RETAIL MARKET PROCEDURES (NSW AND ACT)

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## VERSION CONTROL

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- IN023/09 CI-RAB cash settlement process (approved on 4 May 2010)  
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- IN028/09 – Data Provision for Non-Short Term Trading Market Network sections;  
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- IN012/12 – Market Communications  
- IN020/12 – Consolidation of version 8 and version 9 of Retail Market Procedures  
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| 15.0    | 2 May 2016     | Amendments made in accordance with the following Procedure changes IN006/14 - NSW/ACT Retail Gas Project Amendments (NARGP), IN004/15 NSW-ACT RMP and GIP changes for Wagga Wagga Tamworth, and IN018/15 NARGP As Built changes. | Authorised under the NGL and NGR provisions effective 2 May 2016. |
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CHAPTER 1. GENERAL

1.1 Application

These Retail Market Procedures (NSW and ACT) (Procedures) are made under Chapter 2, Part 7, Division 2 of the National Gas Law and form part of the regulatory framework applicable to the retail gas market of New South Wales and the Australian Capital Territory. Participation in that retail gas market is governed by rule 135AB(1) of the National Gas Rules.

1.1.1 Excluded network sections

These Procedures apply to the network sections situated in all local government areas referred to in any reticulator’s authorisation granted under the Gas Supply Act 1996 of New South Wales, and all areas referred to in any licence to supply or distribute gas under the Utilities Act 2000 of the Australian Capital Territory, except for:

(a) the local government areas in which the distribution systems (as defined in the Gas Supply Act) for Albury and Tweed Shire are situated; and

(b) the Shoalhaven network section.

1.1.2 Wagga Wagga and Tamworth

(a) Subject to paragraphs (b) to (g), and except to the extent inconsistent with any of the provisions specified in paragraph (c), the Retail Market Procedures for South Australia are taken to apply to Network Operators in respect of the Wagga Wagga and Tamworth network sections, and the relevant provisions of the Retail Market Procedures for South Australia are taken to be incorporated into these Procedures for those purposes only.

(b) Unless otherwise specified in this clause 1.1.2, AEMO and Users:

(i) must comply with the provisions of these Procedures and the Gas Interface Protocol (and not the Retail Market Procedures for South Australia) in performing any obligation in respect of the Wagga Wagga or Tamworth network sections; but

(ii) must exercise their rights in respect of the Wagga Wagga or Tamworth network sections in a manner consistent with the relevant Network Operator’s obligations as applicable under this clause 1.1.2.

(c) The following provisions of these Procedures apply to Network Operators in respect of the Wagga Wagga and Tamworth network sections:

(i) this clause 1.1.2;

(ii) clause 1.2.1 (Definitions) – the definitions of business day, gas day, hot water meter and all other defined terms necessary to give meaning and effect to this clause 1.1.2, including any provision specified in this paragraph (c);

(iii) clause 1.2.2 (Interpretation);

(iv) clause 3.6.4 (Calculation of energy data – hot water meters), consistent with the calculation in example 5 of clause 1.2.2(g) and as if the common factor were the water conversion factor as defined in that example;

(v) clause 4.2(b) (De-energising or disconnecting basic meters by Users);

(vi) clause 4.3 (Meter upgrade or downgrade), provided that the time by which the Network Operator is to provide information under paragraphs (c) and (d) is 5.00 pm on the 2nd business day before the relevant meter is to be upgraded or downgraded (as applicable), not the 2nd business day afterwards;

(vii) Chapters 6 and 11 (Customer transfer process and Customer transfer error correction process), subject to paragraph (f);
(viii) Chapter 10 (Lost gas customer process); and
(ix) Attachment 4 (Wagga Wagga and Tamworth information);

(d) The following provisions of the Retail Market Procedures for South Australia do not apply to Network Operators in respect of the Wagga Wagga and Tamworth network sections:

(i) clause 6A (Time under these Procedures);
(ii) Division 2.2.3 of Part 2.2 (Error correction notices);
(iii) Part 3.3 (Transfer), other than clauses 82(a) and 82(c);
(iv) clause 111 (Disconnection by user);
(v) clause 125(3) (Time for lodging permanent removal request); and
(vi) clause 213 (Network operator to provide intra-day withdrawal data);

(e) The following provisions of the Retail Market Procedures for South Australia apply to Network Operators in respect of the Wagga Wagga and Tamworth network sections with the modifications specified:

(i) clause 74 (MIRN discovery request) applies as if ‘or AEMO’ were included after ‘A user’ in subclause (1);
(ii) clause 171(1) and (2) apply as if all references to the publication of data were to the provision of that data to AEMO; and
(iii) clause 229 applies as if all references to ‘estimates’ of unaccounted for gas were to the relevant quantities of unaccounted for gas as calculated by the Network Operator.

(f) Chapters 6 and 11 of these Procedures and associated definitions apply to a transfer request or a transfer error correction request for a delivery point in the Wagga Wagga and Tamworth network sections with the following modifications:

(i) the error correction permitted period commences 425 days before the error correction notice was delivered to AEMO and ends on the date on which that notice was delivered;
(ii) clauses 82(a) and (c) of the Retail Market Procedures for South Australia apply in respect of a transfer request;
(iii) a reference to information under clause 3.5.2 is taken to refer to meter reading information that the Network Operator would be required to provide in relation to a transfer request under corresponding provisions of the Retail Market Procedures for South Australia, noting that a transfer in the Wagga Wagga and Tamworth network sections can only be registered on an actual meter reading;
(iv) clauses 6.7.2, 6.7.3 and 6.7.4 of these Procedures do not apply;
(v) if AEMO does not receive the relevant information by the expiry of the data provision period, AEMO must cease processing the transfer request and deliver a notice to that effect to the User who delivered the transfer request, the FRO for the delivery point and the Network Operator; and
(vi) on receiving a registration notice, the Network Operator must comply with clause 3.5.3.

(g) In respect of the Wagga Wagga and Tamworth network sections, a reference in the Retail Market Procedures for South Australia to:

(i) a network operator, user, self-contracting user or participant are taken to refer to a Network Operator, User, Self Contracting User or Participant respectively;
(ii) a meter includes a hot water meter;

(iii) verification and verification guidelines are taken to refer to the process of validation in accordance with an applicable validation methodology in Attachment 4;

(iv) estimated value is taken to refer to a value estimated in accordance with an applicable estimation methodology in Attachment 4;

(v) substituted value is taken to refer to a value substituted in accordance with an applicable substitution methodology in Attachment 4;

(vi) the Technical Regulator is taken to refer to the New South Wales authority (if any) responsible for regulating the matter to which the relevant provision refers;

(vii) a provision of a South Australian legislative or regulatory instrument is taken to refer to the corresponding provision in a New South Wales legislative or regulatory instrument (if any); and

(viii) South Australia is taken to refer to New South Wales.

1.2 Definitions and Interpretation

1.2.1 Definitions

The words and phrases set out below have the meanings set out opposite them when used in these Procedures. Defined terms are intended to be identified in these Procedures by italicising them, but failure to italicise a defined term does not affect its meaning unless otherwise indicated.

