installations

(1) A person must not install a *metering installation* on a *network* unless the person is:

(a) the *network operator;* or

(b) a *registered metering installation provider* for the *network operator* doing the type of work authorised by its registration.

(2) Nothing in clause 3.27(1) limits the other approvals and authorisations which a person may need to install a *metering installation*.

3.28 Network operator may register a person to install metering installations

A *network operator* may register or deregister a person to undertake some or all of the activities relating to the installation of *metering installations*:

(a) under a *registration process* established under clause 6.9; and

(b) in respect of all or only a sub-set of the installation work.

3.29 Network operator must publish and update a list of registered metering installation providers

A *network operator* must:

(a) *publish* a list of *registered metering installation providers* which includes details on the type of work each *registered metering installation provider* is authorised to carry out; and

(b) at least annually, update the list referred to in clause 3.29(a).

Part 4 –The Metering Database

4.1 The metering database – general

(1) A *network operator*[14] must establish, *maintain* and administer a **"metering database"** containing, for each *metering point* on its *network:*

(a) a *registry* containing *standing data* for the *metering point;* and

(b) *energy data* for the *metering point,* being:

(i) if the *metering point* has an *accumulation meter — accumulated energy data*; or

(ii) if the *metering point* has an *interval meter — interval energy data.*

(2) A *network operator*[15] must ensure that its *metering database* and its associated links, circuits and information storage and processing systems are secured by means of *devices* or methods which, to the standard of *good electricity industry practice*, hinder unauthorised access to the *metering database* and its associated links, circuits and information storage and processing systems and enable unauthorised access to be detected.

{Note: *Data* held in a *network operator's metering database* must be secured in accordance with clauses 4.8(4)(b) and 4.8(5).}

(3) A *network operator*[16] must prepare, and if applicable must implement a disaster recovery plan to ensure that it is able, within 2 *business days* after the *day* of any disaster, to:

(a) rebuild the *metering database;* and

(b) provide *energy data* to the *Code participants* after the disaster (including *energy data* for any days during which the *network operator*[17] was affected by the disaster).

4.2 The metering database – the registry

{Note: The *registry* forms part of the *metering database* and holds *standing data* for *metering points* that may be used when determining the validity and accuracy of *energy data*. The *communication rules* developed under Part 6 of this *Code* contain the complete set of *standing data* attributes.}

(1) A *network operator*[18] must ensure that its *registry* complies with this *Code* and clause 8.3.1 of the *market rules.*

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[14] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[15] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[16] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[17] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[18] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(2) The purpose of the *registry* is to facilitate:

(a) the registration of *metering points*; and

(b) the provision of *metering services*; and

(c) the verification of compliance with this *Code*; and

(d) the auditable control of changes to *standing data*.

4.3 Standing data items

(1) The **"standing data"** for a *metering point* must (subject to clause 4.3(3)) comprise at least the items specified in Table 2:

Table 2 Description and designated source of standing data to be contained in the registry

Item	Information	Designated source
Metering point reference details, including:		
1.	details of the address of the *metering point* in a format specified in the *communication rules*	*network operator*
2.	substation name	*network operator*
3.	the length of *network* between the *metering point* and the substation	*network operator*
4.	*voltage* at *metering point*	*network operator*
5.	distribution loss factor	*network operator*
6.	*network* tariff description	*network operator*
7.	location of the *metering equipment* on the site and reference details (eg drawing numbers)	*network operator*
8.	either: (a) last and next *date for a scheduled meter reading;* or (b) *reading day number*, as specified in the *model service level agreement*.	*network operator*[19]
9.	whether or not the *customer* associated with the *metering point* is a *contestable customer*	*network operator*
10.	site identification names	*network operator*

[19] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

Item	Information	Designated source
11.	(a) details in accordance with the *communication rules* of the *user* which is the **"current user"** for the *metering point*; and (b) except in the case of the *user* who was the *current user* for the *metering point* at the time the *2005 Metering Code* commenced — the *transfer* date on which the *user* became the *current user*; and (c) a change history enabling the determination of which *user* was the *current user* for any day after the time this clause 4.3 commenced	*network operator*
The identity and characteristics of *metering equipment* (ie *instrument transformers*, *revenue metering installation* and *check metering installation*), at the *metering point* including:		
12.	*meter* type	*network operator*
13.	*meter* serial numbers	*network operator*
14.	*NMI*	*network operator*
15.	status (energised or de-energised)	*network operator*
16.	*metering installation Type*	*network operator*
17.	*instrument transformer* connected ratio	*network operator*
18.	reference to current test and calibration program details, test results and test certificates	*network operator*
19.	calibration tables, where applied to achieve *metering installation* accuracy in accordance with the accuracy requirements in Table 3 in Appendix 1	*network operator*
20.	summation scheme values and multipliers	*network operator*
21.	*data* register coding details	*network operator*[20]
Data communication details in respect of the *metering point*, including		
22.	telephone numbers for access to *data*	*network operator*[21]
23.	communication *device* type and serial numbers	*network operator*[22]
24.	communication protocol details or references	*network operator*[23]
25.	*user* identification and access rights	*network operator*
26.	'write' password (to be contained in a hidden or protected field)	*network operator*[24]

[20] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[21] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[22] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[23] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

Item	Information	Designated source
Data validation and *substitution* processes agreed between affected parties in respect of the *metering point*, including:		
27.	algorithms	*network operator*[25]
28.	*data* comparison techniques	*network operator*[26]
29.	processing of alarms (eg *voltage* source limits; phase-angle limits)	*network operator*
30.	*check metering* compensation details	*network operator*[27]

(2) In clause 4.3(1), **"designated source"** means the person responsible for providing the information to the *network operator*[28], not necessarily the person who is the originating source of the information.

{Note: Although at the time this clause 4.3 commenced, the *network operator* is designated as the *designated source* for all of the items of *standing data* listed in Table 2, the designation of a *designated source* for each item of *standing data* is intended to allow for the operation of clause 4.3(3) under which, for example, new items of *standing data* may be required in the *registry* and for which the *network operator* may not be the *designated source*.}

(3) The *communication rules* may remove, modify or add to any requirement in clause 4.3(1) for the *standing data*.

4.4 Discrepancies between database and other data

(1) If there is a discrepancy between *energy data* held in a *metering installation* and *data* held in the *metering database*:

(a) the affected *Code participants* and the *network operator*[29] must liaise together to determine the most appropriate way to resolve the discrepancy; and

(b) for the purposes of this *Code* the *energy data* for the *metering point* in the *metering installation* is to be taken to be correct, unless it is proven to be incorrect.

(2) If there is a discrepancy between *standing data* held in a *registry* and the same category of information in any other database, then for the purposes of this *Code* the *standing data* recorded in the *registry* is to be taken to be correct, unless it is proven to be incorrect.

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[24] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[25] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[26] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[27] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[28] If clause 6.20(1)(b) applies, read "*network operator*" as "*metering data agent*".

[29] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

4.5 Code participants must keep the registry accurate

(1) A *Code participant* must not knowingly permit the *registry* to be materially inaccurate.

(2) Subject to clause 5.19(6), if a *Code participant* other than the *network operator*[30] becomes aware of a change to, or an inaccuracy in, an item of *standing data* in the *registry*, then it must as soon as practicable and in any event (unless clause 5.19(4) applies) no later than 2 *business days* (or such other time as is specified in the applicable *service level agreement*) after the *day* it becomes aware of the change or inaccuracy notify the *network operator*[31] and provide details of the change to, or inaccuracy in, the item of *standing data*.

{Example: *Standing data* values may change as a result of rectification of errors (including reversing an "erroneous transfer" under the *Customer Transfer Code*), field work or other activities.}

4.6 Network operator must amend registry when notified of, or aware of, change or error

(1) If the *network operator*[32] is notified of a change to, or inaccuracy in, an item of *standing data* by a *Code participant* which is the *designated source* for the item of *standing data* under Table 2 in clause 4.3(1), then the *network operator*[33] must update the *registry* to reflect the change to, or correct the inaccuracy in, the *standing data*.

(2) If the *network operator*[34]:

(a) is notified of a change to, or inaccuracy in, an item of *standing data* by a *Code participant* which is not the *designated source* for the item of *standing data* under Table 2 in clause 4.3(1); or

(b) otherwise becomes aware of a change to, or inaccuracy in, an item of *standing data,*

then the *network operator*[35] must:

(c) undertake investigations to the standard of *good electricity industry practice* to determine whether the *registry* should be updated; and

(d) if it determines that the *registry* should be updated, update the *registry* to reflect the change to, or correct the inaccuracy in, the *standing data*.

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[30] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[31] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[32] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[33] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[34] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[35] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

4.7 Network operator must give notice of changes to standing data

(1) If *standing data* for a *metering point* is updated in the *registry*, the *network operator* must, within 2 *business days* after the update (or such other time as specified in the applicable *service level agreement*), notify the update to:

(a) the *current user*; and

(b) each *previous user*, if the updated *standing data* relates to a period or periods when the *previous user* was the *current user*.

(2) In this clause 4.7, **"previous user"** means a *user* who was previously recorded in the *registry* as the *current user* for the *metering point* referred to in clause 4.7(1).

{Example: On creation of *standing data* (e.g. in the event of a new *connection*) or when any of a *metering point*'s *standing data* values in its *registry* change, the *network operator* must inform the *current user* for the *metering point* of details of the changes to the *standing data* within 2 *business days* (or such other time as is specified in applicable *service level agreement*) after updating the attributes in its *registry*.}

4.8 Ownership, security and rights of access to data

(1) A *network operator*, in relation to a *metering point* on its *network*:

(a) owns the *energy data* in the *meter* for the *metering point*; and

(b) owns the *energy data* obtained from the *meter* and the *standing data* for the *metering point*; and

(c) owns the *data* for the *metering point* held in its[36] records whether in written or *electronic* form; and

(d) has a right to access the *data* for the *metering point* in its[37] databases and records.

(2) Clause 4.8(1) applies despite any purported agreement to the contrary.

{Example: An agreement regarding the financial aspects of providing *metering services* may purport to make provision to the contrary to clause 4.8(1).}

{Note: See also clause 3.4 which deals with ownership of *meters* and *communications links*.}

(3) A *network operator*[38] must allow a *user* who is a *retailer* or a *generator* to have local and (where a suitable *communications link* is installed) remote access to the *energy data* held in its *metering installation* for *metering points* at its associated *connection points*, using a password provided by the *network operator*[39] which provides 'read only' access.

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[36] If clause 5.29(b) applies, read "its" as "its, and its *metering data agent's*, ".

[37] If clause 5.29(b) applies, read "its" as "its, and its *metering data agent's*, ".

[38] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[39] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(3A) A *network operator*[40] must allow a *user* who is a *retailer* or a *generator* to have access to *data* held in its *metering database* for *metering points* at its associated *connection points*, by means of a website (or otherwise by remote access to a "data storage device" as that expression is defined in the *Electronic Transactions Act 2003*), using a password provided by the *network operator*[41] which provides 'read only' access.

(4) A *network operator*[42] must have *devices* and methods in place that:

(a) ensure that *energy data* held in its *metering installation* is secured from unauthorised local access or remote access, by *electronic* password and *electronic* security controls which are sufficient to the standard of *good electricity industry practice*; and

(b) ensure that *data* held in its *metering database* is secured from unauthorised local access or remote access, by *electronic* password, *electronic* security controls and software or hardware encryption technologies, sufficient to the standard of *good electricity industry practice*.

(5) Without limiting clause 4.8(4), a *network operator*[43] must:

(a) ensure that (except as specified in clause 4.8(3), 4.8(3A) and 5.17A(2)(d)) *electronic* passwords and other *electronic* security controls are only issued to:

(i) authorised personnel of the *network operator*[44]; and

(ii) where a *registered metering installation provider* has been authorised under its registration to perform work requiring *meter* programming access – authorised personnel of the *registered metering installation provider*, and

(b) otherwise keep its records of *electronic* passwords and other *electronic* security controls secure from unauthorised access.

4.9 Period for which energy data must be retained

A *network operator*[45] must retain *energy data* in its *metering database* for each *metering point* on its *network* (including any *energy data* that has been replaced under clause 5.24):

(a) for at least 13 months from the date when the *data* was obtained — in a readily accessible format; and

(b) after that period for at least a further 5 years and 11 months — in a format that is accessible within a reasonable period of time.

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[40] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[41] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[42] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[43] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[44] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[45] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

Part 5 – Metering Services

Division 5.1 — Metering services generally

5.1 Network operator to use reasonable endeavours to provide access to metering services

(1) A *network operator*[46] must use all reasonable endeavours to accommodate another *Code participant's*:

(a) requirement to obtain a *metering service*; and

(b) requirements in connection with the negotiation of a *service level agreement*.

(2) Without limiting clause 5.1(1), a *network operator*[47] must:

(a) expeditiously and diligently process all requests for a *service level agreement*; and

(b) negotiate in good faith with a *Code participant* regarding the terms for a *service level agreement*; and

(c) to the extent reasonably practicable in accordance with *good electricity industry practice*, permit a *Code participant* to acquire a *metering service* containing only those elements of the *metering service* which the *Code participant* wishes to acquire.

(3) This clause 5.1 does not limit the *Access Code*, and, in the event of any conflict or inconsistency between this clause 5.1 and a provision of the *Access Code*, the latter is to prevail.

(4) The information to be submitted by a *Code participant* to a *network operator*[48] when requesting a *metering service* from the *network operator*[49] is detailed in Appendix 4.

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[46] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[47] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[48] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or its *metering data agent*".

[49] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

5.2 Unwritten service level agreement adopts model service level agreement

If a *network operator*[50] provides, and a *user* accepts, a *metering service* and there is no written *service level agreement* between the parties in respect of the *metering service*, then unless the parties agree otherwise, the terms of the unwritten *service level agreement* for the *metering service* are to be taken to be those set out in the *model service level agreement* in respect of the *metering service*.

5.3 Network operator must read meters

A *network operator*[51] must, for each *metering point* on its *network*:

(a) obtain *energy data* from the *metering installation* for the *metering point*; and

(b) transfer the *energy data* into its *metering database,*

by no later than 2 *business days* after the *date for a scheduled meter reading* for the *metering point* (or such other time as is specified in applicable *service level agreement*).

5.4 Network operator must do at least one meter reading that provides an actual value per year that passes validation

(1) A *network operator*[52] must, for each *meter* on its *network,* at least once in any 12 month period undertake a *meter* reading that provides an *actual value* that passes the *validation* processes in Appendix 2 of this *Code*.

(1A) The *meter* reading referred to in clause 5.4(1):

(a) must not be undertaken by the *customer* associated with the *meter*; and

(b) must be undertaken by a person who is employed or appointed by the *network operator* and who is suitably skilled in accordance with *good electricity industry practice* to carry out *meter* readings.

(2) A *user* must, when reasonably requested by a *network operator*[53]*,* assist the *network operator*[54] to comply with the *network operator's*[55] obligation under clause 5.4(1).

{For example: if the *network operator* is unable to access the *meter* to undertake a *meter* reading and obtain the *energy data*, the *user* may assist the *network operator* to obtain access to the *meter* at a mutually agreed time.}

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[50] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[51] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[52] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[53] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[54] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[55] If clause 5.29(b) applies, read "*network operator's*" as "*metering data agent's*".

(3) Nothing in this clause 5.4 detracts from a *network operator's*[56] obligations to undertake *meter* readings under any other provision of this *Code*, under the *Customer Transfer Code* and as required by an enactment or an agreement.

Division 5.2 — Data provision

5.5 Charges for provision of data

(1) If there is no written *service level agreement* in place between the *network operator*[57] and the *user* in respect of the provision of *data* under this *Code*, the *network operator*[58] or the *user* may require the other to negotiate and enter into a written *service level agreement* in respect of the provision of *data*.

{Note: If there is no written *service level agreement*, any *metering services* provided will be governed by an unwritten *service level agreement* under clause 5.2.}

(2) Subject to clause 5.5(2A)(b), a *network operator*[59] may impose a *charge* for the provision of *energy data*, but only:

(a) if a *user* has requested the *energy data* – to the extent permitted by, and in accordance with, the applicable *service level agreement* between it and the *user*; and

(b) if a *customer* has given a direction under clause 5.17A(1) –

(i) to the extent permitted by, and in accordance with, an applicable agreement between the *customer* and the *network operator*[60]; or

(ii) if no such agreement exists between the *customer* and the *network operator*[61] — in order to recover its reasonable costs of provision.

