Gas

Code

Gas Metering Code

CONSULTATION DRAFT

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1 Preliminary

1.1 Title

1.1.1 This industry code is the *Gas Metering Code*.

1.1.2 This industry code must be interpreted in accordance with the rules set out in Schedule 1 of this *Gas Metering Code*.

1.2 Authority

1.2.1 This *Gas Metering Code* is made as an industry code pursuant to the powers of the ***Commission*** under section 28 of the *Essential Services Commission Act 2002*.

1.3 Definitions and interpretation

1.3.1 In this Code words appearing in bold like **this** have the following meanings:

acceptance testing	means the testing and setting by a manufacturer or installer on a **meter**, **corrector** or **metering installation** to establish the initial calibration of the **meter, corrector** or **metering installation**
Access Arrangement	means the arrangement for third party access to a **distribution pipeline** filed by the **distributor** pursuant to the **National Gas Law** and **National Gas Rules** and which has been approved by the relevant regulator
Act	means the *Gas Act 1997 (SA)* as amended from time to time
AEMO	means the Australian Energy Market Operator Limited (ACN 072 010 327)
actual meter reading	means the figures or other information shown on a **meter** or instrument as actually read. An **actual meter reading** includes a **deemed meter reading**.
affected party	means a party that may be affected by the possible inaccuracy of a **metering installation** or **metering data** from that **metering installation**
applicable regulatory instruments	means any Act or regulatory instrument made under an Act, or a regulatory instrument issued by the **Commission**, which applies to a **distributor** or a **retailer**
applicable regulatory instruments	means the methodology, referred to in the **retail market procedures**, to calculate an **estimated meter reading** as amended from time to time.
approved substitution methodology	means the methodology, referred to in the **retail market procedures**, to substitute **metering data** as amended from time to time.
approved validation methodology	means the methodology, referred to in the **retail market procedures**, to validate **metering data** as amended from time to time.

basic meter	means a **meter** which is not an **interval meter**. This includes all **meters** which are not read daily by means of **telemetry**, even if they record **gas** flow and other data over daily or shorter intervals
basic metering installation	means a **metering installation** with a **basic meter**
best endeavours	means to act in good faith and use all reasonable efforts, skill and resources
business day	means a day that is not a Saturday, a Sunday or a public holiday (excluding part day public holidays) in the State of South Australia
Commission	means the Essential Services Commission established under the *Essential Services Commission Act 2002 (SA)* as amended from time to time
connection	means the joining of a **gas installation** to a **delivery point** to allow the flow of **gas**
corrector	means a device which adjusts uncorrected quantity of **gas** from actual to standard conditions for billing and other purposes
customer	has the meaning given to that term in the **Act** as amended from time to time
customer-own read	means a read of a **meter** undertaken by a **customer**, details of which are provided by the **customer** to the **distributor** or **retailer** for the **delivery point** to which the **meter** relates
data logger	means a device that collects and stores data relating to the quantity, temperature and pressure of **gas** and is capable of either: (a) transferring recorded data to a portable reading device, or (b) being accessed electronically through a data collection system.
deemed meter reading	means an **actual meter reading** deemed to have occurred on the day of a customer move-in, as defined in clause 3.1.3 of the **retail market procedures** as amended from time to time
defective	means: (a) in relation to a new **metering installation**, that it is not meeting the **minimum standards**, and (b) in relation to an existing **meter installation**, that it is not meeting the **minimum standards** of accuracy that it was designed to meet.

delivery point	means a point on a **distribution system** at which **gas** is withdrawn from the **distribution system** for delivery to a **customer** and which is normally located at: (a) the inlet of a gas installation of a customer, or (b) the outlet of a meter.
disclosee	means a person to whom a **distributor** or a **retailer** has disclosed or wishes to disclose **metering data**
distribution system	has the meaning given to that term in the **Act** as amended from time to time
distribution pipeline	has the meaning given to that term in the **National Gas Law** as amended from time to time
distributor	means a person holding a licence under the **Act** to operate a **distribution system**
estimated meter reading	means an estimate of an **actual meter reading** made under clause 4.5.1 or a **customer-own read**. Except in clause 4.4, it does not include an **estimated meter reading** designated to be a **substituted meter reading**
explicit informed consent	has the meaning given to that term in the **National Energy Retail Law** as amended from time to time
gas	has the meaning given to that term in the **Act** as amended from time to time
guideline	means a guideline published by the **Commission**
installation database	means a database of calibration data which a **distributor** is required to keep in respect of its **metering installations** pursuant to this industry code
interval meter	means a **meter** which is read by means of **telemetry**; and aggregates the flow of **gas** across time, and records that flow for each hour
interval metering installation	means a **metering installation** with an **interval meter**
in writing	means communication made by email, letter, facsimile or electronic media
meter	means the device used to directly measure the mass or volume of **gas** passing through it and includes the associated equipment attached to the device to filter, control or regulate that flow of **gas**
meter class	means a group of **meters** in which: (a) all the **meters** have been made to the same specifications by the same manufacturer