**actual meter reading** The figures or other information shown on a meter or instrument as actually read.

**adjustment amount** For a User in a network section for a gas day, the amount calculated under clause 8.11.13(g).

**AEMO** Has the meaning given in the Law.

**AER** Has the meaning given in the Law.

**affected FRO** In relation to a transfer error correction request and a delivery point, the User who would cease to be registered as the FRO, or whose period of registration would be changed, if the User who delivered the transfer error correction request were registered as the FRO for that delivery point with effect from the error correction transfer date.

**aggregate MDQ** For a User for a network section, the amount calculated by summing the current “MDQ” (as defined in the applicable access arrangement for the relevant network section) for each delivery point in the network section for which the User is the FRO.

**allowable period** In relation to a transfer request lodged without a Customer no-change statement, the period commencing on the 10th business day prior to the proposed transfer date and expiring on the 10th business day after the proposed transfer date.

In relation to a transfer request lodged with a Customer no-change statement, the period commencing on the 4th business day prior to the proposed transfer date and expiring on the 10th business day after the proposed transfer date.

**alternative transfer date notice** In relation to a transfer request, a notice delivered to AEMO pursuant to clause 6.7.3.
applicable access arrangement
Has the meaning given in the Law.

apportionment factor
The factor for a non-daily metered delivery point calculated under:
(a) in the case of a network section other than an STTM network section, clause 8.9.3; and
(b) in the case of an STTM network section, clause 8.11.4.

apportionment percentage
The percentage calculated under:
(a) in the case of a network section other than an STTM network section, clause 8.9.5; and
(b) in the case of an STTM network section, clause 8.11.8 or 8.11.13(e), as applicable.

approved estimation methodology
An applicable estimation methodology contained in Attachment 2.

approved substitution methodology
An applicable substitution methodology contained in Attachment 3.

approved validation methodology
An applicable validation methodology contained in Attachment 1.

available offsetting amount
Has the meaning given in clause 8.9.13(b)(i).

average heating value
In relation to a reading period, has the meaning given in clause 3.6.1.

balanced network section
A no OBA network section or an OBA network section.

balancing arrangements register
The register maintained by AEMO under clause 8.2.

base load
In relation to a delivery point, the level of gas consumption at that delivery point that is not affected by the weather.

base reading
In relation to a validated meter reading (reference reading), the immediately preceding validated meter reading (see clause 3.6.2).

basic meter
A gas meter without a data logger or a hot water meter that is not read daily.

business day
A day, other than a Saturday, a Sunday or a public holiday in the State of New South Wales.

checksum
In relation to a MIRN, a single digit used to validate the correct entry of a MIRN in a database entry field.

common factor
In relation to a hot water meter, the factor applied to litres of hot water consumed at a delivery point to obtain the consumed energy as measured at that delivery point during the reading period as follows:

Common factor = Energy used divided by Litres used

Where:

Energy used = MJ consumed in the reading period by master gas meter for hot water service at the delivery point, determined in accordance with clause 3.6.2.
Litres used = Total hot water used at the delivery point.

**complete customer listing**
A listing created and administered by a Retailer that comprises the data attributes as required in the Gas Interface Protocol for every MIRN for which the Retailer is registered as the current FRO in AEMO’s metering database.

**complete MIRN listing**
A listing created and administered by a Network Operator that comprises the MIRN, discovery address and meter number of every MIRN that is recorded in the metering database of that Network Operator. This is referred to in the Rules as the ‘DPI full listing’.

**confirmed nomination**
The quantity of gas assigned to a shipper under clause 8.5.4(b) or 8.5.4(c), or the quantity of gas advised by a User to the Network Operator under clause 8.6.4(b).

**consumed energy**
In relation to a period, the flow during that period converted to energy by application of the applicable average heating value and the pressure correction factor or common factor (see clauses 3.6.2 to 3.6.4, as applicable).

**correction amount**
The amount calculated by AEMO under clause 8.8.8(a) using the methodology developed under clause 8.8.8(e).

**correction period**
The period determined by AEMO to which any calculation carried out under clause 8.8.8(a) or 8.8.8(c) applies.

**cumulative imbalance**
The imbalance calculated under clause 8.8.1 and expressed as a positive or negative value (unless it equals zero).

**Customer**
The ‘customer’ as defined in section 5 of the National Energy Retail Law in relation to gas delivered at a delivery point for particular premises.

**Customer characterisation**
In relation to a Customer at a delivery point, whether the Customer is:

(a) ‘metropolitan’ or ‘non-metropolitan’, where metropolitan indicates the delivery point is on the NSW-Wilton or ACT-Canberra network section; and

(b) ‘residential’ or ‘business’, where residential indicates the primary use of the consumed energy is for household purposes and business indicates the primary use of the consumed energy is for commercial purposes, as determined by the Customer’s Retailer.

**Customer no-change statement**
A statement given with a transfer request in accordance with clause 6.2.1(c)(iv).

**Customer-own read**
A read of a meter undertaken by a Customer, details of which are provided by the Customer to the User or Network Operator for the delivery point to which the meter relates. A Customer-own read is taken to be an estimated meter reading.

**daily metered**
In relation to a delivery point, the recording and reading of gas or water consumption on a daily basis.

**data logger**
A device that collects and stores data relating to the volume and, where available, the temperature and pressure of gas or water, and is capable of either:

(a) transferring recorded data to a portable reading device; or
(b) being accessed remotely by the Network Operator through an electronic data collection system.

data provision period
The period commencing on the first business day of the allowable period and expiring at midnight on the first business day after the day on which the allowable period expires.

de-energised or disconnected
Have the meanings given in Part 1 of the National Energy Retail Law.

default RoLR
Has the meaning given in Part 6 of the National Energy Retail Law (retailer of last resort scheme).

delivery point
A point on a Network Operator's network at which gas is withdrawn from the network and delivered to the Customer for particular premises.

delivery point identifier (DPI)
See definition of MIRN.

deregistered
In relation to a MIRN, means that the delivery point has been permanently removed and the MIRN removed from operational use in the Network Operator's metering database.

designated RoLR
Has the meaning given in Part 6 of the National Energy Retail Law.

disconnected
See definition of de-energised.

discovery address
In relation to a delivery point, the address of the premises to which gas is supplied at that delivery point, at a minimum including street number (or the equivalent), street name, street identifier, and suburb/city/town. The discovery address may also include other specified site address information that conforms with the address standard specified in the Gas Interface Protocol.

distributed withdrawal
A quantity of gas determined to have been withdrawn at a non-daily metered delivery point, calculated under:

(a) for a network section other than an STTM network section, clause 8.9.8(a) or 8.9.8(b); and

(b) for an STTM network section, clause 8.11.10(b) or 8.11.10(c), as revised or recalculated in accordance with clause 8.9 or 8.11 (as applicable).

distribution tariff
Has the meaning given in a Network Operator's applicable access arrangement.