(2A) A *network operator*[62] must not impose a *charge*:

(a) for the provision of *standing data* under this *Code*; and

(b) for the provision of *energy data* under this *Code* if another enactment prohibits it doing so.

{Note: For example, clause 10.7(2) of the *Code of Conduct* does not permit a "distributor" within the meaning of the *Code of Conduct* to charge for the provision of *data* required to be provided under that clause under certain conditions.}

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[56] If clause 5.29(b) applies, read "*network operator's*" as "*metering data agent's*".

[57] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[58] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[59] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[60] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[61] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[62] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

5.6 Network operator must provide energy data after meter reading

(1) Subject to clause 5.6(2), a *network operator*[63] must in accordance with this *Code* provide *validated*, and where necessary *substituted* or *estimated*, *energy data* for a *metering point* to:

(a) the *user* for the *metering point*; and

(b) the *IMO,*

before 5pm on the first *business day* after the *network operator*[64] 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*).

(2) If the *energy data* for a *metering point* fails *validation*, the time limit in clause 5.6(1) is extended to 5pm on the second *business day* after the *network operator*[65] obtains the *data*, unless the *network operator*[66] and the *user* agree otherwise.

5.7 Network operator must provide replacement energy data

If a replacement *energy data* value is inserted in a *metering database* for a *metering point* under clause 5.24, the *network operator*[67] must in accordance with this *Code* provide the replacement *energy data* to:

(a) the *user* for the *metering point*; and

(b) the *IMO,*

within 2 *business days* (or such other time as is specified in the applicable *service level agreement*) after the *day* the replacement is made.

5.8 Network operator must provide data for user's Code of Conduct obligations

A *network operator*[68] must in accordance with this *Code* provide a *user* with whatever information the *network operator*[69] has, including *energy data* and *standing data*, that is necessary to enable the *user* to comply with its obligations under the *Code of Conduct*, within the time necessary for the *user* to comply with the obligations (unless another time is specified in the applicable *service level agreement*).

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[63] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[64] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[65] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[66] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[67] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[68] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[69] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

5.9 Network operator must provide standing data to users

A *network operator*[70] must, in accordance with this *Code*, provide *standing data,* provided to or obtained by it under this *Code*, to *users* where required to do so under any enactment.

{Note: A *network operator* is required to disclose certain *data* to *customers* in other enactments such as clause 10.6 of the *Code of Conduct*.}

5.10 Network operator must provide standing data to retailer

A *network operator*[71] must provide a subset of the *standing data* to a *retailer* in accordance with the provisions of Annex 4 of the *Customer Transfer Code*.

5.11 Network operator must provide standing data to incoming retailer

{Note: Clause 4.13 of the *Customer Transfer Code* requires a *network operator* to provide *notice* of the *transfer* and the transfer date to various entities, including the *incoming retailer*. However the *Customer Transfer Code* does not deal with the *network operator* providing the *incoming retailer* (who has now become the current retailer ie. *current user*) with a full suite of *standing data* to enable the *incoming retailer* to populate its own database. This clause deals with that *data* provision. The *network operator* can if it chooses comply with this clause and clause 4.13 of the *Customer Transfer Code* by a single *notice*. }

If a "transfer" (as defined in the *Customer Transfer Code*) occurs at a *connection point*, then within 2 *business days* after the "transfer date" (as defined in the *Customer Transfer Code*), the *network operator*[72] must provide the *incoming retailer* with a copy of the *standing data* for each *metering point* associated with the *connection point*.

5.12 Current user may request energy data

(1) If:

(a) a *user* gives a *network operator*[73] an *energy data* request for a *metering point* in accordance with the *communication rules*; and

(b) the *energy data* request relates only to a time or times for which the *user* was the *current user* at the *metering point*,

then the *network operator*[74] must within 2 *business days* after receipt of the request (or such other time as is specified in the applicable *service level agreement*) provide the *user* with the complete set of *energy data* for the *metering point* for the time or times specified in the request.

(2) An *energy data* request under clause 5.12(1) may specify that the *energy data* is to be provided at regular intervals.

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[70] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[71] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[72] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[73] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[74] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

5.13 Current user may request standing data

(1) If the *current user* for a *metering point* gives the *network operator*[75] a *standing data* request for the *metering point* in accordance with the *communication rules*, then the *network operator*[76] must:

(a) provide the *current user* with the complete current set of *standing data* for the *metering point*; and

(b) advise whether there is a *communications link* for the *metering point*.

(2) The *network operator*[77] must comply with clause 5.13(1) within 2 *business days* after receipt of the request.

5.14 Current user may request bulk standing data

(1) A *user* may in accordance with the *communication rules* request the *network operator*[78] to provide the current *standing data* for more *metering points* than the maximum daily number specified in clause 3.4(1)(b)(i) of the *Customer Transfer Code* ("**bulk standing data request**").

{Note: At the time this *Code* was made, clause 3.4(1)(b)(i) of the *Customer Transfer Code* specified a maximum of 20 requests per day.}

(2) A *user* may not make a *bulk standing data request* in respect of a *metering point* unless:

(a) it is more than 3 months since that *user* previously made such a request in respect of the *metering point*; and

(b) the *user* is the *current user* for the *metering point*.

(3) If a *user* makes a *bulk standing data request*, the *network operator*[79] must in accordance with the *communication rules*:

(a) acknowledge receipt of the *bulk standing data request*; and

(b) provide the requested *standing data* to the requesting *user* as soon as reasonably practicable and in any event no later than 10 *business days* after receipt of the request (or such other time as is specified in the applicable *service level agreement*).

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[75] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[76] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[77] If clause 5.29(b) applies, read *"network operator"* as *"metering data agent"*.

[78] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[79] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

5.15 Energy data must be accompanied by meter reading date

If a *network operator*[80] provides *energy data* to a *user* or the *IMO*, it must also provide the date of the *meter* reading, which is to be either:

(a) if the *energy data* derives from an actual reading — the date of the actual reading; or

(b) if the *energy data* is an *estimate*, *substitute* or *deemed actual value* — the date on which the *network operator*[81] (acting in accordance with *good electricity industry practice*) deems the reading to have occurred.

5.16 User must provide energy data to network operator

If a *user* collects or receives *energy data* from a *metering installation* then the *user* must provide the *network operator*[82] with the *energy data* (in accordance with the *communication rules*) within 2 *business days* after collecting or receiving the *energy data* (or such other time as is specified in the applicable *service level agreement*).

5.17 User must provide standing data and energy data to user's customers

(1) A *user* must, in accordance with this *Code*:

(a) provide the *validated*, and where necessary *substituted* or *estimated*, *energy data*, provided to it or obtained by it under this *Code*, 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*; and

{Note: a *user* is required to disclose certain *energy data* to its *customers* in order to bill those *customers*. Those requirements may be expressed in other enactments such as clause 4.4 of the *Code of Conduct*.}

(b) provide *standing data* provided to or obtained by it under this *Code,* to the *user's customer* to which that information relates where required by an enactment or an agreement to do so for billing purposes or for the purpose of providing *metering services* to the *customer*.

5.17A Customer may direct that energy data and standing data be provided

(1) A *network operator*[83] must provide *data* for a *metering point* from its *metering database* to a person if (and to the extent that) the *customer* associated with the *metering point* gives the *network operator*[84] a direction to do so.

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[80] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[81] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[82] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[83] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[84] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or its *metering data agent*".

(2) A direction under clause 5.17A(1):

(a) must include the *customer's verifiable consent*, and identify the person (which may be the *customer* or a third party) (**"nominated recipient"**) to whom the *data* must be provided; and

(b) may only be given in respect of *data* that relates to the period or periods for which the *customer* is or was associated with the *metering point*; and

(c) may direct the provision to occur on more than one occasion including at regular intervals; and

(d) may require the *network operator*[85] to allow the *nominated recipient* to have access to the *data* by means of a website (or otherwise by remote access to a "data storage device" as that expression is defined in the *Electronic Transactions Act 2003*) using a password provided by the *network operator*[86] which provides 'read only' access, but only if:

(i) the *nominated recipient* has a legitimate commercial interest or other legitimate interest in accessing the *data*; and

(ii) the *network operator*[87] (acting reasonably and in accordance with *good electricity industry practice*) determines that it is practicable for the *nominated recipient* to access the *data* by that means.

(3) A *network operator*[88] must comply with a direction under clause 5.17A(1):

(a) if the provision is to occur on only one occasion, as soon as practicable but no later than 10 *business days* after it[89] receives the direction; and

(b) if the provision is to occur at regular intervals, within a reasonable time period agreed between the *network operator*[90] and the *nominated recipient*, and failing agreement at reasonable intervals consistent (to the extent practicable in accordance with *good electricity industry practice*) with the direction.

(4) Despite clause 4.8(1), a person to whom *data* is provided under clause 4.8(3) or 5.17A may use, reproduce and disclose the *data*, subject to:

(a) any agreement between the person and the *customer*; and

(b) clause 7.5, if the person is a *Code participant*.

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[85] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[86] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[87] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[88] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[89] If clause 5.29(b) applies, read "it" as "the *network operator* or the *metering data agent*".

[90] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

5.18 User must notify network operator of change to energisation status

(1) If a *user* collects or receives information regarding a change in the energisation status of a *metering point* then the *user* must:

(a) provide the *network operator*[91] with the information including the following attributes, in accordance with the *communication rules*:

(i) the *NMI* of the associated *connection point*;

(ii) energisation status;

(iii) date of change of energisation status; and

(iv) the reason for the change of energisation status,

and

(b) provide the *network operator*[92] with *energy data* from the *metering point* under clause 5.16.

(2) The *user* must comply with clause 5.18(1) within 1 *business day* after the day the *user* collects or receives such information.

5.19 User must provide customer information

(1) A *user* must, when requested by the *network operator*[93] acting in accordance with *good electricity industry practice*, use reasonable endeavours to collect information from *customers*, if any, that assists the *network operator*[94] in meeting its obligations described in this *Code* and elsewhere, and to provide that information to the *network operator*.

{Note: If the information discloses a change in an attribute described in clause 5.19(2), then clauses 5.19(3) and (3A) specify the time within which the change must be notified.}

(2) A *user* must, to the extent that it is able, collect and *maintain* a record of the following information in relation to the site of each *connection point* with which the *user* is associated:

(a) the following **"address attributes"**:

(i) the address of the site in a format specified in the *communication rules*; and

(ii) the *NMI* of each *connection point* at the address of the site;

(b) the following **"site attributes"** — the *NMI* of each *connection point* at the site;

[91] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[93] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[94] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(c) for each *customer* associated with the *connection point,* the following **"customer attributes"**:

(i) the *NMI* of each *connection point* with which the *customer* is associated; and

(ii) the *customer's* name; and

(iii) the *customer's* postal address (and, if a person residing at the site requires *life support equipment*, the person's street address) for outage notification purposes, in a format specified in the *communication rules*; and

(iv) one or more phone numbers to enable the *network operator*[95] to contact the *customer* (and, if a person residing at the site requires *life support equipment*, a phone number to enable the *network operator*[96] to contact the person); and

(v) whether a person residing at the site requires *life support equipment*.

(2A) For the purposes of clause 5.19(2)(c)(v):

(a) a *user* must record that a person residing at the site requires *life support equipment* if the *customer* associated with the *connection point* provides the *user* with confirmation from an appropriately qualified medical practitioner that the person requires *life support equipment*; and

(b) a *user*, acting in accordance with *good electricity industry practice*, is not obliged to record that a person residing at the site requires *life support equipment* if the *customer* associated with the *connection point* does not provide the *user* with confirmation from an appropriately qualified medical practitioner that the person requires *life support equipment*; and

(c) a *user* must record that there is no longer a person residing at the site who requires *life support equipment*, if the *customer* associated with the *connection point* notifies the *user* of this fact.

(3) Subject to clause 5.19(3A) and 5.19(6), the *user* must, within 1 *business day* after becoming aware of any change in an attribute described in clause 5.19(2), *notify* the *network operator*[97] of the change.

{Note: *Customer,* site and *address attributes* may require updating in the following situations:

- on completion of a *customer* transfer to that *user;*
- for a new *connection* where the *customer* details and access requirements are assigned to the new *NMI;*
- when the *customer* moves out or moves in;

[95] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[96] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[97] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

- upon receipt of updates provided by the existing *customer*.}

{Note: to the extent that items listed in clause 5.19(2) are *standing data* items, there is also a general obligation under clause 4.5 for *Code participants*, including the *user*, to keep the *registry* accurate and to *notify* other, relevant, *Code participants* of discrepancies.}

(3A) The time for notification specified in clause 5.19(3) applies unless:

(a) in respect of the attribute described in clause 5.19(2)(c)(v) — a provision of the *Code of Conduct* specifies a different time for the *user* to notify the *network operator*[98]; and

(b) in respect of any other attribute — the applicable *service level agreement* specifies a different time for the *user* to notify the *network operator*[99],

in which case the different time applies.

(4) [Not used]

(5) The *network operator*[100] must give *notice* to the *user*, or (if there is a different *current user*) the *current user*, acknowledging receipt of:

(a) any *customer attributes* or *site attributes* from the *user* within 1 *business day* after receiving the information; and

(b) any *address attributes* from the *user* within 15 *business days* after receiving the information.

(6) The *user* must use reasonable endeavours to ensure that it does not *notify* the *network operator*[101] of a change in an attribute described in clause 5.19(2) that results from the provision of *standing data* by the *network operator*[102] to the *user*.

{Note: This is to prevent a loop situation occurring.}

Division 5.3 — Data Quality

5.20 Energy data verification requests

{Note: The *verification* process is re-validation of the *data* that is held in the *network operator's* systems without an obligation to perform a field visit.}

(1) A *network operator*[103] must, by no later than 6 months after the date this *Code* applies to the *network operator*[104], develop, in accordance with the *communication rules*, an *energy data verification* request form (**"Energy Data**

[98] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[99] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[100] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[101] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[102] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[103] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[104] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

Verification Request Form") that allows a *Code participant* to request *verification* of *energy data* in accordance with this *Code*.

(2) An *Energy Data Verification Request Form* must require a *Code participant* to provide the following information:

(a) the *NMI* and *checksum* for the *connection point* associated with the *energy data*; and

(b) the reason for the request; and

(c) for:

(i) an *interval meter* — the start date and time and end date and time of the period to which the *Code participant's* request relates; and

(ii) an *accumulation meter* — the meter reading date to which the request relates (which is to be the date of the actual reading if the *network operator*[105] has advised the *Code participant* that the *energy data* derives from an actual reading, and the date on which the reading is deemed to have occurred if the *network operator*[106] has advised the *Code participant* that the *energy data* is an *estimate*, *substitute* or *deemed actual value*);

and

(d) where practicable — such information as the *Code participant* is reasonably able to provide to assist the *network operator*[107] to comply with the request.

(3) A *Code participant* may request *verification* of *energy data* using a *network operator's*[108] *Energy Data Verification Request Form* if the *Code participant* reasonably believes that:

(a) there is, or is potentially, an error in the *energy data*; or

(b) the *network operator's*[109] response to a previous request has not resolved its query.

(4) If a *Code participant* requests *verification* of *energy data* under clause 5.20(3), the *network operator*[110] must in accordance with the *metrology procedure*:

(a) subject to clause 5.20(5), use reasonable endeavours to *verify* the *energy data*; and

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[105] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[106] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[107] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[108] If clause 5.29(b) applies, read "*network operator's*" as "*metering data agent*".

[109] If clause 5.29(b) applies, read "*network operator's*" as "*metering data agent's*".

[110] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(b) inform the requesting *Code participant* of the result of the *verification* and provide the *verified energy data* to that *Code participant:*

(i) as soon as possible after completing the *verification*; and

(ii) no later than 5 *business days* after receiving the *Energy Data Verification Request Form* (or such other time as is specified in the applicable *service level agreement*).

(5) A *network operator*[111] is not required to perform a field visit to comply with its obligations under clause 5.20(4).

5.21 Test and audit requests

(1) A *Code participant* may, subject to clauses 5.21(5) and 5.21(6), in relation to a *metering installation*, request the *network operator*[112] to undertake either a test or an audit or both of any one or more of:

(a) the accuracy of the *metering installation*; and

(b) the *energy data* from the *metering installation*; and

(c) the *standing data* for the *metering installation*.