	(b) there are no significant differences in components or materials between the **meters**, and (c) all the **meters** have been sealed with the same date code
metering data	means the measure of quantity of **gas** flow obtained from a **metering installation**
metering database	means a database maintained by a **distributor** that includes the information required by the applicable provisions of Chapter 2 of the **retail market procedures** as amended from time to time
metering installation	means the **meter** and associated equipment and installations, which may include **correctors**, regulators, filters, **data loggers** and **telemetry** relating to a **delivery point**
meter reading	means an **actual meter reading**, a **deemed meter reading**, an **estimated meter reading** or a **substituted meter reading**, as applicable. A reference to a **meter reading** in respect of a particular date or period is the reading that has most recently been included in the **distributor's metering database** for that date or period
meter reading schedule	means a schedule provided by a **distributor** to a **retailer** under clause 3.1.1(a) of the **retail market procedures** as amended from time to time
minimum standards	means, in respect of new **meters**, the minimum standards referred to in clause 2.6 of this industry code
MIRN	means Meter Identification Reference Number and is the unique 10-digit numeric meter installation registration number that a **distributor** assigns to each **metering installation**
NATA	means the National Association of Testing Authorities, Australia
National Energy Retail Law	has the meaning given to that term in the *National Energy Retail Law (South Australia) Act 2011* as amended from time to time
National Energy Retail Regulations	means the Regulations made under Part 11 of the **National Energy Retail Law** as amended from time to time
National Energy Retail Rules	means the Rules made under Part 10 of the **National Energy Retail Law** as amended from time to time
National Gas Law	has the meaning given to that term in the *National Gas (South Australia) Act 2008 (SA)* as amended from time to time

National Gas Regulations	means the Regulations made under Part 3 of the *National Gas (South Australia) Act 2008* as amended from time to time
National Gas Rules	has the meaning given to that term in the National Gas Law as amended from time to time
Network Operator	means an entity (also commonly referred to as a distributor) that participates in the retail gas market of South Australia in the registrable capacity of a "Network Operator" under the National Gas Rules and has registered with AEMO under the National Gas Rules in that capacity
quarterly	means a period of thirteen weeks (13) nominally, but not exceeding a period of fourteen (14) weeks
related body corporate	means in relation to a body corporate, a body corporate that is related to the first mentioned body by virtue of the *Corporations Act 2001 (Cth)* as amended from time to time
retail market procedures	means the Retail Market Procedures (South Australia) administered and published by AEMO under Chapter 2, Part 7, Division 2 of the National Gas Law as amended from time to time
retailer	means a person holding a licence under the Act or a retailer authorisation under the National Energy Retail Law (as the case may be) for the sale and supply of gas
scheduled meter reading	means a meter reading of a delivery point that is scheduled to occur under the distributor's meter reading schedule
special meter reading	means an actual meter reading of a delivery point performed outside of the usual reading cycle for the meter
substituted meter reading	means a reading that is substituted under clause 4.4
Technical Regulator	means the person holding the office of Technical Regulator under Part 2 of the Act
telemetry	means the communication equipment used for transmission of data collected from meters to a distributor's central data management system and typically encompasses modems, telecom landline (which may be dedicated or part of the Public Switched Telephone (PSTN) network) or radio transceivers (which may be in the form or a dedicated radio network, Global System for Mobile Communications (GSM), General Packet Radio Service (GPRS) or satellite telephony).

type testing	means the testing conducted to establish the fitness for purpose of a new **metering installation** type
uncertainty limit	means the range within which the test results will be replicated when a test is repeated

1.4 Application

1.4.1 This *Gas Metering Code* regulates standards for **meters** and **metering installations** at **customer delivery points**.

1.4.2 The persons bound by this industry code are:

(a) **distributors** who are registered as **Network Operators** under the **National Gas Rules** and have a **gas distribution system** with 50,000 or more **connections**, and

(b) **retailers** selling and supplying **gas** to **customers** from a **distributor's gas distribution system** that has 50,000 or more **connections**.

1.4.3 However, notwithstanding the application of clause 1.4.2, this *Gas Metering Code* does not apply (in whole or in part) to any part of a **gas distribution system** operated by a **distributor** that is currently subject to the **Small-scale Gas Networks Code**.

1.5 Obtaining a copy of this Gas Metering Code

1.5.1 A **distributor** must, when asked by a **customer**, send to that **customer** within 10 **business days** a copy of this *Gas Metering Code* (and any amendments from time to time which materially affect a **customer's** rights, entitlements or obligations), free of charge for the first request by that **customer**.

1.5.2 A **distributor** may impose a reasonable charge for subsequent request(s) by that **customer** within a 12-month period.

1.6 Other Acts, codes and guidelines

1.6.1 Not all aspects of the **retailer's** and **distributor's** obligations are regulated by this *Gas Metering Code*. The **retailer's** and **distributor's** obligations, and some aspects of the relationship with a **customer,** are also affected by:

(a) Acts of Parliament and Regulations (in particular, the *Gas Act 1997*, the *National Gas (South Australia) Act 2008*, and the *Essential Services Commission Act 2002* (and associated regulations))

(b) the **National Gas Law**, **National Gas Regulations** and **National Gas Rules**

(c) the **National Energy Retail Law**, **National Energy Retail Regulations** and **National Energy Retail Rules**

(d) the distributor's **Access Arrangement**

(e) the distribution licence held by the **distributor**

(f) industry codes and any **guidelines** or rules made by the **Commission** from time to time

(g) the **retail market procedures**, and

(h) the terms of an agreement in place between a **retailer** and a **distributor**.