DPI full listing
Is defined for the purposes of the Rules and has the same meaning as complete MIRN listing.

error correction date
The day nominated in a transfer error correction request as the day with effect from which the User who delivered the transfer error correction request to AEMO is to be registered in the AEMO metering database as the FRO for the delivery point to which the request relates.

error correction objection notice
A notice of objection to a transfer error correction request, delivered to AEMO under clause 11.3.1.

error correction objection withdrawal notice
A notice of withdrawal of an objection to a transfer error correction request, delivered to AEMO under clause 11.3.2.
error correction permitted period
In relation to a transfer error correction request, the period of 185 business days expiring on the last business day before the day on which the transfer error correction request is delivered to AEMO.

estimated meter reading
An estimate of an actual meter reading that is made under these Procedures in accordance with an approved estimation methodology, or a Customer-own read.

estimated withdrawal
An estimated withdrawal calculated under:
(a) for a network section other than an STTM network section, clause 8.9.6 or revised under clause 8.9.17; and
(b) for an STTM network section, clause 8.11.6 or recalculated under clause 8.11.13.

explicit informed consent
Has the meaning given in Part 1 of the National Energy Retail Law.

failed retailer
Has the meaning given in Part 6 of the National Energy Retail Law.

FCLP amount
A forecast change in linepack amount, which is the amount calculated for a User by AEMO under clause 8.6.7(f).

FCLP amount calculation methodology
Has the meaning given in clause 8.6.7(g).

FCLP validity criteria
The criteria determined by AEMO under clause 8.6.9 as the criteria that must be met in order for clauses 8.6.7 and 8.6.8 to remain in effect.

flow
The difference between a validated meter reading and the immediately preceding validated meter reading.

forecast requirement
Either:
(a) the sum of the information provided under clauses 8.5.1(b)(i) and 8.5.1(b)(iii), or revised under clause 8.5.3; or
(b) the sum of the information provided under clauses 8.6.1(b)(ii), 8.6.1(b)(iv) and 8.6.1(b)(v), or revised under clause 8.6.3.

forecast withdrawal
For a User, the User's forecast requirement less its reconciliation adjustment amount and, if relevant, its participant imbalance amount.

forecasting information
The information provided by AEMO under clause 8.4.1.

FRC HUB
The information system provided by AEMO for the transmission of aseXML messages under these Procedures.

FRC HUB Operational Terms and Conditions
The terms and conditions under which AEMO, each Retailer and Network Operator seek connection to and are obliged to operate under when connecting to and issuing or receiving transactions on the FRC HUB.

FRO (Financially Responsible Organisation)
In relation to a delivery point, the person identified in AEMO’s metering database as the User responsible, at the relevant time, for settling the account relating to that delivery point.

gas
Has the meaning given to ‘natural gas’ in the Law.

gas day
A period of 24 consecutive hours beginning at 6:30 am.
**Gas Interface Protocol**
The protocol that governs the manner and form in which information is to be provided, notice given, notices or documents delivered and requests made, as contemplated by these Procedures.
(See also clause 1.3.)

**gas meter**
A *meter* that measures the mass or volume of gas (see definition of *meter*).

**Gas Supply Act**
Gas Supply Act 1996 (NSW).

**Gas Supply Regulation**
Gas Supply (Natural Gas Retail Competition) Regulation 2001 (NSW).

**genuine transfer error**
In relation to a *delivery point*, a requirement to return the *delivery point* to the previous *FRO*, arising because the current *FRO* initiated a *transfer request* and was registered as the *FRO* for the *delivery point* in error.

**GJ**
One gigajoule which equals $1 \times 10^9$ joules.

**heating value (HV)**
The amount of energy, measured in MJ per cubic metre at standard conditions (15°C and 101.325 kPa), released when a cubic metre of gas is completely burned in a steady-flow process.

HV's are measured based on the quality of the gas that is reticulated in a *network section* in each *gas day*. Each *delivery point* in the *network section* is assigned a HV based on the measurements of a designated gas chromatograph, or multiple gas chromatographs weighted in accordance with technical parameters. The HV assigned to a *delivery point* on any given day will vary in accordance with the mix of hydrocarbons in the gas in that *network section*.

**hot water meter**
A *meter* that measures the volume of water (see definition of *meter*).

**industry approved methodology**
A methodology published by AEMO that must be developed (and may only be amended) after consultation with an industry reference group established by AEMO, such as the Gas Retail Consultative Forum or a successor group or committee. This includes a methodology developed under clauses 3.6.10, 8.6.7(g), 8.6.9 and 8.11.1(b), but excludes the approved validation methodology, approved estimation methodology and approved substitution methodology.

**interval meter**
A *meter* with a *data logger* that is *read* daily.

**Jemena**
Jemena Gas Networks (NSW) Ltd ACN 003 004 322.

**Law**
The National Gas Law as set out in the schedule to the National Gas (South Australia) Act 2008 (SA).

**matched allocation quantity**
Has the meaning given in Part 3 of Schedule 1 to the *Rules*.

**meter**
For gas, a 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 the flow of gas.

For hot water, a device used to directly measure the volume of water passing through it.

**meter number**
A unique identification number allocated to a *meter*. 
meter reading  
An actual meter reading, estimated meter reading or substituted meter reading. A reference to a meter reading in respect of a particular date or reading period is to the reading that has most recently been included in the metering database of the relevant Network Operator in respect of that date or reading period.

meter reading frequency  
The frequency at which the Network Operator will attempt to read a meter located at a delivery point.

metering data  
The data collected under clause 3.1.6.

metering database  
A database maintained by a Network Operator or AEMO that includes relevant MIRN registry, meter data, gas quality data, energy calculations (including validations, estimations and substitutions) and energy data, pursuant to Chapter 2.

metering installation  
A meter and associated equipment and installations installed for a delivery point.

MIRN  
(Meter Installation Registration Number) The numeric name of a delivery point as recorded at any time in the metering database of the Network Operator. A MIRN may cover more than one metering installation, but only one FRO may be associated with a MIRN at any time.

A MIRN was previously known as a ‘delivery point identifier’ (DPI). The MIRN includes a checksum.

MIRN discovery request  
In relation to a delivery point identified by reference to a MIRN or a discovery address, a request by a User or AEMO to a Network Operator for information contained in the Network Operator’s metering database in relation to a delivery point which is (or may be) in that Network Operator’s network.

MIRN discovery response  
The response by a Network Operator to a MIRN discovery request.

miscellaneous reconciliation amount  
For a User, a quantity of gas calculated under clause 8.9.10.

MJ  
One megajoule which equals 1 x 10⁶ joules.

monthly RAB reduction target  
Has the meaning given in clause 8.9.13(a).

net section load  
Either:

(a) for a network section other than an STTM network section, the net system load calculated under clause 8.9.1 or revised under clause 8.9.17; or

(b) for an STTM network section, the net system load calculated under clause 8.11.2 or recalculated under clause 8.11.13.

network  
In relation to a Network Operator, the distribution network described in its applicable access arrangement.

Network Operator  
An entity (also commonly referred to as a distributor) that participates in the retail gas market of New South Wales and the Australian Capital Territory in the registrable capacity of a ‘network operator’ under the Rules and has registered with AEMO under the Rules in that capacity.

network receipt point  
A point at which gas enters a Network Operator’s network.
network section

Part of a Network Operator’s network described as a ‘network section’ in the applicable access arrangement of the relevant Network Operator, where the applicable access arrangement does not identify any network sections, a pipeline forming part of the relevant network.

new nominations timetable

Has the meaning given in clause 8.7.2(a).

no balancing network section

A network section designated in the balancing arrangements register as a “no balancing network section”.

no OBA network section

A network section designated in the balancing arrangements register as a “no OBA network section”.

nomination day

The gas day for which a User must make nominations of gas to be injected into the network in accordance with the process outlined in clause 8.5 or 8.6.

nominations information

Information to be exchanged in accordance with clause 8.5 or 8.6 about the gas requirements in a network section for a gas day.

non-daily metered

Refers to a delivery point that is not daily metered.

non-STTM network section

A network section that is not an STTM network section.