(2) A *network operator*[113] must comply with any reasonable request under clause 5.21(1).

(3) The *user* may witness the test or audit.

(4) A test or audit under clause 5.21(1) is to be conducted in accordance with:

(a) the *metrology procedure*; and

(b) the applicable *service level agreement*.

(5) A *Code participant* must not request a test or audit under clause 5.21(1) unless:

(a) if the *Code participant* is a *user* — the test or audit relates to a time or times at which the *user* was the *current user*; or

(b) it is the *IMO*.

{Note: If the *Code participant* seeking the test or audit is a *network operator* or *metering data agent*, the matter will be dealt with by the *metering data agency agreement*.}

(6) A *Code participant* must not make a request under clause 5.21(1) that is inconsistent with any *access arrangement* or agreement.

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[111] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[112] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".

[113] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".

(7) If there is no written *service level agreement* in place between the *network operator*[114] and the *user* in respect of the testing of the *user's metering installations* or the auditing of information from the *meters* associated with the *metering installations* or both, the *network operator*[115] or the *user* may require the other to negotiate and enter into a written *service level agreement* in respect of the testing of the *metering installations*, or the auditing of information from the *meters* associated with the *metering installations*, or both.

{Note: If there is no written *service level agreement*, any *metering services* provided will be governed by an unwritten *service level agreement* under clause 5.2.}

(8) A *network operator*[116] may only impose a *charge* for the testing of the *metering installations*, or auditing of information from the *meters* associated with the *metering installations*, or both, in accordance with the applicable *service level agreement* between it and the *user*.

(9) Any written *service level agreement* entered into under clause 5.21(7) must include a provision that no *charge* is to be imposed if the test or audit reveals a non-compliance with this *Code*.

(10) Any unwritten *service level agreement* in respect of testing of the *metering installations*, or the auditing of information from the *meters* associated with the *metering installations*, or both, includes a provision to the effect described in clause 5.21(9).

(11) If a test or audit shows that the accuracy of the *metering installation* or information from a *meter* associated with the *metering installation* does not comply with the requirements under this *Code*, the *network operator*[117]:

(a) must advise the affected parties as soon as practicable of the errors detected and the possible duration of the existence of the errors; and

(b) must restore the accuracy of the *metering installation* in accordance with the applicable *service level agreement*; and

(c) may (acting in accordance with *good electricity industry practice*) make corrections to the *energy data,* up to a maximum of 12 months before the test or audit, to take account of errors referred to in this clause 5.21(11) and to minimise adjustments to the final settlement account.

(12) The original stored error correction *data* in a *meter* must not be altered except during accuracy testing and calibration of a *metering installation*.

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[114] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".

[115] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".

[116] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".

[117] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".

5.22 Energy data – validation, substitution and estimation

(1) A *network operator*[118]:

(a) must *validate energy data* in accordance with this *Code* applying, as a minimum, the rules and procedures set out in Appendix 2; and

(b) must, where necessary *substitute* and *estimate energy data* under this *Code* applying, as a minimum, the rules and procedures set out in Appendix 3.

(2) The *network operator*[119] must use *check metering data*, where available, to *validate energy data*, provided that the *check metering data* has been appropriately adjusted for differences in *metering installation* accuracy in accordance with clause 3.13.

(3) If a *check meter* is not available or *energy data* cannot be recovered from the *metering installation* within the time required under this *Code*, then the *network operator*[120] must prepare *substitute* values using a method contained in Appendix 3 of this *Code* and agreed where necessary with the relevant *Code participants*.

(4) If a *network operator*[121] detects a loss of *energy data* or incorrect *energy data* from a *metering installation*, it must *notify* each affected *Code participant* of the loss or error within 24 hours after detection.

(5) *Substitution* or *estimation* of *energy data* is required when *energy data* is missing, unavailable or corrupted, including in the following circumstances:

(a) the *metering equipment* for the *metering point* has failed or is removed from service; or

(b) *energy data* cannot be obtained in the time frames required for the *data* period in question; or

(c) an inspection or test on the *metering installation* establishes that a measurement error exists due to an installation fault that causes the accuracy of the *metering installation* to fail to meet the requirements of Table 3 in Appendix 1 for that *Type* of *metering installation*; or

(d) an inspection or test on the respective algorithms, Inventory, Load or On/Off tables for a *Type* 7 *connection point* establishes that an error exists in the *energy data* calculation set out in a *metrology procedure*; or

(e) where the *energy data* calculation has failed the *validation* tests for the *data* for a *Type* 7 *connection point*; or

[118] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[119] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[120] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[121] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(f) in circumstances where valid *energy data* fails the *validation* processes in Appendix 2 of this *Code*.

(6) The *network operator*[122] must review all *validation* failures before undertaking any *substitution*.

5.23 Deemed actual values

(1) If at any time a *network operator*[123] determines that there is no possibility of determining an *actual value* for a *metering point*, then the *network operator*[124] must designate an *estimated* or *substituted* value for the *metering point* to be a **"deemed actual value"** for the *metering point*.

{Examples: A *deemed actual value* may be required:

(a) for an *accumulation meter*, if the index of the *meter* has become unreadable, or the *meter* is destroyed; and

(b) for an *interval meter*, if the *data logger* or associated *metering equipment* has been destroyed; and

(c) for an *interval meter*, if the *data logger* or associated *metering equipment* is faulty, but not destroyed.}

(2) A *deemed actual value* may be used in place of an *actual value*.

(3) If the *network operator*[125] has designated a *deemed actual value* for a *metering point*, then:

(a) the *network operator*[126] must repair or replace the *meter*, or one or more components of the *metering equipment,* (as appropriate) at the *metering point* in accordance with this *Code*;

{Note: The *network operator* will then be required to comply with clause 5.6(2) and provide the *energy data* to the associated *user* and the *IMO*.}

and

(b) clauses 5.24(3)(c) and 5.24(4) apply in respect of the *estimated* or *substituted* value which was designated to be the *deemed actual value*.

{Note: That is, the *network operator* may update the *deemed actual value* if a better *estimated* or *substituted* value becomes available.}

[122] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[123] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[124] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[125] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[126] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

5.24 Replacement of energy data with better data

{Note: Under the *market rules*, revised *data* can be dealt with under an Adjustment Process, see rules 9.16.3 and 9.19.

Energy data replaced under this clause must still be retained under clause 4.9.}

(1) If a *network operator*[127] uses an *actual value* (**"first value"**) for *energy data* for a *metering point*, and a better quality:

(a) *actual value*; or

(b) *deemed actual value*,

is available (**"second value"**), then the *network operator*[128] must replace the *first value* with the *second value* if doing so would be consistent with *good electricity industry practice*.

(2) If a *network operator*[129] uses a *deemed actual value* (**"first value"**) for *energy data* for a *metering point*, and a better quality *deemed actual value* is available (**"second value"**), then the *network operator*[130] must replace the *first value* with the *second value* if doing so would be consistent with *good electricity industry practice*.

(3) If a *network operator*[131] uses an *estimated* or *substituted* value (**"first value"**) for *energy data* for a *metering point*, and a better quality:

(a) *actual value*; or

(b) *deemed actual value*; or

(c) *estimated* or *substituted* value,

is available (**"second value"**), then the *network operator*[132] must replace the *first value* with the *second value*:

(d) if doing so would be consistent with *good electricity industry practice*; or

(e) if the *user* associated with the *metering point* and its *customer* jointly request the *network operator*[133] to do so.

(4) A *network operator*[134] (acting in accordance with *good electricity industry practice*) must consider any reasonable request from a *Code participant* for an *estimated* or *substituted* value to be replaced under clause 5.24.

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[127] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[128] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[129] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[130] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[131] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[132] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[133] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".
[134] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

5.25 Estimation and processing must maintain data quality

A *network operator*[135] must:

(a) ensure the accuracy of *estimated energy data* in accordance with the methods in its *metrology procedure*; and

(b) ensure that any transformation or processing of *data* preserves its accuracy in accordance with the *metrology procedure*.

(Example: The transformation or processing may involve the application of multipliers to raw *data* to apply the appropriate *CT* or *VT* ratios.}

5.26 Network operator may correct for losses between metering point and associated connection point

A *network operator*[136] may adjust the *energy data* that is transferred into its *metering database* under clause 5.3(b) to compensate for losses between a *metering point* and the associated *connection point* in accordance with the *metrology procedure*.

5.27 Network operator may request customer details

Without limiting clauses 4.5 or 4.6, a *network operator*[137] may, if it reasonably believes that one or more components of the *customer attributes* (but not the *site attributes* or *address attributes*) for a *connection point*:

(a) are missing; or

(b) are incorrect,

request those current values from the *current user,* and the *current user* must provide the information requested in accordance with the *communication rules* within 2 *business day*s after receiving the request (or such other time as is specified in the applicable *service level agreement*).

[135] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[136] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[137] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

Division 5.4 — Appointment of electricity networks corporation as metering data agent

5.28 Network operator may elect for electricity networks corporation to be metering data agent

{Note: Under clause 8.1.4 of the *market rules*, a *network operator* (other than the *electricity networks corporation*) may, under the conditions contained in that clause, decline to collect *energy data* from *market participants connected* to its *network* and the *electricity networks corporation* must undertake that activity. This *Code* applies also to the *network operator* of a non-wholesale market network.}

(1) Subject to clause 5.28(2), a *network operator* (**"electing network operator"**) other than the *electricity networks corporation* may by *notice* to the *electricity networks corporation* elect for the *electricity networks corporation* to be its *metering data agent* for its *network*.

(2) A *network operator* may only make an election under clause 5.28(1) if its *network* is part of the *South West interconnected system*.

(3) Clause 5.28(2) does not prevent the *electricity networks corporation* from agreeing with a *network operator* that the *electricity networks corporation* will be the *metering data agent* for the *network operator's network.*

5.29 Consequences of election

If a *network operator* makes an election under clause 5.28 in respect of a *network*, then (unless the election is terminated under the *metering data agency agreement*):

(a) the *electricity networks corporation* is appointed as the *electing network operator's metering data agent* under this *Code* for the *network,* commencing on the day specified in the *metering data agency agreement*; and

(b) wherever in this *Code* the expression "network operator" is marked by a footnote, the expression is to be read in relation to the *network* and the *electing network operator* as being amended in the manner set out in the footnote; and

(c) except to the extent that the *metering data agency agreement* provides otherwise:

(i) the *electing network operator* must do all things reasonably necessary to enable the *electricity networks corporation* to perform its obligations as the *electing network operator's metering data agent*; and

{Example: The *network operator* will need to tell the *metering data agent* that a *transfer* has occurred under the *Customer Transfer Code*, so that the *metering data agent* can comply with clause 5.11.}

(ii) the *electricity networks corporation* must do all things reasonably necessary to enable the *electing network operator* to perform its obligations under this *Code* and any other enactment;

and

(d) if the *network* is one to which Part 9 of the Act applies — the *electing network operator* must as soon as practicable provide a copy of the election notice to the *IMO*; and

(e) without limiting the generality of clause 5.29(c)(i), except to the extent that the *metering data agency agreement* provides otherwise the *electing network operator* must provide to the *electricity networks corporation* for each *metering point* on its *network*:

(i) all information needed by the *electricity networks corporation* to populate the *registry*; and

(ii) *energy data* for at least the last 2 years;

and

(f) except to the extent that the *metering data agency agreement* provides otherwise nothing in this *Code* obliges the *electricity networks corporation* to *maintain* all or part of a *metering installation*; and

{Note: Clause 3.5(3)(a) requires a *network operator* to provide, install, operate and, subject to clause 3.5(7), *maintain* a *metering installation*.}

(g) except to the extent that the *metering data agency agreement* provides otherwise, the *electing network operator* must (unless the *metering data agent* is appointed after the opportunity to do so has passed) consult with, and have reasonable regard to the requirements of, the *electricity networks corporation* in:

(i) preparing the *model service level agreement* for the *network*; and

(ii) making any submissions to the *Authority* under clause 6.20(3)(b) in relation to the *network*; and

(iii) preparing the *communication rules* for the *network*; and

(iv) preparing the *metrology procedure* for the *network*,

and

(h) except to the extent that the *metering data agency agreement* provides otherwise, the *electricity networks corporation* may make submissions to the *electing network operator* on any initial findings by the *Authority* under clause 6.20(3)(b) in relation to the *network* and the *electing network operator* must provide these submissions to the *Authority* within the time limited for it to provide submissions under clause 6.20(3)(c).

5.30 Metering data agency agreement

(1) If a *network operator* makes an election under clause 5.28 in relation to a *network*, then the *electing network operator* and the *electricity networks corporation* must enter into a *metering data agency agreement* in relation to the *network*, which must deal with at least the following:

(a) the time from which the *electricity networks corporation* is to commence acting as the *electing network operator's metering data agent* in relation

to the *network*, which (unless the *electing network operator* agrees to a later time) must be as soon as practicable in accordance with *good electricity industry practice*; and

(b) whether the *electricity networks corporation* is to adopt the *electing network operator's model service level agreement* and *metrology procedure* in relation to the *network* and for each *document*:

(i) if the *electricity networks corporation* is to adopt it — whether the *electing network operator* is to seek any amendments to it under Division 6.2; and

(ii) if the *electricity networks corporation* is not to adopt it — how the *electing network operator* and the *electricity networks corporation* are to cooperate in developing and having approved under Division 6.2 the *electricity networks corporation's* own *document* for the *network*;

{Note: Clause 5.30(3) provides for consequential amendments to Division 6.2.}

and

(c) whether the *electing network operator* is to seek any amendments to the *communication rules* in relation to the *network* under Division 6.2; and

(d) apportionment of responsibilities under a *model service level agreement*; and

(e) access by the *electing network operator* to the *metering database*; and

(f) test and audit under clause 5.21 as between the *electing network operator* and the *electricity networks corporation*; and

(g) how the election may be terminated and the consequences of termination; and

(h) allocation of responsibility between the *electing network operator* and *electricity networks corporation* in respect of the *electing network operator's* responsibilities under the *Customer Transfer Code*.

(2) The terms of a *metering data agency agreement* may be the subject of a *dispute* under Part 8, but in resolving the *dispute* the *Authority*:

(a) may not, unless the *electing network operator* agrees, include in the *metering data agency agreement* any derogation from clauses 5.32, 5.33 and 5.34(2); and

(b) may not, unless the *electricity networks corporation* agrees, include in the *metering data agency agreement* any derogation from clauses 5.29(c), 5.29(e), 5.29(f), 5.32 and 5.33.

(3) If a *metering data agency agreement* provides in accordance with clause 5.30(1)(b)(ii) that the *electricity networks corporation* is not to adopt either or both of the *electing network operator's model service level agreement* or *metrology procedure* (each a **"relevant document"**), then wherever in Part 6 the expression "network operator" is marked by a footnote which refers to this

clause 5.30(3), the expression is to be read in relation to the *relevant document* as being amended in the manner set out in the footnote.

5.31 Ensuring that the electing network operator's metering installations comply with this Code

(1) If a *network operator* has elected under clause 5.28 for the *electricity networks corporation* to be its *metering data agent* in relation to a *network*, the *electricity networks corporation* must (in accordance with the manner and timing specified in the *metering data agency agreement*):

(a) assess the compliance of each *metering installation* in the *network* with this *Code*; and

(b) *notify* the *electing network operator* of each non-compliant *metering installation.*

(2) For each non-compliant *metering installation notified* under clause 5.31(1)(b), the *electing network operator* may by *notice* to the *electricity networks corporation* require the *electricity networks corporation* to upgrade the *metering installation* in order to make it compliant with this *Code*, in which case the *electricity networks corporation* must undertake the upgrade in accordance with the *metering data agency agreement* and *good electricity industry practice* (as to both the manner and timing of the upgrade).

(3) For each non-compliant *metering installation notified* under clause 5.31(1)(b), if within a reasonable time after notification under clause 5.31(1)(b), the *electing network operator* has not either:

(a) given the *electricity networks corporation* a *notice* under clause 5.31(2); or

(b) provided the *electricity networks corporation* with proof acceptable to the standard of *good electricity industry practice* that the *metering installation* has been upgraded in accordance with this clause 5.31,

then the *electricity networks corporation* may undertake the upgrade.