1.6.2 In particular, in addition to the requirements under this *Gas Metering Code*, retailers and distributors may have obligations under the following instruments: the **retail market procedures**, the **National Gas Rules** (confidentiality provisions) and the **National Energy Retail Rules** (billing requirements).

2 Provision of metering installations

2.1 Obligation to install meters

2.1.1 The **distributor** must provide an **interval metering installation** at **delivery points** for which the annual **gas** consumption level is greater than 10 terajoules per annum, and is expected to remain higher than 10 terajoules per annum.

2.1.2 The **distributor** must not unreasonably withhold its consent to the request of a **retailer** or **customer** to install a **metering installation** of a type that is different from that already installed, or that the **distributor** would otherwise install, provided that the **metering installation** satisfies any applicable technical requirements (including those reasonably required by the **distributor**).

2.1.3 The incremental cost of providing and installing a new **metering installation**:

(a) under clause 2.1.2, or

(b) where the **distributor** elects to install a different **metering installation** to that required by the **applicable regulatory instruments** or ordinarily installed by the **distributor** for that type of **customer** (pursuant to a lawful power to do so),

shall, to the extent permitted by an **applicable regulatory instrument** and/or contract or other agreement with the relevant **customer**, be paid by the party that initiates the change.

2.1.4 Before the **distributor** installs a different **metering installation** to that required by the **applicable regulatory instruments** or ordinarily installed by the **distributor** for that type of **customer,** the **distributor** must notify the relevant **retailer** and **customer** at least 15 **business days** prior to the installation.

2.2 Non reversion

2.2.1 The **distributor** must ensure that an **interval metering installation** is not replaced by a **basic metering installation** prior to the end of its economic life unless the **distributor** had determined that the consumption of **gas** at the **delivery point** will be reduced below 10 terajoules per annum due to significant changes in the use of the premises.

2.2.2 The **distributor** must, upon request by the **Technical Regulator**, report to the **Technical Regulator** on instances where it has replaced an **interval metering installation** with a **basic metering installation** pursuant to a determination of the **distributor** made under clause 2.2.1, within a reasonable timeframe as requested by the **Technical Regulator**.

2.3 Provision of metering installations

2.3.1 A **metering installation** must contain an index register that:

(a) has a visible and accessible display of **metering data**, or

(b) allows the **metering data** to be accessed and read at the same time by portable computer or other equipment of a type or specification reasonably acceptable to all persons who are entitled to have access to that **metering data**.

2.4 Installation

2.4.1 The **distributor** must install **metering installations** as near as practicable to the **delivery point**.

2.4.2 The **distributor** must install **metering installations** in a position which allows safe and unimpeded access to any person whose obligation it is to test, adjust, maintain, repair, or replace the **metering installation**, or collect **metering data** from the **metering installation**.

2.5 Installation database

2.5.1 A **distributor** must maintain an **installation database** in respect of each **metering installation**.

2.5.2 The **installation database** must contain at least the following information:

(a) the Meter Identification Reference Number (**MIRN**)

(b) the make, model and year of manufacture and date of installation for each component of the **metering installation**

(c) current test and calibration programme details, test results and references to test certificates

(d) calibration tables, where applied to achieve **metering installation** accuracy, and data register coding details, and

(e) date and details of all seals and labels applied to the **metering installation**.

Note: The information that must be contained in the **installation database** is in addition to the information that must be contained in the metering database under clause 2.2 of the **retail market procedures**.

2.5.3 A **distributor** must maintain the information contained in the **installation database** in the same format and for the same periods as information that is required to be held in the **metering database** under Chapter 2 of the **retail market procedures**.

2.5.4 The **distributor** must provide, upon request **in writing**, access to an **affected party** to information in the **installation database** relevant to that person:

(a) within 2 **business days**, where the information is in an accessible format as required by clause 2.5.3, and

(b) otherwise within 30 **business days**,

(c) from the date of receipt of the request.

2.6 Minimum standards of accuracy

2.6.1 The **distributor** must ensure that the **minimum standards** of accuracy for **metering installations** are within a margin of accuracy of plus or minus 2% of the net volume of **gas** delivered to that **delivery point**.

2.6.2 The **distributor** must ensure that the operation of the **metering installation** does not show systematic bias within the allowable margin of accuracy.

2.6.3 The **distributor** must ensure that each of its **metering installations** containing pressure regulators are able to provide sufficient flow at the minimum regulator inlet pressure, and where a fixed pressure factor is applied, is able to reliably control the outlet pressure to meet the **distribution system** pressure requirements in the **applicable regulatory instruments**.

2.6.4 A person bound by this industry code must not tamper with or calibrate a **meter** with the purpose of introducing bias in the **meter**.

2.7 Security

2.7.1 The **distributor** must use **best endeavours** to ensure that the **metering installation** is protected from unauthorised interference or damage.