OBA network section

A network section for which an operational balancing arrangement is in effect.

objection notice

A notice delivered to AEMO under clause 6.4.1 objecting to a transfer request.

objection withdrawal notice

In relation to a transfer request, a notice delivered to AEMO under clause 6.4.2.

operational balancing arrangement (OBA)

An agreement between a Network Operator and the transmission pipeline operators to co-operate in the management of pipeline and network interfaces.

Participant

A person who participates in the retail gas market of New South Wales and the Australian Capital Territory in a registrable capacity under the Rules.

participant imbalance amount

The amount described in clause 8.8.4(a) and calculated by AEMO under clause 8.8.4(b).

permitted prospective period

In relation to a transfer request, the period of 90 business days commencing on (and including) the day on which the transfer request is delivered to AEMO.

pressure correction factor (PCF)

(Nota: referred to as the volume correction factor (VCF) for some networks.)

A factor used to convert the volume of gas in cubic metres measured at a gas meter, with varying temperature, pressure and water vapour conditions existing at that meter, to a volume at a standard temperature of 15ºC (288.15 Kelvin) and pressure of 101.325 kPa. The resultant standard gas volume multiplied by the heating value determines the amount of consumed energy in MJ over the period of the metered gas flow.

PCF is calculated using the formula:
PCF = Pressure Factor * Temperature Factor * Supercompressibility Factor

Where:

(a) Pressure Factor is the sum of atmospheric pressure and the meter gauge pressure, divided by standard pressure of 101.325 kPa;
(b) Temperature Factor is the standard temperature of 15°C, expressed in Kelvin, divided by the flowing temperature at the meter in Kelvin; and
(c) Supercompressibility Factor is the correction factor calculated using the AGA_NX-19 state equation and applied to compensate for deviations of the actual gas flow from the ideal Boyle’s Law state.

prior imbalance account For a User in relation to an OBA network section, the cumulative difference between the total of the User’s confirmed nominations for a network receipt point and the User’s Withdrawal Quantity (defined in clause 8.9.16) for that network receipt point for all days prior to the nomination day for which metering information is available from daily metered delivery points, minus the User’s SCLP for that network receipt point.

proposed transfer date In relation to a transfer request, the day nominated in that transfer request as the day with effect from which the User who delivered the transfer request to AEMO is to be registered in the AEMO metering database as the FRO for the delivery point to which the transfer request relates.

prospective FRO A User that wishes to become the FRO for a delivery point.

publish The posting of information on the AEMO website, or any other means specified in the Gas Interface Protocol for making the relevant information available to Participants and other persons who require it.

read The process of collecting figures or other information from a meter either directly or through being transmitted or transformed by electronic, radio, microwave, sonic or other means.

read failure notice In relation to a transfer request, a notice delivered by AEMO pursuant to clause 6.7.2.

reading period The period (identified by reference to the dates of its commencement and expiry) between two consecutive validated meter readings for a non-daily metered delivery point (see clause 3.6.2).

reconciliation account The residual quantity of gas for which a User will be required to nominate to compensate for reconciliation amounts.

reconciliation adjustment amount The amount calculated under clause 8.9.13(a)(ii).

reconciliation amount The amount calculated under clause 8.9.11(a) or revised under clause 8.9.17 (as applicable).

reference reading The validated meter reading obtained on end date of a reading period (see clause 3.6.2).

registered matched allocation agreement Has the meaning given in Part 3 of Schedule 1 to the Rules.
registered matched allocation agreement User
A User which is a party to a registered matched allocation agreement.

registration notice
A notice delivered by AEMO under clause 6.8 or clause 11.7 (as applicable).

relevant dispute
Has the meaning given in Part 15C of the Rules.

Retailer
A ‘retailer’ within the meaning of the Law that participates in the retail gas market of New South Wales and the Australian Capital Territory in the registrable capacity of a ‘user’ under the Rules, and has registered with AEMO under the Rules in that capacity.

RoLR affected delivery point
A delivery point for which the current FRO is a failed retailer under a RoLR notice received by AEMO, and for which a default RoLR is recorded in AEMO’s metering database.

RoLR event
Has the meaning given in Part 6 of the National Energy Retail Law.

RoLR notice
Has the meaning given in Part 6 of the National Energy Retail Law.

RoLR transfer date
Has the same meaning as “transfer date” in Part 6 of the National Energy Retail Law.

Rules
The National Gas Rules made in accordance with the Law.

scheduled read date
In respect of a meter for to a delivery point, a day on which the Network Operator is scheduled to read that meter.

SCLP
For a User in an STTM network section for a gas day, the User’s share of change in linepack (in MJ) as calculated by AEMO under clause 8.11.1(b)(ii).

Self Contracting User
An entity that participates in the retail gas market of New South Wales and the Australian Capital Territory in the registrable capacity of a ‘self contracting user’ under the Rules, and has registered with AEMO under the Rules in that capacity.

settlement period
For the purposes of clause 8.9, 28 calendar days or such other period as AEMO determines from time to time.

shipper
A person contracted to supply gas to a network receipt point on behalf of a User or on behalf of a person from which the User purchases gas at that network receipt point.

site access information
In relation to a meter, information and safety instructions that are relevant to locating and reading that meter.

special read
A read undertaken other than on a scheduled read date.

special read date
The date nominated by a User as the date on which a Network Operator is to perform a special read.

special read request
A request for a special read in the form required by the Gas Interface Protocol.

street/suburb combination
In relation to a MIRN discovery request, the discovery address excluding the street number or its equivalent.

STTM
The short term trading market of New South Wales operating at the Sydney hub, as defined in Part 20 of the Rules.

STTM distribution system allocation
For a User in an STTM network section for a gas day, the sum of:
(a) the User’s total daily withdrawals for that network section for that gas day;

(b) either the User’s share of net section load for that network section for that gas day as calculated under clause 8.11.8 or, if recalculation under clause 8.11.13 is required, the User’s total non-daily metered withdrawals calculated under clause 8.11.13(d);

(c) the User’s SCLP for that network section for that gas day;

(d) the User’s SUAG for that network section for that gas day; and

(e) the User’s adjustment amount for that network section for that gas day, if that adjustment amount has been calculated under clause 8.11.13(g).

**STTM facility allocation** Has the meaning given in Part 20 of the Rules.

**STTM network section** The NSW Wilton network section and any other network section that becomes an STTM network section under clause 8.3(g).

**SUAG** For a User in an STTM network section for a gas day, the User’s share of unaccounted for gas (in MJ) as calculated by the Network Operator.

**substituted meter reading** A reading that is substituted under these Procedures for an actual meter reading in accordance with an approved substitution methodology.

**TJ** Means one terajoule which equals $1 \times 10^{12}$ joules.

**total adjustment amount** For a gas day for a network section, the amount calculated under clause 8.11.13(f).

**total daily withdrawals** Either:

(a) for a network section other than an STTM network section, an amount calculated under clause 8.9.2; or

(b) for an STTM network section:

(i) where the User is a registered matched allocation agreement User, the greater of zero and the amount calculated under clause 8.11.3 minus the matched allocation quantity allocated to that User in respect of that network section under the relevant registered matched allocation agreement; or

(ii) where the User is not a registered matched allocation agreement User, the amount calculated under clause 8.11.3.