5.32 Metering data agent is not an agent

This *Code* does not (except to the extent that the *metering data agency agreement* expressly provides otherwise) create a relationship of principal and agent, partnership or joint venture between an *electing network operator* and the *electricity networks corporation* acting as its *metering data agent*.

5.33 Metering data agent is not a service provider

Appointment as a *metering data agent* in respect of a *network* does not (except to the extent that the *metering data agency agreement* expressly provides otherwise) make the *electricity networks corporation* a service provider for the purposes of the *Access Code* in respect of that *network*.

5.34 Electing network operator to reimburse the costs of the electricity networks corporation

(1) The *electricity networks corporation* may, subject to clause 5.34(2), recover from an *electing network operator* the costs the *electricity networks corporation* incurs in acting as the *network operator's metering data agent*.

(2) Except to the extent that the *metering data agency agreement* provides otherwise, the costs which may be recovered under clause 5.34(1):

(a) must not exceed the costs that would be incurred by a *network operator* acting in good faith and in accordance with *good electricity industry practice*, seeking to achieve the lowest sustainable costs of performing the obligations of a *metering data agent* under this *Code*; and

(b) must not exceed the incremental cost attributable to the *electricity networks corporation* acting as the *metering data agent* and accordingly must not include any allowance for profit margin, return on capital or return of capital.

Division 5.5 — Network operator performance reporting

5.35 Application of this Division 5.5

The clauses of this Division 5.5 apply to a *network operator*[138] in respect of a year if, during the year:

(a) the *network operator* has one or more *small use customers* connected to its *network*; and

(b) the *network operator*[139] is contracted to provide *metering services* to a *user* at one or more *connection points* on its *network*.

5.36 Commencement of reporting obligations

This Division 5.5 commences on 1 July 2013, such that the first report under clause 5.37(1) is to be given for the year ending on 30 June 2014.

5.37 Network operator must prepare report annually

(1) A *network operator* must:

(a) for the year ending on each 30 June, prepare a report setting out the information listed in clause 5.37(2) for each *metering service* it was[140] requested during the year to provide or scheduled during the year to carry out (each such *metering service* being a **"relevant metering service"**); and

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[138] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[139] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or its *metering data agent*".

[140] If clause 5.29(b) applies, read "it was" as "either or both of the *network operator* and its *metering data agent* were".

(b) provide a copy of the report to the Minister and the *Authority* not less than 5 *business days* before it is *published* under clause 5.37(1)(c); and

(c) *publish* the report within 3 months after the year ends.

(2) The report must include the following information for each *relevant metering service*:

(a) the total number of instances of the *metering service* that the *network operator* was[141] requested during the year to provide or scheduled during the year to carry out; and

(b) the total number of such instances that were carried out in compliance with the *applicable service level* determined under clause 5.37(4); and

(c) the percentage of compliance, computed by dividing the number in clause 5.37(2)(b) by the number in clause 5.37(2)(a).

(3) For each *relevant metering service*, the information in clause 5.37(2) must be reported separately for each of the following four classes:

(a) *connection points* associated with *contestable customers*, where the *connection points* are located:

(i) in the *metropolitan area*; and

(ii) in Western Australia outside the *metropolitan area*;

and

(b) *connection points* associated with *customers* which are not *contestable customers*, where the *connection points* are located:

(i) in the *metropolitan area*; and

(ii) in Western Australia outside the *metropolitan area*.

(4) For the purposes of clause 5.37(2)(b) and subject to clause 5.37(5), the **"applicable service level"** for a *metering service* is to be determined using the following table:

[141] If clause 5.29(b) applies, read "*network operator* was" as "*network operator* and its *metering data agent* together were".

In the following circumstance:	**The applicable service level is found in the following instrument:**	**And is the service level set out in the instrument for:**
There is a *service level agreement* governing the provision of the *metering service*.	The *service level agreement*	The *relevant metering service*
There is no written *service level agreement* in respect of the *metering service*, but the *network operator*[142] has a *model service level agreement* for the *network*.	The *model service level agreement* for the *network*	Whichever *metering service* in the instrument most closely approximates the *relevant metering service*
There is no *service level agreement* governing the provision of the *metering service*, and the *network operator* does[143] not have a *model service level agreement* for the *network*.	The *model service level agreement* for the *South West interconnected system*	

(5) If an instrument referred to in clause 5.37(4) specifies different service levels for different classes of *connection point*, then the **"applicable service level"** is the service level specified for the relevant class of *connection point*.

5.38 Network operator must keep records

A *network operator*[144] must keep such records of information as are required for the purposes of clause 5.37, and must retain the information (in a format that is accessible within a reasonable period of time) for at least 7 years after the day on which a report containing the information is *published* under clause 5.37(1)(c).

[142] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[143] If clause 5.29(b) applies, read "*network operator* does" as "*network operator* and its *metering data agent* do".

[144] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

Part 6 – Documentation

{Note on integration with the *Access Code*: The *Access Code* requires an *access arrangement* to deal with metering as a "supplementary matter". Under section 5.28(b) of the *Access Code*, and subject to the *market rules* and related enactments, the *access arrangement* must deal with metering in a manner which is consistent with and facilitates the treatment of metering under other enactments including this *Code*.}

Division 6.1 — The Documents

6.1 Compliance with documents

(1) A *network operator*[145] must in relation to its *network* comply with:

(a) its[146] *model service level agreement*; and

(b) its *communication rules*; and

(c) its[147] *metrology procedure*; and

(d) any *service level agreement* entered into by it;

(e) its *mandatory link criteria*; and

(f) its *registration process* (if any).

(2) A *user* must, in relation to a *network* on which it has an *access contract*, comply with:

(a) the *communication rules*; and

(b) the *metrology procedure*;[148] and

(c) any *service level agreement* entered into by it; and

(d) the *mandatory link criteria*.

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[145] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[146] If clause 5.29(b) applies, read "its" as "the *network operator's* and the *metering data agent's*".

[147] If clause 5.29(b) applies, read "its" as "the *network operator's* and the *metering data agent's*".

[148] If clause 5.29(b) applies, read "the *metrology procedure*" as "the *network operator's* and the *metering data agent's metrology procedures*".

6.2 Network operator must establish documents

A *network operator*[149] must as soon as practicable and in any event no later than 6 months after the date this *Code* applies to the *network operator*[150] submit to the *Authority* for its approval under Division 6.2:

(a) a proposed *model service level agreement*; and

(b) [not used]

(c) a proposed *metrology procedure*; and

(d) proposed *mandatory link criteria* under clause 3.6.

{Note: The *network operator* may establish a *registration process* under clause 6.9, which is also a **"document"**.}

{Note: All *documents* which were in effect under the *2005 Metering Code* immediately before its repeal by clause 10.1, continue in effect for the purposes of this *Code* in accordance with section 36 of the *Interpretation Act 1984*.}

6.3 [Not used]

6.4 Transitional – Communications before communication rules approved

Until the *network operator publishes communication rules* under clause 6.19A in relation to a *network*, the **"communication rules"** for the *network* are that:

(a) *Code participants* must act in accordance with the *Code objectives* and *good electricity industry practice* in the communication of *data* or other information, or both, under this *Code*; and

(b) if under this *Code* a *Code participant* must or may send a thing *electronically*, the *Code participant* must send that thing to the *network operator's*[151] *notified electronic* communication address or recipient's *notified electronic* communication address, as applicable, in accordance with Annex 6 of the *Customer Transfer Code*.

6.5 Requirements for all documents

{Note: References in this clause 6.5 to "*document*" include the *communication rules*.}

A *document* must:

(a) comply with this *Code*; and

(b) not impose inappropriate barriers to entry to a market; and

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[149] If clause 5.30(3) applies, read "*network operator*" as "*network operator* and, in relation to the *relevant document*, its *metering data agent*".

[150] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[151] If clause 5.29(b) applies, read "*network operator's*" as "*network operator's,* and its *metering data agent's,* ".

(c) be consistent with *good electricity industry practice*; and

(d) be reasonable; and

(e) be consistent with the *Code objectives*; and

(f) be consistent with the *market rules*; and

(g) unless this *Code* requires otherwise, be consistent with other enactments.

{Example: Other enactments, such as section 39 of the *Electricity Act* 1945 impact upon a *model service level agreement*. At the time this *Code* was made, section 39 provided:

" the supply authority shall owe a duty to the consumer to keep any meter let on hire to him at all times in proper order for correctly registering the quantity of electricity supplied to the consumer; and if the supply authority fails, and while it continues to fail in the discharge of that duty, the consumer shall not be liable to pay rent or other consideration for the use of such meter."}

6.6 Requirements for model service level agreement

(1) A *model service level agreement* must at least:

(a) specify the *metering services* that the *network operator*[152]:

(i) must provide (which must include at least all the *metering services* that this *Code,* the *Code of Conduct* and the *Customer Transfer Code* require the *network operator* to provide); and

(ii) may provide,

to other *Code participants* on request,

and

(b) 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*,

and

(c) subject to clause 5.21(9), specify the maximum *charges* that the *network operator*[153] may impose for each *metering service* referred to in clause 6.6(1)(a); and

[152] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and the *metering data agent*".

[153] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

(d) if any of the *charges* specified under clause 6.6(1)(c) is variable, provide details of the methodology and cost components that will be used to calculate the variable *charge* including (where applicable) hourly labour rates, distance-related costs and equipment usage costs; and

(e) provide that the *charges* which may be imposed under a *service level agreement* may not exceed the costs that would be incurred by a *network operator* acting in good faith and in accordance with *good electricity industry practice*, seeking to achieve the lowest sustainable costs of providing the relevant *metering service*; and

(f) require the *network operator* to *publish*, annually, a list setting out for each *metering point* on the *network* either:

(i) each *date for a scheduled meter reading* in the coming year; or

(ii) the *reading day number* to apply for the current year,

and specify the procedures by which, and frequency with which, this list may be revised;

and

(g) specify the procedures for a *Code participant* to make a request for *metering services* (**"metering service order"**) and the procedures for dealing with a *metering service order*.

{Note: Without limiting clause 6.6(1), a *model service level agreement* must, at least:

(a) specify service levels (including timeframes) under clause 3.11(2);

(b) specify test and audit service levels under clause 5.21;

(c) contain a mandatory charging provision under clause 5.21(9);

(d) specify the service levels (including timeframes) for the provision, installation, operation and *maintenance* of *metering installations* under clause 3.5(1);

(e) specify a time limit for the purposes of clause 5.13(2);

(f) specify service levels (including timeframes) for *metering* repairs.}

(2) The paragraphs of this clause 6.6 do not by implication limit each other.

6.7 Requirements for communication rules

(1) *Communication rules* must at least:

(aa) specify, or incorporate by reference, detailed technical specifications (including file formats, protocols and timeframes) as to how *data* and information communication is to be implemented, and as to how the necessary information systems are to be designed and developed; and

{Note: The detailed technical specifications referred to in clause 6.7(1)(aa) are commonly referred to as the **"build pack"**.}

(ab) be sufficient to enable a *Code participant* to design and commission the information systems necessary for it to engage in business-to-business communications for the purposes of this *Code*; and

(a) without limiting clause 6.5(g), be compatible with any "communication rules" (as defined in the *Customer Transfer Code*) approved for the *network* under the *Customer Transfer Code;* and

{Note: The intention is that there ultimately will be only one set of *communication rules*, fulfilling a function under both this *Code* and the *Customer Transfer Code*. The *Customer Transfer Code* communication rules requirements are less extensive than this *Code's* requirements.}

(b) specify a test for validity of communications and how invalid communications are to be dealt with; and

(c) provide for:

(i) requests for; and

(ii) the *verification*, updating, correction and notification of changes to,

data in the *registry*; and

(d) provide for the addition, removal and modification of items of *standing data* in the *registry* in accordance with clause 4.3(3); and

(e) for the purposes of clause 7.1(c), make provision regarding *electronic notices*; and

(f) specify the format of the details of the address referred to in Item 1 of Table 2 in clause 4.3(1); and

(g) specify the format of the details of the matters referred to in Item 11 of Table 2 in clause 4.3(1); and

(h) provide for the development, submission and answering of *Energy Data Verification Request Forms* in accordance with clause 5.20; and

(i) specify *meter data* event codes; and

(j) specify the format of the details required by the *network operator*[154] in respect of *metering service orders* and other industry transactions; and

(k) include a process for the management of *proposed amendments*, including:

(i) the commencement (by a *Code participant* or other interested person) and *publication* (by the *network operator*) of a *proposed amendment*; and

(ii) consultation regarding a *proposed amendment*; and

[154] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and the *metering data agent*".

(iii) testing of any proposed system changes arising as a result of a *proposed amendment*; and

(iv) the making and *publication* of a decision by the *network operator* to either implement or not implement a *proposed amendment*; and

(v) without limiting Part 8, the resolution of disagreements between *Code participants* about a *proposed amendment*; and

(vi) time limits for the things referred to in clause 6.7(1)(k)(i) to 6.7(1)(k)(v) including, if appropriate, mechanisms for extending a time limit.

(1A) In this *Code*, **"proposed amendment"** means any amendment to the *communication rules* which is proposed by a *Code participant* or other interested person:

(a) in order to address the *communication rules'* non-compliance, or purported or anticipated non-compliance, with this *Code*; or

{Note: The reference in clause 6.7(1A)(a) to compliance with this *Code* includes all the matters listed in clause 6.5.}

(b) in order that the *communication rules* may better or more effectively comply with this *Code*.

(1B) The process referred to in clause 6.7(1)(k) must:

(a) be designed to achieve as little formality and technicality, and as much expedition, as proper management in accordance with *good electricity industry practice* of the *proposed amendment* permits; and

(b) require the *network operator*, if it becomes aware that the *communication rules* do not comply with this *Code*, to commence a *proposed amendment* to remedy the non-compliance.

(2) The paragraphs of clause 6.7(1) do not limit each other.

(3) Without limiting the generality of clause 6.7(1)(a) a *network operator* may incorporate the "communication rules" under the *Customer Transfer Code* as part of the *communication rules* it *publishes* under clause 6.19A.

(4) [Not used]

6.8 Requirements for a metrology procedure

A *metrology procedure* must at least:

(a) as a minimum, contain information on the *devices* and *methods* that are used by the *network operator*[155] to:

(i) measure, or determine by means other than a *device*, *electricity* produced and consumed at a *metering point;* and

[155] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

(ii) convey the measured or determined information to other *devices* using *communications links;* and

(iii) prepare the information using *devices* or *methods* to form *energy data*; and

(iv) provide access to the *energy data* from a telecommunications network;

and

(b) specify the minimum requirements for *meters* and *metering installations*, including:

(i) *accumulation meters*; and

(ii) interfaces that allow *interval energy data* to be downloaded; and

(iii) direct connected *meters* for *Type* 4 to *Type* 6 *metering installations*; and

(iv) *CTs* and *VTs*; and

(v) programmable settings under clause 3.10.

(c) specify the procedures for *estimating*, *substituting* and *validating energy data* under this *Code*; and

(ca) provide for the sampling and testing of *meters* for the purposes of and in accordance with clause 3.11A(1); and

(d) [not used]

(e) specify the date from which the *metrology procedure* takes effect which must be no less than 3 months after it is *published*.

{Note: Without limiting clause 6.8, a *network operator's metrology procedure* must, at least:

(a) specify the technical parameters for the provision, installation, operation and *maintenance* of *metering installations* under clause 3.5(1) which are consistent with this *Code*; and

(b) specify the methods for determining the accuracy of *estimated energy data* under clause 5.25(a); and

(c) specify test and audit procedures under clause 5.21; and

(d) [not used]

(e) specify the *devices* and methods to ensure the accuracy of *data* relating to each *metering point* by the application of appropriate *CT* or *VT* ratios and pulses in accordance with clause 5.25(b); and

(f) specify what the *network operator* must do to comply with clause 5.20(4); and

(g) specify the methods for comparing *market generator interval energy data* against *SCADA data* for the purposes of A2.6(2)(b).}

6.9 Network operator may establish a registration process

(1) A *network operator* may establish a proposed *registration process* and submit it to the *Authority* for its approval under Division 6.2.