2.7.2 The **distributor** must in respect of new **metering installations**, provide seals or other appropriate devices to detect any interference.

2.7.3 Following notification to the **distributor** that a seal has been broken the following obligations apply to the **distributor**:

(a) if following the breaking of the seal, there is reason to suspect that the relevant **metering installation** may no longer meet the relevant **minimum standards** of accuracy, then the **distributor** must:

(i) test the **metering installation** in accordance with clause 3, within 15 **business days**, and/or

(ii) replace the **metering installation** in accordance with clause 3.6, and

(b) the **distributor** must replace a broken seal on the earlier of the following:

(i) if the **metering installation** is tested and is not replaced, at the time when the **metering installation** is tested

(ii) if the **metering installation** is not tested, the first occasion the **metering installation** is visited to take a reading, or

(iii) in any event within 70 **business days**.

2.7.4 The costs of replacing seals which are broken are borne:

(a) if the seal was broken by the **customer**, by the **customer**; or

(b) if the seal was broken by the **retailer**, by the **retailer**, or

(c) otherwise by the **distributor**.

3 Metering installation testing

3.1 Accreditation and certification

3.1.1 The **distributor** must ensure that **meters** and **correctors** purchased have National Measurement Institute pattern approval from an accredited laboratory recognised under the International Certification Scheme in accordance with specifications or guidelines specified by the National Measurement Institute under the *National Measurement Act 1960 (Cth)*.

3.1.2 Where National Measurement Institute pattern approval is not required to be provided by the National Measurement Institute, the **distributor** must conduct tests, or must cause tests to be conducted, in respect of the setting, scaling or certifying the accuracy of **meters** and **correctors**, by persons, or in a facility, accredited by **NATA** to conduct such tests.

3.1.3 The **distributor** must ensure that calibrating equipment used in connection with the calibration of its **metering installations** is certified by a verifying authority empowered to issue certificates under Regulation 13 of the *National Measurement Regulations (Cth)*.

3.2 Acceptance testing and type testing of metering installations

3.2.1 The **distributor** must conduct, or cause to be conducted, **acceptance tests** on **meters**, **correctors** and **data loggers** that are components of **metering installations** in the following circumstances:

(a) before a new **meter**, **corrector** or **data logger** is placed in service

(b) before a **meter**, **corrector** or **data logger** that has been removed from service is placed back into service, and

(c) after any repairs, maintenance or recalibration performed on a **meter**, **corrector** or **data logger** have been completed.

3.2.2 The distributor must only adopt a new type of **metering installation** if that **metering installation** has been type tested.

3.2.3 The **distributor** must provide a **retailer**, on request and by the date requested by the **retailer**, copies of the relevant **type test** certificates in its possession in relation to a **meter**.

3.2.4 The **distributor** must keep records of **type testing** under clause 3.2.2 while **meters** of that type remain in service, or for a minimum of 7 years, whichever is the longer.

3.2.5 The **distributor** must ensure that any **metering installations** that have been modified are assessed to determine whether the modified design continues to meet the **minimum standards** prescribed by this industry code and that the **metering installations** do not differ from their **type test** to the extent that any difference would affect the performance of the **metering installations**.

3.2.6 If reasonable grounds exist for concluding that modifications to a **metering installation** affect its measuring capability or its initial **type testing**, then the **distributor** must ensure that the **metering installation** is submitted for **type testing**.

3.3 Obligation to test metering installations

3.3.1 The **distributor** may at any time, and must within 15 **business days** of a request from a **retailer**, test a **metering installation** to ascertain whether or not that **metering installation** is **defective**.

3.3.2 The **distributor** must:

(a) give the **retailer** who requests a test, at least 5 **business days'** notice (or agree such other mutually convenient time) of when the requested test is proposed to be performed, and

(b) permit the **retailer** to inspect and witness the test (at the **retailer's** expense) such **metering installations** where this is reasonably required by the **retailer** for its operations.

3.3.3 If, as a result of the test requested by a **retailer** under clause 3.3.1, the **metering installation** is found to be:

(a) **defective**, the **distributor** must bear the cost incurred in conducting the test, or

(b) not **defective**, the **distributor** may seek to recover the cost incurred in conducting the test.

3.3.4 The **distributor** must, upon request, provide the **retailer** with the results of the test conducted under clause 3.3.1 within 5 **business days**.

3.3.5 The **distributor** must keep records of tests in accordance with clause 2.5.3.

3.3.6 If a test carried out under clause 3.3.1 requires the flow of **gas** through a **delivery point**, then the **distributor** must ensure that the **customer** does not pay any material amount for any **gas** used for the test and not utilised by the **customer**.

3.4 Meter classes

3.4.1 The initial in-service period of a **meter class** is a period approved by the **Technical Regulator** commencing on the day a **meter** in that **meter class** was first used in the supply of **gas** to a **customer**.

3.4.2 If a **distributor** intends to retain the **meters** in a **meter class** after the end of the initial in-service period for that **meter class** the **distributor** must, in addition to the other **meter** testing provisions in this industry code, establish and maintain a testing and sampling plan approved by the **Technical Regulator**.