**total distributed withdrawals** For a User in a network section for a gas day:

(a) where that network section is a no OBA Network section or OBA network section, the sum calculated under clause 8.9.9 or revised under clause 8.9.17; and

(b) where that network section is an STTM network section, the amount calculated under clause 8.11.11 or recalculated under clause 8.11.13.

**total estimated withdrawal** For a User in a network section:
(a) where that network section is not an STTM network section, the amount calculated for a nomination day under clause 8.9.7 or revised under clause 8.9.17; and

(b) where that network section is an STTM network section, the amount calculated for a gas day under clause 8.11.7.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>total non-daily metered withdrawals</td>
<td>For a User in a network section for a gas day, the amount calculated under clause 8.11.13(d).</td>
</tr>
<tr>
<td>total reconciliation amount</td>
<td>The sum calculated under clause 8.9.12(a) or revised under clause 8.9.17.</td>
</tr>
<tr>
<td>transfer error correction request</td>
<td>In relation to a delivery point, a request by a User to AEMO under clause 11.1.1 to register that User in the AEMO metering database as the FRO for that delivery point on the basis that a genuine transfer error has occurred within the error correction permitted period.</td>
</tr>
<tr>
<td>transfer error correction request notification</td>
<td>A notification that AEMO has received a transfer error correction request, issued by AEMO under clause 11.2.</td>
</tr>
<tr>
<td>transfer error correction withdrawal notice</td>
<td>In relation to a transfer error correction request, a notice delivered to AEMO under clause 11.5.1.</td>
</tr>
<tr>
<td>transfer request</td>
<td>In relation to a delivery point, a request by a User to AEMO under clause 6.2.1 to register that User in the AEMO metering database as the FRO for that delivery point.</td>
</tr>
<tr>
<td>transfer request notification</td>
<td>A notification that AEMO has received a transfer request, issued by AEMO under clause 6.3.</td>
</tr>
<tr>
<td>transfer withdrawal notice</td>
<td>In relation to a transfer request, a notice delivered to AEMO under clause 6.6.1.</td>
</tr>
<tr>
<td>transferable cumulative imbalance</td>
<td>For the purpose of clause 8.8.5, a User's revised cumulative imbalance notified under clause 8.8.5(d)(ii) for the last nomination day on which the User ceased to be a FRO for any delivery points in the network section.</td>
</tr>
<tr>
<td>transferable reconciliation account balance</td>
<td>For the purposes of clause 8.9.18, a User's reconciliation account balance notified under clause 8.10.1 for the nomination day on which the User applies to transfer its reconciliation account balance.</td>
</tr>
<tr>
<td>transmission pipeline operator</td>
<td>The party to an operational balancing arrangement that is not a Network Operator.</td>
</tr>
<tr>
<td>transportation agreement</td>
<td>An agreement made under an applicable access arrangement between a Network Operator and a User for the transportation of gas along the Network Operator's network.</td>
</tr>
<tr>
<td>User</td>
<td>A Retailer or a Self Contracting User.</td>
</tr>
<tr>
<td>validated meter reading</td>
<td>A meter reading that has been validated in accordance with an approved validation methodology.</td>
</tr>
<tr>
<td>weekly calculation day</td>
<td>Each Friday in a calendar month, or where the last day of that calendar month is a Thursday, that Thursday.</td>
</tr>
<tr>
<td>withdrawal quantity</td>
<td>Has the meaning given in clause 8.9.16.</td>
</tr>
</tbody>
</table>
1.2.2 Interpretation

The following principles of interpretation apply to these Procedures unless otherwise indicated.

(a) Terms defined in the Law or the Rules, and not otherwise defined in clause 1.2.1, whether or not they appear in italics in these Procedures, have the meanings given to them in the Law or the Rules (as applicable).

(b) If a provision of these Procedures is inconsistent with a provision of the Law, the Rules or the National Energy Retail Law, the Law, Rules or National Energy Retail Law (as the case may be) will prevail to the extent of the inconsistency.

(c) References to time are references to Australian Eastern Standard Time.

(d) A reference to any person includes that person’s successors in respect of the assets, function or activity to which that reference relates.

(e) If a period of time is specified in days from a given day or an act or event, it is to be calculated exclusive of that day.

(f) In deciding whether a person has used reasonable endeavours, regard must be had to all relevant factors including whether the person has acted in good faith and has done what is reasonably necessary in the circumstances.

(g) Where Network Operators are required to calculate values under these Procedures, such calculations must not apply truncation to any value. Derived values will not have an implied accuracy greater than any of the input variables to the calculation. Thus for a value derived from the product of two variables, one with two decimal place precision and one with three decimal place precision, the product will initially be set to three decimal places to allow for rounding to a final precision of two decimal places. Rounding will only be applied to the final value derived in the calculation process. The rounding method will be as described in the examples below:

- ROUND 2.14 to one decimal place - equals 2.1
- ROUND 2.15 to one decimal place - equals 2.2
- ROUND 2.159 to one decimal place - equals 2.2
- ROUND 2.149 to two decimal places - equals 2.15
- ROUND -1.475 to two decimal places equals -1.48

**Example 1 Energy Calculation:**
PCF of 1.0989
HV of 39.81
Vol of 200
1.0989 * 39.81*200 = 8749.4418
Rounded to 8749

**Example 2 Energy Calculation:**
PCF of 1.0989
HV of 41.89
Vol of 200
1.0989 * 41.89* 200= 9206.5842
Rounded to 9207

**Example 3 Energy Calculation:**
Example 4 Hot Water Energy Calculation (except Wagga Wagga/Tamworth)
Method:

\[
\text{Energy} = (\text{Meter index difference}) \times \text{Multiplier} \times \text{Common Factor}
\]

Where:
- Meter index difference = difference between current and previous index reading
- Common factor = Master gas consumption (MJ) divided by Master water consumption (litres)

Example:

- Meter Index Difference = 1111
- Multiplier of 10.0
- Master gas consumption = 57544 MJ
- Master water consumption = 126190 litres
- Common factor = 57544 / 126190 = 0.4560107 rounded to 0.456011
- Energy (MJ) = 1111 x 10 x 0.45601 = 5066.28 rounded to 5066 MJ

Example 5 Hot Water Energy Calculation Wagga Wagga/Tamworth
Method:

\[
\text{Energy} = \text{Meter index difference} \times \text{PCF} \times \text{HV}
\]

Where:
- Meter index difference = difference between current and previous index reading
- PCF = pressure correction factor \times \text{Water conversion factor}
- Water conversion factor = Master gas consumption (M³) divided by Master/Total sub-hot water consumption (litres)
- HV = heating value

Example:

- Master gas consumption = 2547 M³
- Total sub-hot water consumption = 117786 litres
- Water conversion factor = 2547 / 117786 = 0.021623962100759 rounded to 0.0216
- PCF = 1.0989 x 0.0216 = 0.0238
- Meter Index Difference = 3800
- HV = 38.55
- Energy (MJ) = 3800 x 0.0238 x 38.55 = 3480.9792 rounded to 3481 MJ

(h) Schedule 2 of the Law includes further provisions applicable to the interpretation of these Procedures.
1.3 Gas Interface Protocol

1.3.1 Publication

AEMO must publish the Gas Interface Protocol, as amended from time to time.