{Note: A *network operator* may register and deregister a person in accordance with its *registration process* under clause 3.28.}

(2) A *registration process* must at least:

(a) in relation to applicant *metering installation* providers, specify the criteria the *network operator* may take into account in considering an application for registration and authorising the work that may be carried out by the person; and

(b) contain appropriate checks, to the standard of *good electricity industry practice*, for competence of proposed *registered metering installation providers*; and

(c) provide for the deregistration of non-compliant *registered metering installation providers* (including provision for reasonable notice of non-compliance, a reasonable cure period where appropriate, and a reasonable dispute resolving mechanism).

Division 6.2 – Approval procedure for documents

6.10 Application of this Division 6.2 approval procedure

The clauses of this Division 6.2 apply to all proposed *documents* unless otherwise indicated.

6.11 Consultation with Code participants

(1) This clause 6.11 does not apply in respect of a proposed *registration process* or proposed *mandatory link criteria*.

(2) Before submitting a proposed *document* to the *Authority* under clause 6.2 or *publishing* proposed *communication rules* under clause 6.19A, a *network operator*[156] must:

(a) give *Code participants* a reasonable opportunity to make submissions to the *network operator*[157] concerning the proposed *document*; and

(b) take into account any submissions received from *Code participants* in developing the proposed *document*.

[156] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[157] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

(3) Before submitting a proposed *document* to the *Authority* under clause 6.2 or *publishing* proposed *communication rules* under clause 6.19A, a *network operator*[158] must provide a report to the *Authority* that:

(a) identifies the process through which the proposed *document* was developed, including details of consultation with *Code participants* under this clause 6.11; and

(b) describes how the proposed *document* complies with the criteria set out in clauses 6.5 to 6.9 (as applicable); and

(c) describes how the *network operator*[159] took into account any submissions received from *Code participants*; and

(d) includes copies of submissions received by the *network operator*[160] from *Code participants*.

(3A) The *network operator* must *publish* the report it provides to the *Authority* under clause 6.11(3).

(4) The *Authority* must not approve a proposed *document* under clause 6.2 unless the *Authority* is satisfied that the *network operator*[161] has complied with clauses 6.11(2) and 6.11(3).

6.12 Authority may establish a Metering Advisory Committee

(1) The *Authority* may establish a *Metering Advisory Committee* to advise the *Authority*.

{Example: The *Authority* may establish the committee to advise it on a single *document*, or on all *documents*, or in relation to metering generally.}

(2) If the *Authority* establishes a *Metering Advisory Committee*, the *Authority* must concurrently determine, and thereafter may determine changes or additions to, the role, functions, composition and procedures of the *Metering Advisory Committee*.

(3) The *Authority* must have regard to advice provided by a *Metering Advisory Committee*:

(a) in deciding whether to approve or not approve a proposed *document*; and

(b) in drafting its own proposed *document* under clause 6.17.

(3A) The *Authority* may seek, and have regard to, advice provided by a *Metering Advisory Committee* in performing its functions under clause 6.20.

(4) Clause 6.12(3) does not limit the matters to which the *Authority* must or may have regard.

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[158] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

[159] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

[160] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

[161] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

6.13 Authority may approve a document or specify amendments

(1) If a *network operator*[162] submits a proposed *document* (other than proposed *communication rules*) to the *Authority*, then the *Authority* must within 30 *business days* of submission:

(a) make a decision to either:

(i) approve the proposed *document*; or

(ii) not approve the proposed *document*;

and

(b) notify the *network operator*[163] in *writing* of:

(i) the *Authority's* decision; and

(ii) if the *Authority's* decision is not to approve the proposed *document* — the amendments (or nature of the amendments) which would have to be made to the proposed *document* in order for the *Authority* to approve it.

(2) The *Authority* may on one or more occasions extend the time limit specified in clause 6.13(1) for a period determined by the *Authority* if, and only to the extent that, the *Authority* first reasonably determines that:

(a) a longer period of time is essential for due consideration of all the matters under consideration or satisfactory performance of its obligations under clause 6.13(1), or both; and

(b) the *Authority* has taken all reasonable steps to fully utilise the times and processes provided for in this Part 6.

(3) The *Authority* must not exercise the power in clause 6.13(2) to extend the time limit specified in clause 6.13(1) unless, before the day on which the time would otherwise have expired, it *publishes* notice of, and reasons for, its decision to extend the time limit.

6.14 Requirements for approval by Authority

The *Authority* must not approve a proposed *document* unless it is satisfied that the proposed *document* meets the criteria set out in clauses 6.5 to 6.9 (as applicable).

6.15 "Code objective" from Access Code to be taken into account

(1) Without limiting clause 6.14, in considering whether to approve a *model service level agreement* under this Division 6.2, the *Authority*:

(a) must take into account; and

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[162] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable,".

[163] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

(b) may give priority to,

the "Code objective" as defined in the *Access Code*.

(2) Clause 6.15(1) does not limit the matters the *Authority* must or may take into account under this *Code*.

6.16 Network operator may submit an amended document

(1) A *network operator*[164] may submit an amended proposed *document* (other than proposed *communication rules*) within 10 *business days* after the date of the *Authority's* advice under clause 6.13(1)(b)(ii), and, within 20 *business days* after the amended proposed *document* is submitted, the *Authority* must make a decision whether to approve or not approve the amended proposed *document* and notify the *network operator* of the decision.

(2) If an amended proposed *document* submitted by a *network operator*[165] under clause 6.16(1) contains the amendments advised by the *Authority* under clause 6.13(1)(b)(ii), then the *Authority* must approve the amended proposed *document* and *notify* the *network operator*[166] in *writing* of its decision.

6.17 Authority drafts its own documents

(1) This clause 6.17 does not apply in respect of proposed *communication rules*.

(2) If:

(a) a *network operator*[167] fails to submit an amended proposed *document* to the *Authority* under clause 6.16; or

(b) the *Authority* makes a decision to not approve an amended proposed *document* submitted to it by a *network operator*[168] under clause 6.16,

then the *Authority* must within 30 *business days* after:

(c) if clause 6.17(2)(a) applies — the last day on which the *network operator* may submit an amended proposed *document* under clause 6.16(1); or

(d) if clause 6.17(2)(b) applies — the day on which the *Authority* makes the decision to not approve the amended proposed *document*,

draft its own proposed *document* and approve it and *notify* the *network operator*[169] in *writing* of the *Authority's* approval.

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[164] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

[165] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

[166] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

[167] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

[168] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

[169] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*".

6.18 Publication of document

A *network operator*[170] must, within 10 *business days* after notification of the *Authority*'s approval under clause 6.13(1)(a)(i), 6.16 or 6.17, *publish* the *document*.

6.19 When a document takes effect

(1) Clause 6.19 does not apply in respect of a proposed *metrology procedure* or proposed *communication rules*.

{Note: A *metrology procedure* takes effect from the date specified in the *metrology procedure* in accordance with clause 6.8(e). *Communication rules* are dealt with in clause 6.19A.}

(2) A *document* approved by the *Authority* under clause 6.13(1)(a)(i), 6.16 or 6.17 takes effect 10 *business days* (or such later time as is specified in the *document* or by the *Authority* in its approval) after the *document* has been *published*.

6.19A Publication of communication rules and when they take effect

(1) A *network operator*[171] must, as soon as practicable and in any event within 6 months after the date this *Code* applies to the *network operator*[172], *publish* its *communication rules*.

(2) The *communication rules* take effect 10 *business days* (or such later time as may be approved by the *Authority*) after they are *published*.

(3) The *Authority* must not exercise its power to extend the time limit in clause 6.19A(2) unless, before the day on which the time would otherwise have expired, it *publishes* notice of, and reasons for, its decision to extend the time limit.

6.19B Amendment of communication rules

(1) Once *communication rules* have been *published* for a *network* under clause 6.19A (and, if applicable, amended under clause 6.21(3)), the *communication rules may* thereafter be amended only in accordance with:

(a) the *communication rules* made under clause 6.7(1)(k); or

(b) clause 6.19C.

(2) Amendments to *communication rules* under the *communication rules* or clause 6.19C do not take effect until the earlier of the date they are *published* or a later date specified in notice of *publication*.

(3) If a *proposed amendment* to *communication rules* has been referred to the *Authority* under clause 6.19C, the *network operator* must not *publish* the *proposed amendment* until permitted or required to do so under clause 6.19C.

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[170] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

[171] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

[172] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

6.19C Review of proposed amendment to communication rules

(1) A *Code participant* or other interested person may refer a *proposed amendment* to the *Authority*, at any time after the *network operator* has made and *published* its decision under clause 6.7(1)(k)(iv) to implement or not implement the *proposed amendment*, including (subject to clause 6.19C(2)(b)), after the *proposed amendment* has been implemented.

(2) The *Authority*:

(a) may reject a referral which the *Authority* considers to have been made on trivial or vexatious grounds, or to be misconceived or lacking in substance, in which case the Authority must *publish* its reasons for rejection; or

(b) must reject a referral which is made after the *proposed amendment* has been implemented, unless the *Authority* considers (having regard to the *Code objectives*) that the benefits of revisiting the implemented amendment outweigh the disadvantages of doing so.

(3) The *Authority* may in its absolute discretion, upon having a *proposed amendment* referred to it under clause 6.19C(1):

(a) require or permit the *network operator*[173] to implement the *proposed amendment* in the proposed form or in an amended form; or

(b) require or permit the *network operator*[174] not to implement the *proposed amendment,*

provided that any *proposed amendment* required or permitted to be implemented must comply with this *Code*.

(4) Subject to clause 6.19C(2), before making a decision under clause 6.19C(3), the *Authority* must initiate a review of the *communication rules* under clause 6.19C(5), which review may be of the whole *communication rules* or only that part of the *communication rules* for which the referred *proposed amendment* relates.

(5) The *Authority* must, if it undertakes a review under this clause 6.19C:

(a) within 50 *business days* after initiating the review:

(i) *publish* its draft findings in relation to the review; and

(ii) *notify* the *network operator*[175] of its draft findings; and

(b) allow a period of at least 20 *business days* after *publication* of the draft findings for persons to make submissions in relation to the draft findings; and

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[173] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

[174] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

[175] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

(c) within 10 *business days* after the end of the period in 6.19C(5)(b):

(i) *publish* its final findings in relation to the review (which must detail whether a contentious *proposed amendment* must or must not be implemented) together with any submissions made under clause 6.19C(5)(b) in relation to the review; and

(ii) *notify* the *network operator*[176] of its final findings.

(6) The *Authority* may on one or more occasions extend the time limits specified in clauses 6.19C(5)(a) and 6.19(5)(c) for a period determined by the *Authority*.

(7) The *Authority* must not exercise the power in clause 6.19C(6) to extend the time limits specified in clauses 6.19C(5)(a) and 6.19(5)(c) unless, before the day on which the time would otherwise have expired, it *publishes* notice of, and reasons for, its decision to extend the time limit.

(8) The *network operator*[177] must comply with the *Authority's* decision under clause 6.19C(3).

(9) The *network operator*[178] must *publish communication rules* that have been amended under clause 6.19C(8).

(10) If a *network operator* fails to comply with the *Authority's* decision under clause 6.19C(3), the *Authority* may *publish* amendments to the *communication rules* as necessary to give effect to the decision.

6.20 Review and amendment of network operator's documents (other than communication rules)

(1A) This clause 6.20 does not apply in respect of *communication rules*.

(1) The *Authority* may in its absolute discretion:

(a) of its own initiative; or

(b) upon request by a *Code participant,*

require or permit a *network operator*[179] to amend a *document* provided that the *document* as amended must comply with this *Code*.

(2) Before requiring or permitting an amendment to a *document* under this clause 6.20, the *Authority* must initiate a review of the *document* under clause 6.20(3), which review may be of the whole *document* or only that part of the *document* for which the amendment is proposed.

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[176] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[177] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[178] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[179] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or the *metering data agent*, as applicable, ".

(3) The *Authority* must, if it undertakes a review under this clause 6.20:

(a) within 50 *business days* after initiating the review:

(i) *publish* its draft findings in relation to the review; and

(ii) *notify* the *network operator*[180] of its draft findings;

and

(b) allow a period of at least 20 *business days* after *publication* of the draft findings for persons to make submissions in relation to the draft findings; and

(c) within 10 *business days* after the end of the period in 6.20(3)(b):

(i) *publish* its final findings in relation to the review (which must detail any amendments required to the *document*) together with any submissions made under clause 6.20(3)(b) in relation to the review; and

(ii) *notify* the *network operator*[181] of its final findings.

(3A) The *Authority* may on one or more occasions extend the time limits specified in clauses 6.20(3)(a) and 6.20(3)(c) for a period determined by the *Authority*.

(3B) The *Authority* must not exercise the power in clause 6.20(3A) to extend the time limits specified in clauses 6.20(3)(a) and 6.20(3)(c) unless, before the day on which the time would otherwise have expired, it *publishes* notice of, and reasons for, its decision to extend the time limit.

(4) The *network operator*[182] must amend any *document* in accordance with the *Authority's* final findings.

(5) The *network operator*[183] must *publish* any *document* that has been amended under clause 6.20(4).

(6) If a *network operator* fails to amend a *document* as required under clause 6.20(4), the *Authority* may *publish* the amendment, and the *document* has effect as amended by the *published* amendment, from the time of *publication* or such other time as is stated in the *publication*.

6.21 Transitional – Grandfathering for SWIS communication rules after 2012 amendments

(1) In this clause 6.21:

"previous Build Pack" means the documents comprising the "Build Pack" as defined in the *SWIS communication rules* as they were in effect immediately before the date this clause 6.21 commences; and

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[180] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[181] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[182] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[183] If clause 5.30(3) applies, read "*network operator*" as "*network operator* or *metering data agent*".

"previous requirements" means the requirements of clause 6.7 of the *2005 Metering Code* as it was in effect immediately before the date this clause 6.21 commences; and

"step 1" and **"step 2"** are defined in clause 6.21(3); and

"SWIS communication rules" means the *communication rules published* by the *electricity networks corporation* for the parts of the *South West interconnected system* it owns; and

"transitional period" means the period of one year, starting when this clause 6.21 commences.

(2) During the *transitional period*:

(a) clause 6.7 does not apply; and

(b) the *previous requirements* do apply,

in respect of *communication rules* for a *network* that is part of the *South West interconnected system*.

(3) Despite clause 6.19B(1), the *electricity networks corporation* must amend the *SWIS communication rules*, in two steps as follows:

(a) in **"step 1"**, within 2 months after the start of the *transitional period* the *electricity networks corporation* must amend the *SWIS communication rules* to incorporate (whether expressly or by reference) in full without material amendment the *previous Build Pack*; and

(b) the *electricity networks corporation* must promptly *publish* the SWIS *communication rules* as amended under clause 6.21(3)(a); and

(c) in **"step 2"**, the *electricity networks corporation* must, using the process set out in clause 6.21(5), further amend the *SWIS communication rules* (as amended under *step 1*) to comply with this *Code* as it will apply immediately after the end of the *transitional period*.

(4) The *step 1* amendment is not a *proposed amendment f*or the purposes of clause 6.19C.

{Note: This clause 6.21(4) ensures that the *previous Build Pack* gets incorporated swiftly. It does not prevent an interested person from subsequently commencing a *proposed amendment* in respect of a provision of the *SWIS communication rules* as amended under *step 1*.}

(5) The process for *step 2* is as follows:

{Note: This transitional mechanism is needed for *step 2*, because until *step 2* is completed the *SWIS communication rules* will not incorporate the process described in clause 6.7(1)(k).}

(a) no later than 6 months after the start of the *transitional period* the *electricity networks corporation* must *publish* its proposal for the *step 2* amendments and an invitation for submissions on the proposal from *Code participants* and other interested persons; and

(b) the *electricity networks corporation* must allow a period of at least 20 *business days* after *publication* under clause 6.21(5)(a) for persons to make submissions on the proposal, which may include proposals for alternative amendments; and

(c) the *electricity networks corporation*, acting reasonably in accordance with *good electricity industry practice*, must:

(i) take into account any submissions received under clause 6.21(5)(b); and

(ii) where reasonably practicable to do so, consult with *Code participants* and other interested persons regarding any material issues arising from the submissions; and

(d) no later than 1 month before the end of the *transitional period* the *electricity networks corporation* must *publish* its final proposal for the *step 2* amendments; and

(e) subject to clause 6.21(5)(g), the amendments *published* under clause 6.21(5)(d) take effect at the end of the *transitional period*; and

(f) an amendment proposed under this clause 6.21(5) by any person is a **"proposed amendment"** for the purposes of this *Code*; and

(g) a *Code participant* or other interested person may refer a *proposed amendment* to the *Authority*, at any time after the *network operator* has *published* its final proposal under clause 6.21(5)(d), including (subject to clause 6.19C(2)(b)), after the *proposed amendment* has been implemented; and

(h) if a *proposed amendment* is referred under clause 6.21(5)(g), then:

(i) the *Authority* is to consider the *proposed amendment* having regard to how this *Code* will apply immediately after the end of the *transitional period*; and

{Note: This clause 6.21(5)(h)(i) is needed to negate the effect of clause 6.21(2), if the *Authority* is considering a referral before the first anniversary. That is, to ensure that the *Authority* can assess the proposed amendment against the *Code* as it will be in effect once the grandfathering in clause 6.21(2) has ended.}

(ii) the amendments *published* under clause 6.21(5)(d) take effect as amended by the *Authority* and on a date determined by the *Authority*.