3.4.3 The testing and sampling plan must provide that **meters** be tested at both 20% and 100% of the badge capacity of the **meters**.

3.4.4 The minimum test requirements will be in accordance with AS/NZS 4944-2006 (as amended from time to time).

3.4.5 The **distributor** is required to provide to the **Technical Regulator** the test results for both 20% and 100% for that **meter class**.

3.4.6 If the test results do not satisfy:

(a) the maximum allowable error limits for badge capacity of the **meters** at 20% and at 100% as set out in clause 2.6, with an **uncertainty limit** of no more than 1%, and

(b) such other requirements of the testing and sampling plan approved by the **Technical Regulator**,

then the **distributor** must replace or recalibrate all **metering installations** in that **meter class**.

3.5 Provision of test results

3.5.1 The **distributor** must, upon request by the **Technical Regulator**, provide the **Technical Regulator** with the results of any test conducted in accordance with this industry code, within a reasonable period of time as requested by the **Technical Regulator**.

3.6 Non-compliant meters

3.6.1 If the accuracy of a **metering installation** does not comply with the requirements of this industry code, or if a **distributor** becomes aware of any matter which could affect the integrity of the **metering data**, the **distributor** must at the cost of the **distributor**:

(a) notify the **affected parties** as soon as practicable

(b) arrange for the accuracy of the **metering installation** to be restored so that it meets the **minimum standards** of accuracy, or for the **metering installation** to be replaced, within 10 **business days** where the consumption at the **delivery point** is less than 10 terajoules per annum and 5 **business days** where the consumption at the **delivery point** is 10 terajoules per annum or more, or such longer period as may be approved by the **Technical Regulator**, and

(c) until the restoration or replacement of the **metering installation** in accordance with clause 3.6.1(b) use **substituted meter readings**.

3.6.2 Where a measurement error exists and the **distributor** proposes to substitute previous **meter** readings, the **distributor** must limit the use of **substituted meter readings** to:

(a) the period where the measurement error was greater than 1.5 times the **minimum standards** of accuracy, and

(b) the period where the measurement error exists, but no earlier than 12 months prior to when the measurement error was known if the measurement error resulted in the **customer** being undercharged.

3.7 Correction

3.7.1 In undertaking a **meter** reading at a **metering installation** the **distributor** must adjust the **meter** reading for pressure, temperature or supercompressibility, or a combination of these factors, through applying the correction factors or using a **corrector** when:

(a) the error arising from these effects exceeds the requirements of the **minimum standards**, or

(b) the operating condition varies during the course of the day affecting the pressure, temperature or supercompressibility, or

(c) where required to do so by the **Technical Regulator**.

3.7.2 A **distributor** can only make an adjustment for **meter** error using a **corrector** or a **correction factor** when:

(a) the **corrector** and **meter** for the specified correction is uniquely identified

(b) the accuracy of the **meter** and/or **corrector** is within the **minimum standards**

(c) the method of adjustment by the **corrector** can be varied, and

(d) the **affected parties** are advised of the compensation device and the settings used.

3.8 Labelling

3.8.1 A **distributor** must place a label on any **meter** and **corrector** that has been subject to an **acceptance test** and found to pass the test. The label must include a distinguishing mark and the year of test attached to indicate that it has passed the test.

3.8.2 If a **meter** or **corrector** has not been tested or has been found not to pass an **acceptance test**, the **distributor** must ensure that it is not labelled.

4 Meter reading and metering data

4.1 Gas heating value

4.1.1 **Gas** is to be metered by quantity and converted to units of energy for billing purposes using the heating value data calculated by the **distributor** in accordance with a heating value methodology that has been approved by the **Technical Regulator** from time to time.

4.2 Meter reading for customer transfer

4.2.1 On request by a **retailer**, the **distributor** must use its **best endeavours** to carry out an **actual meter reading** on a reasonable date as requested by the **retailer**, to enable the transfer of a **customer** to that **retailer**.

Note: The **actual meter reading** may be a **deemed meter reading** where permitted by the relevant **retail market procedures**.

4.3 Collection of metering data

4.3.1 Subject to clauses 4.3.2 and 4.3.3, a **customer** may arrange with the **retailer** the manner in which data stored in a **metering installation** provided to the **customer** is to be collected by the **distributor**.

4.3.2 A **customer** may request that the data stored in the **metering installations** provided to it be collected by the **distributor**:

(a) by inspecting the **metering installation,** or

(b) where the **metering installation** is capable of providing data by electronic means, by electronic means, or

(c) where the **metering installation** is capable of providing data by any other means, by any other means.

4.3.3 The **distributor** may charge a **retailer** for the collection of **metering data** under clause 4.3.2 to the extent that its costs of collection are higher than they would otherwise be.

4.3.4 Where the **metering data** held in the **metering installation** is protected from direct or remote access by suitable password and security controls, such passwords and security controls must be used.

4.3.5 Passwords must be treated as confidential information in accordance with clause 4.7.

4.3.6 If there is any discrepancy between:

(a) the data stored in a **metering installation**, and

(b) **metering data** in respect of that **metering installation**, the data stored in the **metering installation** is to be the prima facie evidence of the quantity of **gas** or energy, if applicable, supplied to the relevant **customer**.