1.3.2 Effect

AEMO and each Participant must comply with, and is bound by, the Gas Interface Protocol in respect of the provision of information, giving or delivery of notices or documents and making of requests, and the receipt of information, notices, documents or requests, as contemplated by these Procedures.

Note: The Gas Interface Protocol may provide for AEMO to communicate some information or notices by posting them on an electronic market information system or bulletin board.

1.3.3 Amendment

The Gas Interface Protocol may only be amended by AEMO undertaking one of the following consultative processes:

(a) the ordinary process for making Procedures under section 135EE of the Rules; or
(b) the expedited process for making Procedures under section 135EF of the Rules.

1.3.4 FRC HUB

(a) In accordance with the certification process (Gas FRC Business to Business connectivity Testing and System Certification) maintained and published by AEMO, AEMO and each Retailer and Network Operator must be certified as compliant by AEMO prior to using the FRC HUB for transactions specified in the Gas Interface Protocol.

(b) AEMO must maintain and publish FRC HUB Operational Terms and Conditions for the FRC HUB.

(c) AEMO, prior to implementing changes to the published FRC HUB Operational Terms and Conditions for the FRC HUB, must:

(i) provide Retailers and Network Operators with the proposed change to the FRC HUB Operational Terms and Conditions; and

(ii) allow a reasonable time to receive Retailer and Network Operator responses to the proposed change to the FRC HUB Operational Terms and Conditions.

(d) AEMO and each Retailer and Network Operator must comply with the FRC HUB Operational Terms and Conditions, as published by AEMO from time to time.

(e) A breach by a Retailer or Network Operator of the FRC HUB Operational Terms and Conditions, is taken to be a breach of these Procedures for the purposes of section 91MB of the Law.

(f) Where a Retailer or Network Operator uses the FRC HUB in breach of the FRC HUB Operational Terms and Conditions, then as soon as AEMO becomes aware of such breaches AEMO:

(i) must notify the Retailer or Network Operator of the breach; and

(ii) may take any action in relation to the breach, including issuing a direction to the Retailer or Network Operator under section 91MB(4)(b) of the Law to rectify the breach or to take specified measures to ensure future compliance (or both).

(g) Where a Retailer or Network Operator continues to use the FRC HUB in breach of the FRC HUB Operational Terms and Conditions after a notice of a breach under 1.3.4(f)(i) has been provided to the Retailer or Network Operator, and continued significant
breaches of the same nature are evident, then AEMO may treat the continued breach as a material breach of these Procedures and refer the matter to the AER in accordance with section 91MB(4)(c) of the Law.

1.3.5 Additional FRC HUB outages

(a) After consultation with affected Network Operators and Retailers, AEMO may determine an outage period during which the FRC HUB will not be available, in addition to the outages covered by the FRC HUB Operational Terms and Conditions and unplanned outages (an “additional FRC HUB outage”).

(b) AEMO must publish details of the additional FRC HUB outage at least 7 days before the outage commences.

(c) The published details of the additional FRC HUB outage must include any changes to any timing requirement set out in these Procedures that will apply during the outage.

1.4 Confidentiality

Unless these Procedures state otherwise, any information provided to AEMO or a Participant under these Procedures is classified as confidential information for the purposes of the Law and the Rules.

Note: Division 7, Part 6 of the Law and rule 138A of the Rules provides for the use and disclosure of confidential information.

1.5 Market Audit

(a) AEMO must undertake a review in accordance with this clause (“Review”) at least every two years.

(b) A Review must constitute an examination in accordance with the standard for a review specified in Auditing Standard ASAE 3000 (Explanatory Framework for Standards on Audit and Audit Related Services) (as varied from time to time) prepared by the Auditing and Assurance Standards Board.

(c) In undertaking a Review, AEMO must appoint a person (a “Market Auditor”) who in AEMO's reasonable opinion is independent and suitably qualified to conduct a Review.

(d) A Review must examine compliance by AEMO with its processes and the effectiveness and appropriateness of systems utilised in the operation of any activities as set out in or contemplated by these Procedures, including but not limited to:

   (i) AEMO’s compliance processes and compliance with the Procedures;

   (ii) IT controls, including software management and business continuity;

   (iii) integrity of the AEMO metering database;

   (iv) profiling and allocation processes and systems; and

   (v) retail billing and information systems.

(e) AEMO will determine, in consultation with Participants, the extent and scope of the Review to be undertaken.

(f) AEMO must ensure that the Market Auditor prepares a report in which the results of the Review are set out.

(g) AEMO must publish the report on its website and make it available to Participants on request.
CHAPTER 2. MIRNS AND DATABASES

2.1 Allocation of MIRNs
(a) AEMO must allocate to each Network Operator a set of numbers which are available for use as MIRNs for delivery points in that Network Operator’s network, and may allocate further sets of numbers for that purpose from time to time.

(b) Each number allocated by AEMO pursuant to paragraph (a) must be unique and must not be allocated by AEMO to any other Network Operator.

(c) Each Network Operator must assign one of the numbers allocated to it by AEMO to each delivery point in its network. The assignment must be effected by the relevant Network Operator recording that number in its metering database as the MIRN for the relevant delivery point.

(d) Each number assigned to a delivery point by a Network Operator must be unique and must not be allocated by that Network Operator to any other delivery point.

(e) To the extent it has been allocated sufficient numbers pursuant to paragraph (a), each Network Operator must assign one of those numbers, in accordance with paragraphs (c) and (d), to each new delivery point and, where applicable, notify any prospective FRO in accordance with the Gas Interface Protocol.

(f) Only one MIRN is to be allocated to a delivery point, even if there is more than one meter at that delivery point.

2.2 Network Operator Metering Database
(a) Each Network Operator must create, maintain and administer a metering database that includes the following information in respect of each delivery point in its network:

(i) the MIRN;

(ii) the delivery point’s discovery address and any other site address information specified in the Gas Interface Protocol;

(iii) the delivery point’s customer characterisation;

(iv) the delivery point’s meter reading frequency;

(v) the distribution tariff to which that delivery point is assigned;

(vi) the supply point(s) associated with the delivery point;

(vii) for each meter at a delivery point or associated supply point:

(A) the meter number of the current installed meter;

(B) the meter number of the previous installed meter(s), and the date and reason for each meter change;

(C) the next scheduled read date on which the meter is to be read;

(D) the network section in which it is located;

(E) the next known date (if any) on which a special read of the meter is to occur;

(F) the type of communication equipment (if any); and

(G) whether the meter is de-energised or disconnected.

(viii) for each meter reading undertaken during the previous 7 years:

(A) the date the meter reading was undertaken;
(B) the type of meter reading (validated actual by Network Operator, validated Customer-own read, estimated, or substituted);

(C) the meter reading; and

(D) if the meter reading is an estimated meter reading or substituted meter reading:
   (a) the date to which that estimated meter reading or substituted meter reading relates;
   (b) the reason for the estimated meter reading or substitution meter reading; and
   (c) the type of the approved estimation methodology or approved substitution methodology applied to obtain that meter reading.