(6) After the completion of the process described in clause 6.21(5), any *proposed amendment* to the *SWIS communication rules* as amended under this clause 6.21, must be done under clause 6.19B.

Part 7 – Notices and Confidential Information

7.1 Requirements for valid notice

To be a valid *notice* under this *Code*, a notice or other communication must be given in accordance with this Part 7, and:

(a) in *writing* by post, to the recipient's *notified* postal address; or

(b) in *writing* by facsimile, to the recipient's *notified* facsimile number; or

(c) *electronically*, in accordance with the *communication rules*.

7.2 Code participants

(1) *Code participants* must use reasonable endeavours to ensure that they can send and receive a *notice* by each of the following means:

(a) post; and

(b) facsimile; and

(c) *electronic* communication,

and they must *notify* the *network operator*[184] of a telephone number for voice communication in connection with this *Code*.

(2) A *network operator*[185] must *notify* each *Code participant* of its initial *contact details*, and of any change to its *contact details* at least 3 *business days* before the change takes effect.

(3) If a *Code participant* has not provided the *network operator*[186] with its *contact details* under clause 7.2(4), then the *network operator*[187] may comply with clause 7.2(2) in respect of the *Code participant* by placing a reasonably prominent advertisement in a newspaper which has circulation throughout Western Australia.

(4) If requested by a *network operator* with whom it has entered into an *access contract,* the *Code participant* must *notify* its *contact details* to the *network operator*[188] within 3 *business days* after the request.

(5) A *Code participant* must *notify* any affected *network operator*[189] of any change to the contact details it *notified* to the *network operator*[190] under clause 7.2(4) at least 3 *business days* before the change takes effect.

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[184] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[185] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

[186] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[187] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[188] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and its *metering data agent*".

7.3 Receipt

(1) A *notice* sent by post within Australia is deemed to have been received by the intended recipient on the third *business day* after the *day* it was sent.

(2) A *notice* sent by facsimile transmission which is transmitted:

(a) on or before 15:00 hours on a *business day* is deemed to have been received by the intended recipient on that *business day*; and

(b) after 15:00 hours on a *business day*, or on a *day* which is not a *business day*, is deemed to have been received by the intended recipient on the first *business day* following the date of transmission,

provided that the sender of the *notice* is able to produce a transmission report produced by the machine from which the facsimile was sent showing successful uninterrupted facsimile transmission of all pages of the relevant *notice* to the facsimile number of the intended recipient.

(3) A *notice* sent *electronically* is deemed to have been received by the intended recipient in accordance with the *communication rules*.

7.4 Confidential Information

(1) In this *Code* **"confidential information"** means:

(a) *standing data* and *energy data*; or

(b) other information which is confidential information of, or commercially sensitive to, a *customer* or *Code participant* (in which case the *customer* or *Code participant* is the "affected person" for the purposes of clause 7.4(1A)(b)),

but does not include information which is in, or enters into, the public domain other than by a breach of this *Code*.

(1A) In this *Code* **"affected person"** means:

(a) in relation to *standing data* and *energy data* for a *metering point* – the *customer* associated with the *metering point*; and

(b) in relation to *confidential information* described in clause 7.4(1)(b) – a person identified as such in that clause.

(2) A reference in clauses 7.4, 7.5 or 7.6 to information being disclosed to or received by a *Code participant*, includes information being communicated to or created, ascertained, discovered or derived by it or on its behalf.

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[189] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

[190] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

7.5 Confidentiality Obligations

A *Code participant* must, subject to clauses 5.17A and 7.6:

(a) not disclose, or permit the disclosure of, *confidential information* provided to it under or in connection with this *Code*; and

(b) only use or reproduce *confidential information* for the purpose for which it was disclosed or another purpose contemplated by this *Code*.

7.6 Permitted Disclosure

(1) A *Code participant* must disclose or permit the disclosure of *confidential information* that is required to be disclosed by this *Code*.

(2) A *Code participant* may disclose or permit the disclosure of *confidential information*:

(a) to any of the following persons who has in place appropriate confidentiality arrangements in respect of the *confidential information*:

(i) its officers; or

(ii) its employees; or

(iii) a *related body corporate* and its officers or employees or both; or

(iv) its legal advisers; or

(v) its auditors; or

(vi) a consultant engaged by the *Code participant*,

provided such a person has a reasonable need for the *confidential information*, including for the purposes of providing professional advice to it;

or

(b) which is required to be disclosed by:

(i) an enactment; or

(ii) the rules of a stock exchange which has jurisdiction over the *Code participant* or any of its *related bodies corporate*,

and in such cases only disclose that part of the *confidential information* which is required to be disclosed;

or

(c) if required for the purpose of determining, prosecuting or defending a legal proceeding, arbitration or *dispute* and, in such cases only disclose that part of the *confidential information* which the relevant *Code participant* is required to disclose for the purpose;

or

(d) with the *verifiable consent* of each *affected person* (which must not be unreasonably withheld) and subject to the conditions of the *verifiable consent* (which conditions must not be unreasonable); or

(e) that is aggregated *energy data* for multiple *connection points*, which is disclosed in a way that does not enable a recipient to determine the identity of any *customer* or to determine, or accurately estimate, the *energy data* for any *customer*.

(3) The *IMO* may disclose, use or reproduce *confidential information* to the extent necessary for the purpose of facilitating the operation of the *market rules*.

Part 8 – Dispute Resolution

8.1 Dispute resolution procedures

(1) If any *dispute* arises between any *Code participants* other than the *Authority* ("**disputing parties**"), then (subject to clause 8.2(3)) representatives of the *disputing parties* must meet within 5 *business days* after a *notice* given by a *disputing party* to the other *disputing parties* and attempt to resolve the *dispute* by negotiations in good faith (**"representative negotiations"**).

(2) If the *dispute* is not resolved within 10 *business days* after the *dispute* is referred to *representative negotiations*, the *disputing parties* must (subject to clause 8.2(3)) refer the *dispute* to a senior management officer of each *disputing party* who must meet and attempt to resolve the *dispute* by negotiations in good faith (**"senior management negotiations"**).

(3) If the *dispute* is not resolved within 10 *business days* after the *dispute* is referred to *senior management negotiations*, the *disputing parties* must (subject to clause 8.2(3)) refer the *dispute* to the senior executive officer of each *disputing party* who must meet and attempt to resolve the *dispute* by negotiations in good faith (**"CEO negotiations"**).

(4) If the *dispute* is resolved by *representative negotiations*, *senior management negotiations* or *CEO negotiations*, the *disputing parties* must:

(a) prepare a written record of the resolution and sign the record; and

(b) adhere to the resolution.

8.2 Referral of disputes to the arbitrator

(1) If a *dispute* is not resolved within 20 *business days* after the *dispute* is referred to *CEO negotiations*, then any *disputing party* may by *notice* to each other *disputing party* refer the *dispute* to the *arbitrator*.

(2) The *disputing party* referring the *dispute* to the *arbitrator* must give *notice* to the *arbitrator* of the nature of the *dispute*, including:

(a) the breach, act, omission or other circumstance forming the basis for the *dispute*; and

(b) the provision within this *Code* or other basis for the *dispute*.

(3) A *disputing party* may:

(a) by *notice*, request the *arbitrator* to conduct a *dispute* resolution before *representative negotiations*, *senior management negotiations* or *CEO negotiations* if the *disputing party* considers that the *dispute* is of an urgent nature; and

(b) if the *disputing party* makes such a request, it must provide to the *arbitrator* and to each other *disputing party* written details of the circumstances which make it urgent.

(4) The *arbitrator*:

(a) may, in its absolute discretion, decide whether or not to accede to a request under clause 8.2(3) in which case the *disputing parties* do not have to engage in *representative negotiations*, *senior management negotiations* or *CEO negotiations*; and

(b) must make a decision under clause 8.2(4)(a) within 2 *business days* after receiving a request under clause 8.2(3); and

(c) must *notify* each *disputing party* of its decision.

8.3 Informality and expedition

(1) Subject to the rules of natural justice, the *arbitrator* must conduct a *dispute* resolution with as little formality and technicality, and with as much expedition, as the requirements of this Part 8, and a proper hearing and determination of the *dispute*, permit.

(2) The *disputing parties* must at all times conduct themselves in a manner which is directed towards achieving the objective in clause 8.3(1).

8.4 Arbitrator may determine own procedures

Subject to the rules of natural justice, the *arbitrator* may from time to time specify procedures (either of general application or in respect of all or some part of a particular *dispute*) for a *dispute* resolution including:

(a) the manner of any submissions by the *disputing parties*; and

(b) whether, and if so the extent to which, legal representation is permitted; and

(c) regulating the conduct of the *disputing parties*.

8.5 Powers of arbitrator

(1) Subject to the Act, this *Code* and the rules of natural justice, the *arbitrator* may:

(a) inform itself independently as to facts and if necessary technical matters to which the *dispute* relates; and

(b) receive written submissions and sworn and unsworn written statements; and

(c) consult with such other persons as the *arbitrator* thinks fit; and

(d) take such measures as the *arbitrator* thinks fit to expedite the completion of the *dispute* resolution; and

(e) make any order that it considers expedient to justly consider and dispose of a *dispute*.

(2) Without limiting the generality of clause 8.5(1)(e), in determining a *dispute* the *arbitrator* may order a *network operator*[191] to enter into a *service level agreement* on terms specified in the *model service level agreement.*

8.6 Timing of dispute resolution

(1) The *arbitrator* must, subject to clause 8.6(2), make a determination of the *dispute* within 20 *business days* (or within such further period as the *disputing parties* may agree) after:

(a) the *dispute* is referred to it under clause 8.2(1); or

(b) a decision by the *arbitrator* under clause 8.2(4)(a) to accede to a request under clause 8.2(3).

(2) If any *disputing party* considers that the *dispute* is of an urgent nature and needs to be resolved within a shorter period than that specified in clause 8.6(1), then that *disputing party* may apply to the *arbitrator*, and the *arbitrator* may reduce the period of 20 *business days* to such lesser period as the *arbitrator* considers appropriate having regard to the interests of all *disputing parties* and this *Code*, being not less than 10 *business days*.

8.7 Written determination

The *arbitrator* must deliver a written determination which sets out the reasons for its determination and the findings of fact on which the determination is based.

8.8 Dispute resolution to be held in Perth

Unless the *disputing parties* and the *arbitrator* agree otherwise, the *dispute* resolution must be held in Perth, Western Australia.

8.9 Arbitrator's determination and orders are binding

The *arbitrator's* determinations and orders are binding on the *disputing parties*.

8.10 Costs of the arbitrator

(1) The *arbitrator* is, in relation to a *dispute*, entitled:

(a) to be paid for his or her work at the rate provided for in his or her conditions of office under the *Energy Arbitration and Review Act 1998*; and

(b) to be reimbursed any expenses reasonably incurred in connection with the *dispute.*

(2) The *arbitrator* may direct by whom and in what manner the whole or any part of the costs it is entitled to recover under clause 8.10(1) are to be paid.

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[191] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

8.10A Arbitrator may withhold determination until payment made

The *arbitrator* may refuse to communicate his or her determination to the *disputing parties*, either verbally or in *writing*, until the *arbitrator* has been paid the amount he or she is entitled to under clause 8.10(1).

8.10B Costs of disputing parties

(1) Subject to clause 8.10B(2), *disputing parties* bear their own costs in relation to the resolution of a *dispute*.

(2) If the *arbitrator* is satisfied that a *disputing party* (**"first party"**) incurred costs in the resolution of a *dispute* because of frivolous or vexatious conduct of, or unfounded submissions by, another *disputing party* (**"second party"**), the *arbitrator* may determine that the *second party* must pay some or all of the *first party's* costs.

(3) If the *arbitrator* makes a determination under clause 8.10B(2), the *arbitrator* must:

(a) decide the amount of costs the *second party* must pay to the *first party*, and the date by which the payment must be made; and

(b) give reasons for its decision; and

(c) communicate the decision and reasons in *writing* to the *disputing parties*.

8.11 Referral to the arbitrator does not affect the obligations of the disputing parties

The referral of any matter to the *arbitrator* does not relieve any *disputing party* from performing its obligations under this *Code* pending the determination of the *dispute*.

Part 9 – Code Amendment & review

9.1 Authority may recommend amendment

(1) The *Authority* on its own initiative or in response to a proposal by a *Code participant* or other interested person may recommend to the Minister an amendment to this *Code,* if the *Authority* considers the proposed amendment would better achieve the *Code objectives*.

(2) The *Authority* must *notify* all *Code participants* if it proposes to recommend an amendment to this *Code*, and provide an explanation of why it considers the amendment would better achieve some or all of the *Code objectives*.

(3) Unless the *Authority* is satisfied on reasonable grounds that an amendment is urgently required, the *Authority* must not recommend an amendment to this *Code* unless:

(a) *Code participants* have been given a reasonable opportunity to make representations to the *Authority* concerning the proposed amendment; and

(b) the *Authority* has taken those representations into account.

(4) Before recommending an amendment to this *Code*, the *Authority* may also seek representations from other interested persons, and if it does so, the *Authority* must have regard to those representations.

9.2 Other amendments

Nothing in this Part 9 limits:

(a) a person's ability to propose a *Code* amendment to the Minister; or

(b) the Minister's discretion to propose, consider or make a *Code* amendment.

Part 10 – Repeal of 2005 Metering Code

10.1 Repeal of 2005 Metering Code

The *Electricity Industry Metering Code 2005* is repealed.

10.2 References to the 2005 Metering Code

(1) A reference in an instrument to the *2005 Metering Code* should be read as a reference to this *Code*, unless-

(a) if the instrument is a written law, the *Interpretation Act 1984* (WA) requires otherwise; or

(b) if the instrument is not a written law:

(i) express provision is made to the contrary; or

(ii) the intention of the instrument, or something in the subject or context of the instrument, is inconsistent with such reading.

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

{Note: Refer to clause 3.9.}

A1.1 Metering installation types and accuracy requirements in Part 3

{Note: Clause 3.9(10) requires all measurements in Table 3 to Table 7 in this Appendix 1 to be referred to 25 degrees Celsius.}

Table 3 Overall Accuracy Requirements of Metering Installation Components

Type	Annual *throughput* at *connection point*	Maximum allowable overall error (±%) at full load [192]		Minimum acceptable class or standard of components [193]	Clock Error (seconds per month)	Minimum Meter Types	See also the following clauses	Measurement for *reactive energy* required
		Active	Reactive					
1	1000 GWh and above	0.5	1.0	0.2 *CT*/*VT*/*Meter* Wh 0.5 Meter varh	± 5	*Interval meter*	5.25	Yes
2	100 GWh to but not including 1000 GWh	1.0	2.0	0.5 *CT/VT/Meter* Wh 1.0 *Meter* varh	± 7	*Interval meter*	5.25	Yes
3	750 MWh to but not including 100 GWh	1.5	3.0	0.5 *CT/VT* 1.0 *Meter* Wh 2.0 *Meter* varh	± 10	*Interval meter*	5.25	Yes
4	300 MWh to but not including 750 MWh	1.5	NA	Either 0.5 *CT* and 1.0 *Meter* Wh; or whole electric current connected *General Purpose Meter* Wh with a *data logger*	± 20	*Interval meter*	3.9(6) and 5.25	No
5	50 MWh to but not including 300 MWh	1.5	NA	Either 0.5 *CT* and 1.0 *Meter* Wh; or whole electric current connected *General Purpose Meter* Wh with a *data logger*	± 20	*Interval meter*	3.9(6) and 5.25	No
6	Less than 50 MWh	1.5	NA	Whole electric current connected *General Purpose Meter* Wh	NA	*Accumulation meter*	3.9(5), 3.9(6) and 5.25	No

[192] Refer to Table 4 to Table 7 for intermediate loads. A reference in this Code to this Table 3 includes as required also a reference to Table 4 to Table 7.