4.4 Validation and substitution of metering data

4.4.1 The **distributor** must ensure that **metering data** collected from an **interval metering installation** under clause 4.3:

(a) is validated in accordance with the **approved validation methodology** in schedule 2, clause 1 of this industry code, and

(b) where necessary, is substituted in accordance with the **approved substitution methodology** in schedule 2, clause 2, of this industry code.

4.4.2 The **distributor** must ensure that **metering data** collected from a **basic metering installation** under clause 4.3:

(a) is validated in accordance with the **approved validation methodology** schedule 3, clause 1 of this industry code, and

(b) where necessary, is substituted in accordance with the **approved substitution methodology** in schedule 3, clause 2 of this industry code.

4.4.3 The **metering data** for a **metering installation** will be required to be substituted where any of the following apply:

(a) the **actual meter reading** fails the validation tests;

(b) there is a failure of the **metering installation**, or

(c) an inspection or test on the **metering installation** establishes that a measurement error(s) exists.

4.4.4 The **metering data** for a **basic metering installation** will also be required to be substituted where a **deemed meter reading** or **estimated meter reading** is permitted under the **retail market procedures** and is required to transfer a **customer** to a new **retailer**.

4.4.5 If a substitution is made to **metering data**, the **distributor** must:

(a) provide the substituted **metering data** to the **retailer** so that the **retailer** can meet its billing obligations

(b) inform the **retailer** to ensure that a bill issued to the relevant **customer** informs that **customer** that a substitution has been made, and

(c) provide the substituted **metering data** to **AEMO** if the metering data is required to be transferred to **AEMO**.

4.4.6 Where **metering data** in respect of a **customer** has been substituted and is required to be transferred to **AEMO**, the substituted data must be provided to **AEMO** by the **distributor**.

4.4.7 The **distributor** must maintain a separate record of the substitution made under clauses 4.4.1 and 4.4.2 for 7 years and provide access to the record at reasonable times to the relevant **customer's retailer**.

4.5 Estimation of metering data

4.5.1 Where the **retail market procedures** require the **distributor** to calculate an **estimated meter reading**, the **distributor** must use the **approved estimation methodology** in:

(a) schedule 2, clause 3 of this industry code for an **interval metering installation**, and

(b) schedule 3, clause 3 of this industry code for a **basic metering installation**.

4.5.2 If the **distributor** calculates an **estimated meter reading**, the **distributor** must inform the **retailer**.

4.6 Access to metering data

4.6.1 Where data is available by electronic means, the **distributor** must, on written request from a **customer's retailer**, provide facilities to enable the **customer** to access data stored in a **metering installation** where it is available by electronic means.

4.6.2 Where the **distributor** has provided facilities to enable the **retailer's customer** to access data stored in a **metering installation** by remote electronic means, if remote electronic access to the **metering installation** is unavailable for a period of 5 consecutive **business days** due to the actions within the control of the **distributor**, the **distributor** must, if requested by the **retailer's customer**, obtain data locally from the **metering installation** and provide that data to the **retailer's customer** at the **distributor's** cost.

4.6.3 When providing data required under clauses 4.6.1 and 4.6.2, this data must be provided within the timeframes required for the provision of this data contained in the **retail market procedures**.

4.6.4 Where access is provided for the **retailer** to **metering data**, the **distributor** must ensure that any additional data required by the **retailer** to meets its obligations under the **National Energy Retail Law** is also provided, and that any timeframes for the provision of this additional data imposed under the **National Energy Retail Law** are complied with.

4.7 Confidentiality

4.7.1 **Metering data** is classified as confidential information by the **retail market procedures** for the purposes of Part 16 of the **National Gas Rules**.

4.8 Ownership of metering data

4.8.1 The owner of the **meter** is the owner of all **metering data** produced or recorded by that **meter**. Each other person entitled to access that **metering data** under this industry code has the right to a non-exclusive licence to use that **metering data** for the purposes of its business, subject to the provisions of the **Act**.

5 Gas measurement management plan

5.1.1 The distributor must, within three months after the issue of its distribution licence or the commencement of this industry code, whichever is the later, prepare and submit to the Technical Regulator, a Gas Measurement Management Plan.

5.1.2 The Gas Measurement Management Plan must summarise the distributor's procedures for:

(a) installation and ownership of metering installations

(b) minimum standards for metering installations and the maintenance of that accuracy, including the testing and sampling plan referred to in clause 3.4

(c) collection of metering data

(d) field and maintenance testing of metering installations

(e) resolution of metering disputes

(f) metering data obligations

(g) management and exchange of metering information, and

(h) measurement and calculation of heating value for the purpose of billing.

5.1.3 The distributor must annually review and, if necessary, update the plan to ensure its efficient operation, and submit the updated plan to the Technical Regulator for approval.

5.1.4 The distributor must comply with the plan prepared in accordance with clause 5.1.1 and as updated from time to time in accordance with clause 5.1.3.

5.1.5 The distributor must not amend the plan without the approval of the Technical Regulator.

This Industry Code was made by the Commission on [DATE] pursuant to Part 4 of the *Essential Services Commission Act 2002*, to take effect on and from the date on which it is notified in the Gazette.