(ix) in respect of each meter reading for a gas meter included in the metering database:
   (A) the flow;
   (B) the average heating value;
   (C) the pressure correction factor to be applied in respect of that flow; and
   (D) the consumed energy in MJ during that reading period;

(x) in respect of each meter reading for a hot water meter included in the metering database:
   (A) the water flow in litres during the period since the immediately preceding validated meter reading which is included in the metering database;
   (B) the common factor in MJ per litre applicable for that period as calculated in accordance with these Procedures; and
   (C) the consumed energy during that period;

(xi) in respect of each meter reading for an interval meter included in the metering database:
   (A) the flow during the relevant gas day;
   (B) the heating value for that gas day;
   (C) the pressure correction factor to be applied in respect of that flow; and
   (D) the consumed energy during that gas day.

(xii) any other attribute of a delivery point required to either meet or derive the attributes relevant to a Network Operator in the Gas Interface Protocol.

(b) Except as otherwise provided in clause 4.1 in relation to the period within which such information must be provided, each Network Operator must use its reasonable endeavours to ensure that the information required to be included in its metering database (other than meter data) is included in the metering database by midnight on the next business day after the day on which that information is obtained or calculated by the Network Operator.

(c) In relation to the period within which such information must be included in the metering database, each Network Operator must use its reasonable endeavours to ensure that the meter data required to be included in its metering database is included in that metering database by 5.00 pm on the next business day after the day on which that information is obtained or calculated by the Network Operator.
2.3 AEMO Metering Database

2.3.1 Database requirements

(a) AEMO must create, maintain and administer a metering database containing information for each delivery point.

(b) AEMO must ensure that the AEMO metering database holds at least the following current information on each delivery point:

(i) MIRN;
(ii) FRO;
(iii) default RoLR;
(iv) the network to which the delivery point is directly connected;
(v) network receipt point;
(vi) network section;
(vii) Network Operator;
(viii) whether the delivery point has an interval meter or a basic meter;
(ix) the meter reading frequency;
(x) the date the delivery point was first entered into the AEMO metering database;
(xi) the date on which the physical connection of the delivery point to the network became effective;
(xii) whether the delivery point is de-energised or disconnected if applicable;
(xiii) energy data provided to AEMO pursuant to Chapter 3; and
(xiv) transfer data provided to AEMO pursuant to Chapter 5 or Chapter 11.

(c) AEMO must ensure that the AEMO metering database contains all data determined by AEMO for the purposes of Chapter 8.

2.3.2 Use of Data

AEMO must use the information provided to AEMO from the metering database of each Network Operator for any purpose contemplated by these Procedures.

2.4 Metering Database Requirements

(a) AEMO and each Network Operator must use its reasonable endeavours to procure that information in its metering database is available to affected Participants in accordance with these Procedures.

(b) Data must be stored in the metering database for seven years in accessible format.

(c) Unless otherwise provided in these Procedures or required or permitted by law, the only persons entitled to request and receive metering data from the metering database in relation to a delivery point are:

(i) each User who is, or was at the time to which the relevant metering data relates, the FRO for that delivery point;
(ii) the Network Operator whose pipeline is connected to the meter at that delivery point; and
(iii) AEMO and its authorised agents.
CHAPTER 3. METERING

3.1 Meter Reading

3.1.1 Next Scheduled Read Date

(a) Each Network Operator must provide to the Retailer who is the FRO for a delivery point in its network, the next scheduled read date for a meter relating to that delivery point.

(b) A Retailer may request the relevant Network Operator to change the date of the next scheduled read date for a meter relating to a delivery point for which the Retailer is the FRO. However, the Network Operator is not required to make the requested change.

(c) A Network Operator must notify each Retailer who is the FRO for delivery points in its network of a change to the previously notified next scheduled read dates for a number of delivery points that represent a set, or multiple sets, of established meter reading schedules, as far as practicable prior to that change being made.

(d) A Network Operator must use its reasonable endeavours to read a meter at a delivery point in accordance with the scheduled read date or as otherwise agreed with the Retailer who is the FRO for the delivery point.

(e) If a Network Operator is unable to read the meters comprising a discrete route in accordance with a the scheduled read date, the Network Operator must use its reasonable endeavours to notify that failure to each Retailer who is a FRO for a delivery point to which such a meter relates by 5.00 pm on the 2nd business day after the day on which it was unable to read the meter.

3.1.2 Site Access Information

(a) Each User who is the FRO for a delivery point in a Network Operator’s network must use its reasonable endeavours to provide that Network Operator with details of any changes to any site access information in relation to the meter for that delivery point by 5.00 pm on the next business day after the day on which the User receives those details. Those details must be identified to the Network Operator by reference to the MIRN for the delivery point.

(b) Each Network Operator must use its reasonable endeavours to provide each User who is the FRO for a delivery point in its network with details of any changes to any site access information in relation to the meter for that delivery point by 5.00 pm on the next business day after the day on which the Network Operator receives those details. Those details must be identified to the User by reference to the MIRN for the delivery point.

3.1.3 Customer provided Meter Readings

If, following the failure by a Network Operator to read a meter, the Customer of a Retailer provides a Customer-own read:

(a) to its Retailer, the Retailer must use its reasonable endeavours to provide the Customer-own read to the Network Operator by 5.00 pm on the next business day after the day on which it was received from the Customer.

(b) to the Network Operator, the Network Operator must process the Customer-own read in accordance with clauses 3.5 and 3.6.

3.1.4 Special Reads

(a) A User may request a Network Operator to undertake a special read of a meter relating to a delivery point in that Network Operator’s network by delivering a special read request to the Network Operator. The special read request must nominate, as the day on which the special read is to be undertaken, a business day that is not less than 2 business days after the day on which the special read request is given to the Network Operator.
(b) The Network Operator must use its reasonable endeavours to undertake the special read on the nominated date.

3.1.5 Meter reading frequency

A Network Operator must use reasonable endeavours to collect metering data for each of the delivery points in its network in accordance with the following timeframes:

- (a) for daily metered delivery points – at 6.30 am each day;
- (b) for non-daily metered delivery points with meters read monthly – 31 days plus or minus 2 business days;
- (c) for non-daily metered delivery points with meters read every two months – 61 days plus or minus 1 business day; and
- (d) for non-daily metered delivery points with meters read quarterly – 91 days plus or minus 2 business days.

3.1.6 Metering data to be collected

A Network Operator must obtain at least the following data for each of the delivery points in its network:

- (a) for non-daily metered delivery points:
  - (i) meter number;
  - (ii) actual meter readings; and
  - (iii) total quantity of gas delivered, or estimated in accordance with clause 3.3 to have been delivered, to the delivery point stated in cubic metres and joules;
- (b) for daily metered delivery points, where available and in addition to the data set out in clause 3.1.6(a):
  - (i) hourly pressure and temperature data (unless otherwise agreed with the User);
  - (ii) hourly volumes;
  - (iii) compressibility calculations; and
  - (iv) on-site reading validation on a monthly/quarterly basis for delivery points without telemetry devices.

3.1.7 Treatment of multiple meters

- (a) A Network Operator must use reasonable endeavours to ensure that all meters at a non-daily metered delivery point are read on the same gas day.

- (b) The Network Operator must ensure that the applicable meter reading information for all meters relating to a delivery point is provided to the FRO for that delivery point at the same time.