[193] In Table 3, in the column entitled *"Minimum acceptable class or standard of components"*, a reference to "0.2", "0.5, "1.0" or "General Purpose" means that the component or *meter* must meet the requirements of *AS* 1284.13 for, respectively, what are referenced in *AS* 1284.13 as Class 0.2, Class 0.5, Class 1 and General purpose meters.

Type	Annual *throughput* at *connection point*	Maximum allowable overall error (±%) at full load [192]		Minimum acceptable class or standard of components [193]	Clock Error (seconds per month)	Minimum Meter Types	See also the following clauses	Measurement for *reactive energy* required
		Active	Reactive					
7	Un-metered load – see clause 3.9(2).		NA	No *Meter*. Techniques for determination of *estimated energy data* to be included in a *metrology procedure*.	NA		3.9(2) and 5.25	No

Table 4 Intermediate Load Accuracy Requirements for Type 1 Metering Installation - Annual Energy Throughput Greater than 1,000 GWh

% Rated Load	Power Factor					
	Unity	0.866 lagging		0.5 lagging		Zero
	active	active	reactive	active	reactive	reactive
10	0.7%	0.7%	1.4%	n/a	n/a	1.4%
50	0.5%	0.5%	1.0%	0.5%	1.0%	1.0%
100	0.5%	0.5%	1.0%	n/a	n/a	1.0%

Table 5 Intermediate Load Accuracy Requirements for Type 2 Metering Installation - Annual Energy Throughput between 100 and 1,000 GWh

% Rated Load	Power Factor					
	Unity	0.866 lagging		0.5 lagging		Zero
	active	active	reactive	active	reactive	reactive
10	1.4%	1.4%	2.8%	n/a	n/a	2.8%
50	1.0%	1.0%	2.0%	1.0%	2.0%	2.0%
100	1.0%	1.0%	2.0%	n/a	n/a	2.0%

Table 6 Intermediate Load Accuracy Requirements for Type 3 Metering Installation - Annual Energy Throughput from 750 MWh to 100 GWh

% Rated Load	Power Factor					
	Unity	0.866 lagging		0.5 lagging		Zero
	active	active	reactive	active	reactive	reactive
10	2.0%	2.0%	4.0%	n/a	n/a	4.0%
50	1.5%	1.5%	3.0%	1.5%	3.0%	3.0%
100	1.5%	1.5%	3.0%	n/a	n/a	3.0%

Table 7 Intermediate Load Accuracy Requirements for Annual Energy Throughput Less Than 750 MWh

% Rated Load	Power Factor		
	Unity	0.866 lagging	0.5 lagging
	active	active	active
10	2.0%	2.0%	n/a
50	1.5%	1.5%	1.5%
100	1.5%	1.5%	n/a

Appendix 2 – Validation of Data in the Metering Database

{Note: This Appendix 2 sets out the rules and procedures for a *network operator* to *validate energy data* contained in the *metering database*. The *validation* requirements set out in this Appendix 2 are minimum requirements. A *network operator* may develop additional procedures that enhance the quality and reliability of the *energy data*, provided that these additional procedures meet the minimum requirements outlined in this Appendix 2.}

A2.1 Purpose

(1) *Validation* must occur within the registration process when *standing data* is being entered into the *registry* and when *energy data* is being entered into the *metering database*.

(2) Where manual *meter* reading is undertaken, *validation* must occur during that process.

A2.2 Validation within the registration process for Type 1 to Type 5 metering installations

(1) This clause A2.2 applies in respect of *Type* 1 *metering installations* to *Type* 5 *metering installations*.

(2) The *energy data* read on initial registration of, or following changes to the *metering point* (such as a *meter* change or *CT* ratio change) must be *validated*. *Validation* of the *energy data* must involve:

(a) *verification* that the *energy data* correctly pertains to the registered *metering installation*.

(b) *verification* that the magnitude and profile of the *energy data* is correct for the primary *energy* and respective date/time of the *energy data*.

(c) *verification* of the initial *meter* installation functionality and readings.

(3) This *validation* must be performed prior to the acceptance and distribution of any *energy data* to the relevant *Code participants*.

A2.3 Validation within the registration process for Type 6 metering installations

(1) This clause A2.3 applies in respect of *Type* 6 *metering installations*.

(2) The *energy data* read on initial registration of, or following changes to, the *metering point* (such as a *meter* change) must be *validated*. *Validation* of the *energy data* must involve:

(a) *verification* that the *energy data* correctly pertains to the registered *metering installation*.

(b) *verification* of the initial *metering installation* functionality and readings.

(3) This *validation* must be performed prior to the acceptance and distribution of any *energy data* to the relevant *Code participants*.

A2.4 Validation within the registration process for Type 7 connection points

(1) This clause A2.4 applies in respect of *Type* 7 *connection points*.

(2) The requirement to *validate energy data* from a *Type* 7 *connection point* on registration must include:

(a) a check that the Inventory tables, Load tables and On/Off tables are complete and correct for the *Type* 7 *connection point*.

(b) *verification* that the *energy data* correctly pertains to the registered *metering installation*.

A2.5 Validation of energy data from Type 1 to Type 5 metering installations with check metering

(1) This clause A2.5 applies in respect of *Type* 1 *metering installations* to *Type* 5 *metering installations* with full *check metering*.

(2) *Validations* to be performed:

(a) comparison of *revenue* and *check metering data*. In some installations the *check metering installation* may not fully duplicate the *revenue metering installation*. The *validation* check may involve a *validation* of the transmission node by nodal balance (comparing energy fed into the bus against energy fed from the bus). In other cases the *check meter* may be at the other end of the transmission or distribution line or the other side of a *transformer* (the comparison of energies will require an adjustment for *transformer* losses). Analysis of the historical *energy data* for each *metering point* should indicate what percent error differences between the revenue and *check meter* is considered acceptable. This information should be used to refine the *validation* algorithms. The maximum error difference considered acceptable for any *metering point* is 1%. This value should be minimised for each *metering point*, based on historical *energy data*.

(b) comparison of *market generator interval energy data* against *SCADA data*: It will be necessary to construct an appropriate *validation* algorithm as the *SCADA data* may be derived from a different measurement point, be of different interval collection and or have a different base unit of measurement, e.g. power not energy value.

(c) check against a nominated maximum value: (this check must be performed in the *metering database* to ensure no spikes are created in the process of exporting *data* from the *meter* reading system to the *metering database*; this check may additionally be performed in the *meter* reading software). This *validation* should include a check of maximum value of Wh or VAh units of measure as a minimum. Maximum varh checks may also be performed as an option (the *revenue meter* values are being *validated* against the *check meter*). The maximum value is to be initially set to the *CT* rating of the *metering installation*. On a per installation basis the maximum value may be increased to cater for situations where it has been confirmed that the *CT* is overloaded on a short-term basis.

(d) check against a nominated minimum value or alternatively a ‘zero’ check that tests for an acceptable number of zero interval values per *day*.

(e) check for null *energy data* fields in the database (no values in database) for all *meter*s. The aim of this check is to ensure that there is a 100% *data* set (and any missing *meter* read *data* has been allocated *substituted* values). Minimum check required is to ensure that there is at least one non-null Wh or VA field per interval per *meter*.

(f) check for significant *meter* alarms (power failure, *VT* or phase failure, pulse overflow, CRC error and time tolerance): A process must be in place that captures these significant *meter* alarms within the *data validation* process and ensures that any *meter* alarm occurrences are retained as part of the *data* audit trail.

(g) where possible, *validation* of *load* profile *data* by comparison of *energy* values obtained from the pulse or engineering unit *load* profile file(s) and the *meter accumulated energy registers* (*energy* tolerance). It is acknowledged that this check would not identify *CT* ratio changes performed on site after initial commissioning that have not been advised to the *network operator*[194]. It is also recognised that there are some *meter* specific issues to be considered.

A2.6 Validation of energy data from Type 1 to Type 5 metering installations with partial check metering

{Note: This *Code* requires that Type 2 *metering installations* have at least partial *check metering* installed.}

(1) This clause A2.6 applies in respect of *Type* 1 *metering installations* to *Type* 5 *metering installations* with a partial *check metering installation*.

(2) *Validations* to be performed:

(a) comparison of *revenue* and *check metering data*. In some installations the *check metering installation* may not fully duplicate the *revenue metering installation*. The *validation* check may involve a *validation* of the transmission node by nodal balance (comparing *energy* fed into the bus against *energy* fed from the bus). In other cases the *check meter* may be at the other end of the transmission or distribution line or the other side of a *transformer* (the comparison of energies will require an adjustment for *transformer* losses). Analysis of the historical *energy data* for each *metering point* should indicate what percent error differences between the *revenue* and *check meter* is considered acceptable. This information should be used to refine the *validation* algorithms. The maximum error difference considered acceptable for any *metering point* is 1%. This value should be minimised for each *metering point*, based on historical *energy data*.

(b) comparison of *market generator* interval *data* against *SCADA data*: It will be necessary to construct an appropriate *validation* algorithm in accordance with the *metrology procedure* as the *SCADA data* may be derived from a different measurement point, be of different interval collection and or have a different base unit of measurement, e.g. power not energy value.

(c) check against a nominated maximum value: (this check must be performed in the database to ensure no spikes are created in the process of exporting *data* from the *meter* reading system to the database; this check may additionally be performed in the *meter* reading software). This *validation* should include a check of maximum value of Wh or VAh units of measure as a minimum. Maximum varh checks may also be performed as an option (the *revenue meter* values are being *validated* against the *check meter*). The maximum value is to be initially set to the *CT* rating of the *metering installation*. On a per installation basis the maximum value may be increased to cater for situations where it has been confirmed that the *CT* is overloaded on a short-term basis.

(d) check against a nominated minimum value or alternatively a 'zero' check that tests for an acceptable number of zero interval values per *day*.

[194] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

(e) check for null *energy data* fields in the database (no values in database) for all *meter*s. The aim of this check is to ensure that there is a 100% *data* set (and any missing *meter* read *data* has been allocated *substituted* values). Minimum check required is to ensure that there is at least one non-null Wh or VA field per interval per *meter*.

(f) check for significant *meter* alarms (power failure, *VT* or phase failure, pulse overflow, CRC error and time tolerance): A process must in place that captures these significant *meter* alarms within the *data validation* process and ensures that any *meter* alarm occurrences are retained as part of the *data* audit trail.

(g) where possible, *validation* of *load* profile *data* by comparison of *energy* values obtained from the pulse or engineering unit *load* profile file(s) and the *meter accumulated energy register*s (*energy* tolerance). It is acknowledged that this check would not identify *CT* ratio changes performed on site after initial commissioning that have not been advised to the *network operator*[195]. It is also recognised that there are some *meter* specific issues to be considered.

A2.7 Validation of energy data from Type 1 to Type 5 metering installations with no check metering

{Note: The majority of these *metering installations* will be *Type* 3 *metering installations* or below.}

(1) This clause A2.7 applies in respect of *Type* 1 *metering installations* to *Type* 5 *metering installations* with no *check meter*.

(2) *Validations* to be performed:

(a) check against a nominated maximum value: (this check must be performed in the database to ensure no spikes are created in the process of exporting of data from the meter reading system to the database; this check may additionally be performed in the meter reading software). This *validation* should include a check of maximum value of Wh and varh or VAh units of measure as a minimum. The maximum value is to be initially set to the *CT* rating of the metering installation if a *CT* is installed, or the rating of the meter if a direct connected meter is installed. On a per installation basis the maximum value may be increased to cater for situations where it has been confirmed that the *CT* or meter is overloaded on a short-term basis.

(b) check against a nominated minimum value or alternatively a 'zero' check that tests for an acceptable number of zero interval values per *day*.

(c) check for null *energy data* fields in the database (no values in database) for all *meters*. The aim of this check is to ensure that there is a 100% *data* set (and any missing *meter* read *data* has been allocated *substituted* values). Minimum check required is to ensure that there is at least one non-null Wh or VA field per interval per *meter*.

(d) check for significant *meter* alarms (power failure, *VT* failure, pulse overflow, CRC error and time tolerance): A process must in place that captures these significant *meter* alarms within the *data validation* process and ensures that any *meter* alarm occurrences are retained as part of the *data* audit trail.

(e) where possible, *validation* of *load* profile *data* by comparison of *energy* values obtained from the pulse or engineering unit load profile file(s) and the meter cumulative registers (*energy* tolerance). It is acknowledged that this check would not identify *CT* ratio changes on site after initial commissioning that

[195] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

have not been advised to the *network operator*[196]. It is also recognised that there are some *meter* specific issues to be considered.

(f) where no *check meter* is available consideration should be given to developing additional *validation* techniques.

A2.8 Validation of energy data from Type 6 metering installations

(1) This clause A2.8 applies in respect of *Type* 6 *metering installations*.

(2) *Validations* to be performed:

(a) Check against a nominated minimum *meter* read value.

(b) Check against a nominated maximum *meter* read value.

(c) *Meter* read value is numeric and >= 0.

(d) *Meter* reading date > previous *meter* reading date.

(e) Check for null *energy data* fields in the *metering database* (no values in database) for all meters. The aim of this check is to ensure that there is a 100% data set (and any missing meter read data has been allocated substituted values).

A2.9 Validation of energy data for Type 7 connection points

(1) This clause A2.9 applies in respect of *Type* 7 *connection points*.

(2) *Validations* to be performed:

(a) check against a nominated maximum *energy data* value.

(b) check for null *energy data* fields in the database (no values in database) for all *meters*. The aim of this check is to ensure that there is a 100% *data* set (and any missing *energy data* has been allocated *substituted* values). Minimum check required is to ensure that there is at least one non-null Wh field per interval per *meter*.

(c) check the Inventory tables, Load tables and On/Off tables to ensure that the correct version of the tables are being used for the *energy data* calculations.

(d) check against a nominated minimum value or alternatively a 'zero' check that tests for an acceptable number of zero interval values per *day*.

(e) check that the *energy data* date > previous *energy data* date.

A2.10 Validation within the meter reading process for Type 5 and Type 6 metering installations

(1) This clause A2.10 applies in respect of *Type* 5 *metering installations* and *Type* 6 *metering installations*.

(2) *Validations* to be performed:

(a) New *meter* reading >=previous *meter* reading.

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[196] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

(b) *Meter* reading is valid against an expected minimum value.

(c) *Meter* reading is valid against an expected maximum value.

(d) Installed *meter* number is correct against recorded number.

(e) Time synchronisation of *metering equipment* inclusive of any *load* control *devices*.

(f) Security of *metering installation*, e.g. *meter* seals in place and in good order.

Appendix 3 – Data Substitution and Estimation

{Note: This Appendix 3 sets out the rules for the *network operator* to carry out *substitution* and *estimation* of *energy data* during the process of collection and transfer to the *metering database*.}

A3.1 Purpose

(1) *Substitution* or *estimation* must occur when the *energy data* is unavailable or fails the *validation* process.

(2) For all *data substitutions*, care and attention must be exercised to ensure that the selected *substitution* period includes any questionable "valid" *data* points at each extremity of the lost or "invalid" *data* period.

A3.2 Data substitution and estimation rules for Type 1 to Type 5 metering installations

(1) This clause A3.2 applies in respect of *Type* 1 *metering installations* to *Type* 5 *metering installations*.

(2) The *network operator*[197] must obtain clear and concise identification as to the cause of any apparent lost or erroneous *data* related to any *substitutions* carried out.

(3) The *network operator*[198] may do all *data substitution* types, except method 16, without prior agreement with the affected parties.

(4) All respective *Code participants* must be *notified* of any *substitution* or *estimation* within 2 *business days* after the day of the *data substitution* or *estimation* being carried out, or such other period as may be agreed.

(5) In the event of a communications failure it may be necessary to obtain *energy data* by means of a manual download at the *meter* if the *network operator*[199] cannot obtain quality *energy data* within the required time frames.

(6) Unless reliable *check metering data* exists for *generating plant*, *substitutions* may not be performed without prior consultation with the *generator. SCADA data* is considered to be *check metering data* for the purpose of *data substitutions*.