Adam Wilson

Chief Executive Officer and Commission authorised signatory

.....

Date

.....

Schedule 1 – Interpretation

In this Code, unless the context otherwise requires:

(a) headings are for convenience only and do not affect the interpretation of this Code

(b) words importing the singular include the plural and vice versa

(c) words importing a gender include any gender and/or a person of intersex status

(d) an expression importing a natural person includes any company, partnership, trust, joint venture, association, corporation or other body corporate and any governmental agency

(e) a reference to a person includes that person's executors, administrators, successors, substitutes (including, without limitation, persons taking by novation) and permitted assigns

(f) a reference to any statute, regulation, proclamation, order in council, ordinance or bylaw includes all statures, regulations, proclamations, orders in council, ordinances or by-laws varying, consolidating, re-enacting, extending or replacing them and a reference to a statute includes all regulations, proclamations, orders in council, ordinances, by-laws and determinations issued under that statute

(g) a reference to a document or a provision of a document includes an amendment or supplement to, or replacement or novation of, that document or that provision of that document

(h) an event which is required under this code to occur on or by a stipulated day which is not a **business day** may occur on or by the next **business day**.

Schedule 2 – Validation, Substitution and Estimation – Interval Metering Installation

1. Approved validation methodology

The validation rules that may be applied to the **metering data** from the **meter** of an **interval metering installation** are:

(a) Consumption **metering data** for the **meter** read period = sum of **interval metering data** for the **meter** read period

(b) Accumulated **meter** read value is numeric and ≥ 0

(c) Accumulated **meter** read value is ≥ previous accumulated **meter** read value

(d) Accumulated **meter** read value passes high/low test

(e) **Meter** read date/time > previous **meter** read date/time

(f) Maximum value (to ensure that no spikes are created)

(g) Null checks

(h) Dial capacity and decimal point check, and

(i) **Metering data** is consistent with the correct **meter** type for that **delivery point**.

2. Approved substitution methodology

The **distributor** may use Types 1, 2, 3, 4, 5, 6, 7 or 8 techniques in accordance with clauses 4 and 5 of this schedule 2, when the **metering data** is required to be substituted.

3. Approved estimation methodology

The distributor may use Types 1, 2, or 3 techniques in accordance with clauses 4 and 5 of this schedule 2, when the **metering data** is required to be estimated.

4. When substitution and estimation types may be used

(a) The **distributor** may use Type 2 except where the first **actual meter reading** has not been undertaken.

(b) The **distributor** may use Type 3, except where:

(i) the first **actual meter reading** has not been undertaken, or

(ii) the **scheduled meter reading** frequency is less frequent than monthly and the data from the same, or similar, **meter** reading period in the previous year is available.

(c) The **distributor** may use Types 4, 5, 6 and 7 in the circumstances described in clauses 5.4, 5.5, 5.6 and 5.7 of this schedule 2, respectively.

(d) The **distributor** may use Type 7 prior to the first **actual meter reading** being undertaken.

(e) The **distributor** may use Type 8 where there is an error in the **meter** pressure and/or **gas** temperature.

(f) The **distributor** must ensure that for all Types, except Type 5, substituted or estimated **metering data** is based on an **actual meter reading**, and is not based on **metering data** that has previously been estimated or substituted.

(g) When estimating or substituting **metering data** using Types 1, 2 or 3, the **distributor** must take into consideration any changes in the composition of **gas** that have occurred since the "Nearest Equivalent Day" or "Like Day".

5. Substitution and estimation types

The techniques for substituting and estimating **metering data** for **interval metering installations** are provided in this clause.

5.1 Type 1

Where there is another **interval metering installation** at the same measurement point for the same interval data periods as that being substituted for, the **distributor** must substitute or estimate the **metering data** using **metering data** from that **interval metering installation**.

5.2 Type 2

The **distributor** may substitute or estimate the **metering data** using the data from the "Nearest Equivalent Day" or "Like Day" from the same, or similar, **meter** reading period in the previous year. The "Nearest Equivalent Day" or "Like Day" is determined from the table below.

DAY	"NEAREST EQUIVALENT DAY" OR "LIKE DAY" (IN ORDER OF AVAILABILITY)
Monday	Monday ❖❖ Monday ❖
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❖

SUBSTITUTION OR ESTIMATES FOR 'LIKE DAY' TO BE AS DETAILED ABOVE, UNLESS:	
♦	No readings are available on the first listed day, then the next listed preferred day is to be used.
♦	The day was a public holiday, in which case the most recent Sunday is to be used.
♦	The day was not a public holiday and the 'Like Day' is a public holiday, in which case the 'Like Day' to be used must be the most recent day that is not a public holiday, Saturday or Sunday.
❖❖	Occurring in the same week as the day in the previous year.
❖	Occurring in the week preceding that in which the substitution day occurs in the previous year.

5.3 Type 3

The **distributor** may substitute or estimate the **metering data** using the data from the "Nearest Equivalent Day" or "Like Day" from previous **meter** readings. The "Nearest Equivalent Day" or "Like Day" is determined from the table below.