A3.3 Data substitution and estimation methods for Type 1 to Type 5 metering installations

{Note: *Substitution* methods 11 to 18 apply to *Type* 1 *metering installations* to *Type* 4 *metering installations*. *Substitution* methods 51 to 56 apply to *Type* 5 *metering installations*.}

(1) This clause A3.3 applies in respect of *Type* 1 *metering installations* to *Type* 5 *metering installations*.

(2) Substitution Method 11

(a) *Interval energy data* obtained from another *meter* at the same measurement point for the same interval *data* periods as that being *substituted* for may be used for *substitution* purposes, e.g. installations where *revenue* and *check meters* are installed.

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[197] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[198] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[199] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(b) Method 11 *substitutions* also include the use of *data* from similar *meters* where the *load* profile of the second *meter* is a good match to the *load* profile of the *meter* for which *substitutions* are being made, e.g. where *meters* are installed on each end of a transmission line where the difference due to line losses can be accurately determined; where *meters* are installed on parallel feeders where supply is 'to' and 'from' common buses and line impedances are similar.

(3) Substitution Method 12

Data values may be calculated for an unknown feed to a node based on the other known *energy* flows to or from that node.

(4) Substitution Method 13

(a) *Data* from an energy management system or *SCADA data* may be used for *substitution* purposes, where the *data* originates from a similar measurement point as the *meter* for which *substitutions* are being made.

(b) *Data* from an energy management system or *SCADA data* may be *data* which is inferior in accuracy or resolution and which is in a dissimilar format to the *energy data*, (e.g. 30 Min. demand values). It may be necessary to adjust the *data* in both magnitude and form in order that the *substitution* is of an acceptable quality.

(5) Substitution Method 14

Where *data substitution* methods 11, 12, and 13 cannot be carried out, then the *network operator*[200] may *substitute* for the missing *data* using the "Nearest Equivalent Day" or "Like Day" method, as detailed in the table below.

METHOD 14

Substitution Day	**"Nearest Equivalent Day" or "Like Day" (in order of availability)**
Monday	Monday ♦♦
Tuesday	Tuesday ♦♦ Wednesday♦♦ Thursday ♦♦ Wednesday ♦ Thursday ♦
Wednesday	Wednesday ♦♦ Tuesday ♦ Thursday ♦♦ Thursday ♦ Tuesday ♦♦
Thursday	Thursday ♦♦ Wednesday ♦ Tuesday ♦ Wednesday ♦♦ Tuesday ♦♦
Friday	Friday ♦♦
Saturday	Saturday ♦♦
Sunday	Sunday ♦♦

Substitutions for 'Like Day' to be as detailed above, unless:

1. If no readings are available on the first listed *day*, then the next listed preferred *day* is to be used.
2. The *substitution day* was a public holiday, in which case the most recent Sunday is to be used.
3. The *substitution day* was not a public holiday and the 'Like Day' is a public holiday, in which case the *substitution* 'Like Day' to be used must be the most recent *business* day.

♦♦ Occurring in the week preceding that in which the *substitution day* occurs.

♦ Occurring in the same week as the *substitution day*

[200] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(6) Substitution Method 15

Where *data substitution* methods 11, 12, and 13 cannot be carried out, then the *network operator*[201] may *substitute* for the missing *data* using the "Nearest Equivalent Day" or "Like Day" method, as detailed in the Table below.

METHOD 15
The intervals to be *substituted* will be plugged using an average of each interval from the proceeding 4 weeks, or part thereof. This averaging technique may be applied in the following ways: a) where the averaged intervals are simply 'plugged' into the intervals requiring *substitution*. b) where the averaged intervals are used to provide the profile for the ones to be 'plugged' to a pre-determined number of pulses for the total *substitution* period. However if *data* is required to be *substituted* for a public holiday then the most recent available Sunday will be used.

(7) Substitution Method 16

(a) Where *data substitution* is required for any period greater than 7 *days*, consideration, consultation and agreement must take place between the affected parties to resolve any abnormal equivalent *days* that may be applicable.

(b) Method 16 *substitutions* are:

(i) *data substitutions* of any format for periods greater than 7 *days* that are based on an agreement between all the affected parties;

(ii) changes to existing *substitutions* for any period that are carried out where the affected parties have directed that as a result of site or *customer* specific information, the original *substitutions* are in error.

(8) Substitution Method 17

Data substitutions for periods up to, but not exceeding 2 hours, may be carried out by simple linear interpolation.

(9) Substitution Method 18

This *substitution* method covers the situation where an alternate method of *substitution* has been agreed with the *market participant*, the applicable *user* and the *network operator*[202]. This may be a globally applied method or a site specific method where an adjusted profile is used to take into account local conditions which affect consumption (e.g. local holiday or *customer* shutdown), or where alternate *data* may be able to be used for quality checks and minor adjustments of an *estimated* profile such as using *meter* register *data*.

[201] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[202] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(10) Substitution Method 51

This method is known as the Previous Years Method. Where *data substitution* methods 11, 12, and 13 cannot be carried out, then the *network operator*[203] may *substitute* for the missing *data* using the "Nearest Equivalent Day" or "Like Day" method, as detailed in the Table below.

METHOD 51	
Substitution Day	***"Nearest Equivalent Day" or "Like Day" (in order of availability)***
Monday	Monday ♦♦ Monday ♦
Tuesday	Tuesday ♦♦ Wednesday♦♦ Tuesday ♦ Wednesday ♦
Wednesday	Wednesday ♦♦ Tuesday ♦♦ Thursday ♦♦ Wednesday ♦ Thursday ♦ Tuesday ♦
Thursday	Thursday ♦♦ Wednesday ♦♦ Tuesday ♦♦ Thursday ♦ Wednesday ♦ Tuesday ♦
Friday	Friday ♦♦ Friday ♦
Saturday	Saturday ♦♦ Saturday ♦
Sunday	Sunday ♦♦ Sunday ♦
Substitutions for 'Like Day' to be as detailed above, unless: 1. If no readings are available on the first listed *day*, then the next listed preferred *day* is to be used. 2. The *substitution day* was a public holiday, in which case the most recent Sunday is to be used. 3. The *substitution day* was not a public holiday and the 'Like Day' is a public holiday, in which case the *substitution* 'Like Day' to be used must be the most recent *business day*. ♦♦ Occurring in the same week as the *substitution day* in the previous year. ♦ Occurring in the week preceding that in which the *substitution day* occurs in the previous year.	

(11) Substitution Method 52

This method is known as the Previous *Meter* Reading Method. Where *data substitution* methods 11, 12, and 13 cannot be carried out, then the *network operator*[204] may *substitute* for the missing *data* using the "Nearest Equivalent Day" or "Like Day" method, as detailed in the Table below.

METHOD 52	
Substitution Day	***"Nearest Equivalent Day" or "Like Day" (in order of availability)***
Monday	Monday ♦♦ Monday ♦
Tuesday	Tuesday ♦♦ Wednesday♦♦ Tuesday ♦ Wednesday ♦
Wednesday	Wednesday ♦♦ Tuesday ♦♦ Thursday ♦♦ Wednesday ♦ Thursday ♦ Tuesday ♦
Thursday	Thursday ♦♦ Wednesday ♦♦ Tuesday ♦♦ Thursday ♦ Wednesday ♦ Tuesday ♦
Friday	Friday ♦♦ Friday ♦
Saturday	Saturday ♦♦ Saturday ♦
Sunday	Sunday ♦♦ Sunday ♦
Substitutions for 'Like Day' to be as detailed above, unless: 1. If no readings are available on the first listed *day*, then the next listed preferred day is to be used. 2. The *substitution day* was a public holiday, in which case the most recent Sunday is to be used. 3. The *substitution day* was not a public holiday and the 'Like Day' is a public holiday, in which case the *substitution* 'Like Day' to be used must be the most recent *business day.* ♦♦ Occurring in the last whole week of the previous *meter* reading period. ♦ Occurring in the week preceding the last whole week of the previous *meter* reading period.	

[203] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[204] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

(12) Substitution Method 53

(a) Where *data substitution* is required for any period greater than 7 *days*, consideration, consultation and agreement must take place between the affected parties to resolve any abnormal equivalent *days* that may be applicable.

(b) Method 53 *substitutions* are:

(i) *data substitutions* of any format for periods greater than 7 *days* that are based on an agreement between all the affected parties;

(ii) changes to existing *substitutions* for any period that are carried out where the affected parties have directed that as a result of site or *customer* specific information, the original *substitutions* are in error.

(13) Substitution Method 54

Data substitutions for periods up to, but not exceeding 2 hours, may be carried out by simple linear interpolation.

(14) Substitution Method 55

This *substitution* method covers the situation where an alternate method of *substitution* has been agreed with the *market participant*, the applicable *user* and the *network operator*[205]. This may be a globally applied method or a site specific method where an adjusted profile is used to take into account local conditions which affect consumption (e.g. local holiday or *customer* shutdown), or where alternate *data* may be able to be used for quality checks and minor adjustments of an *estimated* profile such as using *meter register data*.

(15) Substitution Method 56

This *substitution* method covers the situation where a *substitution* for *interval energy data* is required for a period prior to the first *meter* read. The *data substitution* must be done in accordance with an approved *metrology procedure*.

A3.4 Data substitution and estimation rules for Type 6 metering installations

(1) This clause A3.4 applies in respect of *Type* 6 *metering installations*.

(2) The *network operator*[206] may apply the following *substitution* and *estimation* methods:

(a) *Substitutions* may be method 61, 62, 63, or 64.

(b) *Estimations* may be method 61,62 or 65.

(3) All affected parties must be *notified* of any *substitution* or *estimation* within 2 *business days* after the *data substitution* or *estimation* being carried out, or such other period as may be agreed.

[205] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[206] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

A3.5 Data substitution and estimation methods for Type 6 metering installations

(1) This clause A3.5 applies in respect of *Type* 6 *metering installations*.

(2) Substitution Method 61: Previous Year Method (*average daily consumption*).

Substituted or *estimated meter* reading = *average daily consumption* from the same or similar *meter* reading period last year multiplied by number of *days* required to be *substituted*.

(3) Substitution Method 62: Previous *Meter* Reading Method (*average daily consumption*).

Substituted or *estimated meter* reading = *average daily consumption* from the previous *meter* reading period multiplied by the number of *days* required to be *substituted* or *estimated*. Where the scheduled meter reading frequency is less frequent than monthly, this *substitution* or *estimation* method is to be used only when the consumption from the same, or similar, *meter* reading period last year is not available.

(4) Substitution Method 63: Customer Class Method.

Substituted meter reading = *average daily consumption* for this *customer* class with the same type of usage multiplied by number of *days* required to be *substituted*.

(a) Method 63 is to be used only when the consumption from the same, or similar, *meter* reading period last year and the consumption from the previous *meter* reading period is not available.

(b) *Customer* classes are Residential, Non-Residential, Farm and Public Lighting.

(c) Types of usage are peak and off-peak.

(5) Substitution Method 64; Agreed Method.

(a) The *market participant*, the applicable *user* and the *network operator*[207] may agree to use another method of *substitution* (which may be a modification of an existing substitution method) where none of the existing substitution methods is applicable.

(b) The specifics of this substitution method may involve a globally applied method or a site-specific method.

(6) Substitution Method 65: *Estimation* by *average daily consumption.*

Estimate = average daily consumption multiplied by number of days required to be *estimated*.

Estimation method 65 is to be used only when the consumption from the same, or similar, *meter* reading period last year and the consumption from the previous *meter* reading period are not available.

[207] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

A3.6 Substitution and estimation rules for Type 7 connection points

This clause A3.6 applies in respect of *Type 7 connection points*.

The *network operator*[208] may apply method 71, 72, 73, or 74 substitution methods.

All affected parties must be *notified* of any *substitution* or *estimation* within 2 *business days* of the *data substitution* or *estimation* being carried out, or such other period as may be agreed.

A3.7 Data substitution and estimation for Type 7 connection points

(1) This clause A3.7 applies in respect of *Type 7 connection points*.

(2) Substitution Method 71: Recalculation.

The *energy data* is *substituted* with the *energy data* obtained by a recalculation based on the current Inventory tables, Load tables and On/Off tables.

(3) Substitution Method 72: Revised tables.

Where the error in the calculation of the *energy data* is due to errors in the Inventory table, Load Table or On/Off table, the *energy data* is *substituted* with the *energy data* obtained by a recalculation based on the most recent Inventory tables, Load tables and On/Off tables for which there was no error.

(4) Substitution Method 73: Revised Algorithm.

Where the error in the calculation of the *energy data* is due to an error in the algorithm, the *energy data* is *substituted* with the most recent *energy data* for which there was no error.

(5) Substitution Method 74: Agreed Method.

(a) The *market participant*, the applicable *user* and the *network operator*[209] may agree to use another method of *substitution* (which may be a modification of an existing substitution method) where none of the existing substitution methods is applicable.

(b) The specifics of this substitution method may involve a globally applied method or a site-specific method.

[208] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

[209] If clause 5.29(b) applies, read "*network operator*" as "*metering data agent*".

Appendix 4 – Details of Available Metering Services

A4.1 Request for metering services

{Note: A *metering service order* includes a *customer transfer request* under the *Customer Transfer Code*.}

(1) A *network operator's*[210] *metering service order* form must require the *user* to provide the following information:

(a) either or both of the name and, if applicable, identification number or code of the *user* submitting the request for a *metering service*; and

(b) either:

(i) if the *network operator* has not allocated a *NMI* for the *connection point* to which the *metering service* relates — the *customer's*:

A. name; and

B. location identifier or lot number and, if applicable, unit number; and

C. street number; and

D. street; and

E. suburb or district; and

F. *meter* number(s),

or

(ii) if the *network operator* has allocated a *NMI* for the *connection point* — the *customer's NMI* and *checksum*;

and

(c) the type(s) of *metering service* being requested; and

(d) the *user's metering service order* identifier, to enable the *metering service order* to be tracked.

(2) A *network operator*[211] must develop a *metering service order* form suitable for transmission by *electronic* communication for use by *users* and may make a *metering service order* form available on its websites.

(3) Upon the successful, or unsuccessful, completion of the work, or the cancellation of a *metering service order*, the *network operator*[212] must send a response to the *user* with details of the status of the requested work.

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[210] If clause 5.29(b) applies, read "*network operator's*" as "*network operator's* and *metering data agent's*".

[211] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".

[212] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

(4) Completion of a *metering service order* may result in either or both of changes to *standing data* and collection of *energy data*, in which case the provisions of this *Code* apply.

(5) A *user* may provide the *network operator*[213] with a preferred appointment date and time for the *network operator*[214] to carry out the *metering service order*.

(6) The *network operator*[215] must make reasonable endeavours to perform the *metering service order* at the preferred date and time provided under clause A4.1(5).

(7) Unless otherwise agreed, a *user* who wishes to revise a previously-notified preferred date and time must:

(a) request the *network operator*[216] to cancel the *metering service order*; and

(b) submit a new *metering service order* for the same *NMI* and type of *metering service*, specifying the new preferred date and time, and a new *metering service order* identifier.

A4.2 Request for cancellation of a metering service order

(1) A *network operator*[217] must *publish* a form to allow a *user* to request the *network operator*[218] to cancel a *metering service order*.

(2) The *metering service order* cancellation form must require *user* to provide:

(a) the *NMI* for the *connection point* to which the *metering service order* relates; and

(b) the *user's metering service order* identifier.

(3) Upon receipt of a request to cancel a *metering service order*, the *network operator*[219] must use reasonable endeavours to ensure that the previously requested work is not carried out and costs are not incurred.

(4) A *service level agreement* (and a *model service level agreement*) may provide that, to the extent that the *network operator* complies with clause A4.2(3), the *user* must pay to the *network operator* the amount incurred by the *network operator*, acting efficiently in accordance with *good electricity industry practice*, before the work or costs were able to be stopped or cancelled.

(5) The *network operator* must provide evidence to the *user* of the amount referred to in clause A4.2(4).

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[213] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".
[214] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".
[215] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".
[216] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".
[217] If clause 5.29(b) applies, read "*network operator*" as "*network operator* and *metering data agent*".
[218] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".
[219] If clause 5.29(b) applies, read "*network operator*" as "*network operator* or *metering data agent*".

Appendix 5 – [Not used]