DAY	"NEAREST EQUIVALENT DAY" OR "LIKE DAY" (IN ORDER OF AVAILABILITY)
Monday	Monday❖❖
Tuesday	Wednesday❖❖ Thursday❖❖
Wednesday	Wednesday❖❖ Tuesday❖ Thursday❖❖ Tuesday❖❖
Thursday	Thursday❖❖ Wednesday❖ Tuesday❖ Wednesday❖❖ Tuesday❖❖
Friday	Friday❖❖
Saturday	Saturday❖❖
Sunday	Sunday❖❖

SUBSTITUTION OR ESTIMATIONS FOR 'LIKE DAY' TO BE AS DETAILED ABOVE, UNLESS:	
♦	No readings are available on the first listed day, then the next listed preferred day is to be used.
♦	The day was a public holiday, in which case the most recent Sunday is to be used.
♦	The day was not a public holiday but the preferred day is a public holiday, in which case the 'Like Day' to be used must be the most recent preferred day that is not a public holiday.
❖❖	Occurring in the week preceding that in which the estimation day occurs.
❖	Occurring in the same week as the estimation day.

5.4 Type 4

Previously used substituted **metering data** can be changed, prior to the **actual meter reading**, where the **retailer** has agreed, on the basis of site- or **customer**-specific information that the original substituted **metering data** is in error and a correction is required.

5.5 Type 5

Substituted **metering data** can be created using simple linear interpolation where the **retailer** has agreed.

5.6 Type 6

(a) The **retailer** may agree to use another method of substitution (which may be a modification of an existing Type) where none of the existing Types is applicable.

(b) The specifics of this Type may involve a globally applied method or a site-specific method.

5.7 Type 7

Prior to the first **actual meter reading**, the **metering data** may be substituted using a method agreed between the **retailer** and the **distributor**.

5.8 Type 8

Where the measurement error has arisen from errors in the **gas** temperature and/or **meter** pressure, the **metering data** may be substituted using the **meter** reading and the estimates for the **gas** temperature and/or **meter** pressure.

Schedule 3 – Validation, Substitution and Estimation – Basic Metering Installation

1. Approved validation methodology

The validation rules that may be applied to the **metering data** from the **meter** of a **basic metering installation** are: **Meter** read value is numeric and ≥ 0

(a) **Meter** read value is ≥ previous **meter** read value

(b) **Meter** read value passes high/low test

(c) **Meter** read date > previous **meter** read date

(d) Null checks

(e) Dial capacity and decimal point check, and

(f) **Metering data** is consistent with the correct **meter** type for that **delivery point**.

2. Approved substitution methodology

The **distributor** may use Types 1, 2, 3, 4, 5 or 6, techniques in accordance with clauses 4 and 5 of this schedule 2, when the **metering data** is required to be substituted.

3. Approved estimation methodology

The **distributor** may use Types 1, 2, or 3 techniques in accordance with clauses 4 and 5 of this schedule 2, when the **metering data** is required to be estimated.

4. When substitution and estimation types may be used

(a) The **distributor** may use Type 6 where there is an error in the **meter** pressure and/or **gas** temperature.

(b) The **distributor** must ensure that for all Types, substituted or estimated **metering data** is based on an **actual meter reading**, and is not based on **metering data** that has previously been substituted or estimated.

(c) When estimating or substituting **metering data** using Types 1 or 2, the **distributor** must take into consideration any changes in the composition of **gas** that have occurred since the **meter** read period last year or the previous **meter** read period.

(d) When estimating or substituting **metering data** using Type 3, the **distributor** must take into consideration any differences in the composition of **gas** for **customers** in the **customer** class.

5. Substitution and Estimation Types

The techniques for substituting and estimating **metering data** for **basic metering installations** are provided in this clause.

5.1 Type 1

Substitution or estimation

= Average daily consumption from same, or similar, **meter** read period last year

* Number of days required to be substituted or estimated.

5.2 Type 2

Substitution or estimation

= Average daily consumption from previous meter read period

* Number of days required to be substituted or estimated

Note: Where the **scheduled meter reading** frequency is less frequent than monthly, Type 2 is to be used only when the consumption from the same, or similar, **meter** read period last year is not available.

5.3 Type 3

Substitution or estimation

= Average daily consumption for this same **customer** class with the same type of usage

* Number of days required to be substituted or estimated

Note: Type 3 is to be used only when the consumption from the same, or similar, **meter** read period last year and the consumption from the previous **meter** read period are not available.

5.4 Type 4

(a) The **retailer**, and the **distributor** may agree to use another method of substitution (which may be a modification of an existing Type) where none of the existing Types is applicable.

(b) The specifics of this Type may involve a globally applied method or a site-specific method.

5.5 Type 5

Previously used substituted **metering data** can be changed, prior to the next **actual meter reading** where the **retailer** and **distributor** have agreed, on the basis of site- or **customer** specific information, that the original substituted **metering data** is in error and a correction is required.

5.6 Type 6

Where the measurement error has arisen from errors in the **gas** temperature and/or **meter** pressure, the **metering data** may be substituted using the **meter** reading and the estimates for the **gas** temperature and/or **meter** pressure.

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