- (c) For the purposes of the timeframes for providing meter reading information under this Chapter, where a delivery point includes a hot water meter, the information for all meters at the delivery point must be delivered within the timeframe applicable to the hot water meter.

3.2 Validation of Meter Readings

3.2.1 Approved Validation Methodology

A Network Operator must validate a meter reading for the purposes of these Procedures in accordance with an approved validation methodology.
3.2.2 Validation of Meter Readings

A Network Operator must ensure that meter readings are validated in accordance with an approved validation methodology before:

(a) the meter reading; or
(b) information calculated on the basis of the meter reading,

is provided to a FRO or AEMO.

3.3 Estimated Meter Readings

3.3.1 Approved Estimation Methodology

If a Network Operator is required to undertake an estimated meter reading for the purposes of these Procedures, the Network Operator must undertake that estimated meter reading in accordance with an approved estimation methodology.

3.3.2 Changes to Estimates

(a) The Retailer who is the FRO for a delivery point to which a meter relates may, at any time, request a Network Operator who has undertaken an estimated meter reading in relation to that meter for the purposes of these Procedures to change that estimate. The Network Operator may change that estimate if it reasonably considers the revised estimate to be more accurate.

(b) If a Network Operator changes an estimated meter reading, then the Network Operator must use its reasonable endeavours:

(i) to recalculate any flow and consumed energy calculated using the previous estimated meter reading;

(ii) to include the new estimated meter reading, flow and consumed energy in its metering database;

(iii) to provide the new estimated meter reading, flow and consumed energy to the FRO for the delivery point by 5.00 pm on the next business day after the day on which that estimated meter reading is changed; and

(iv) to provide the new consumed energy to AEMO in relation to each delivery point by midnight on the next business day after the day on which that estimated meter reading is changed.

3.3.3 Subsequent Actual Meter Reading

If a Network Operator obtains an actual meter reading that is a validated meter reading for a delivery point for which it has previously undertaken an estimated meter reading, the Network Operator must use its reasonable endeavours:

(a) to recalculate any flow and consumed energy that was calculated using the previous estimated meter reading;

(b) to include the actual meter reading and the new flow and consumed energy in its metering database;

(c) to provide the actual meter reading and the new flow and consumed energy to the FRO for the delivery point by 5.00 pm on the next business day after the day on which the meter was read; and

(d) to provide the new consumed energy to AEMO in relation to each delivery point by midnight on the next business day after the day on which the meter was read.
3.4 Substituted Meter Readings

3.4.1 Approved Substitution Methodology
A Network Operator must only undertake a substituted meter reading in accordance with, and in the circumstances specified in, an approved substitution methodology. The approved substitution methodology must specify the criteria which must be satisfied before that methodology may be applied.

3.4.2 Changes to Substitutes
(a) The User who is the FRO for a delivery point to which a meter relates may, at any time, request a Network Operator who has undertaken a substituted meter reading in relation to that meter for the purposes of these Procedures to change that substitute. The Network Operator may change that substitute if it reasonably considers the revised substitute to be more accurate.

(b) If a Network Operator changes a substituted meter reading, then the Network Operator must use its reasonable endeavours:
   (i) to recalculate any flow and consumed energy that was calculated using a previous substituted meter reading;
   (ii) to include the new substituted meter reading, flow and consumed energy in its metering database;
   (iii) to provide the new substituted meter reading, flow and consumed energy to the FRO for the delivery point by 5.00 pm on the next business day after the day on which that substituted meter reading is changed; and
   (iv) to provide the new consumed energy to AEMO in relation to each delivery point by midnight on the next business day after the day on which that substituted meter reading is changed.

3.5 Provision of Meter Reading Information

3.5.1 General Meter Readings
(a) Subject to clause 3.1.7(c) and clause 4.1, a Network Operator must comply with the applicable requirements of this clause 3.5.1 for the provision of information to the FRO for a delivery point in the Network Operator's network in respect of each meter for the delivery point (identified by reference to its MIRN).

(b) Where the Network Operator has read the meter in accordance with a scheduled read date and the actual meter reading is a validated meter reading, the Network Operator must use its reasonable endeavours to provide the FRO with the following information:
   (i) the day on which the meter was read
   (ii) the next scheduled read date; and
   (iii) the validated meter reading for that meter,
   by 5.00 pm on the next business day after the day on which a gas meter was read, or by 5.00 pm on the 4th business day after the day on which a hot water meter was read;

(c) Where the Network Operator has read the meter in accordance with a scheduled read date but the actual meter reading is not a validated meter reading, the Network Operator must:
   (i) undertake an estimated meter reading as at that date in accordance with clause 3.3; and
(ii) use its reasonable endeavours to provide the FRO with the following information:

(A) the next scheduled read date;

(B) the estimated meter reading (identified as such) for that meter;

(C) the details of the approved estimation methodology applied to obtain that estimated meter reading; and

(D) the reason for the actual meter reading not being a validated meter reading, by 5.00 pm on the 2nd business day after the day on which a gas meter was read or by 5.00 pm on the 5th business day after the day on which a hot water meter was read.

d) Where the Network Operator has been unable to read the meter on a scheduled read date, the Network Operator must:

(i) undertake an estimated meter reading as at the scheduled read date in accordance with clause 3.3; and

(ii) use its reasonable endeavours to provide the FRO with the following information:

(A) the next scheduled read date;

(B) the estimated meter reading (identified as such) for that meter;

(C) the details of the approved estimation methodology applied to obtain that estimated meter reading; and

(D) the reason for the Network Operator not being able to read the meter, by 5.00 pm on the 2nd business day after the scheduled read date for a gas meter or by 5.00 pm on the 5th business day after the scheduled read date for a hot water meter.

e) Where the Network Operator has been unable to obtain a validated meter reading on a scheduled read date, the Network Operator must use its reasonable endeavours to provide the FRO with the following information:

(i) the day on which the meter was read;

(ii) the next scheduled read date; and

(iii) the validated meter reading for that meter, by 5.00 pm on the 2nd business day after the day on which a gas meter was read or by 5.00 pm on the 5th business day on which a hot water meter was read.

(f) Where the Network Operator has been provided a Customer-own read by the FRO or the Customer, and the Network Operator reasonably considers the Customer-own read to be accurate, the Network Operator must use its reasonable endeavours to provide the FRO with the following information:

(i) the day on which the meter was read;

(ii) the next scheduled read date;

(iii) the validated meter reading for that meter; and

(iv) a flag indicating that the reading was a Customer-own read, by 5.00 pm on the next business day after the day on which the Customer-own read for a gas meter was validated by the Network Operator or by 5.00 pm on the 5th business day after the day on which the Customer-own read for a hot water meter was received by the Network Operator.
(g) Where the Network Operator has undertaken a special read of the meter that was requested by the FRO for the delivery point to which that meter relates, and the actual meter reading is a validated meter reading, the Network Operator must use its reasonable endeavours to provide the FRO with the following information:

(i) the day on which the meter was read;
(ii) the next scheduled read date; and
(iii) the validated meter reading for that meter,

by 5.00 pm on the next business day after the day on which a gas meter was read or by 5.00 pm on the 4th business day after the day on which a hot water meter was read.

(h) Where:

(i) the Network Operator has undertaken a special read of the meter, but the actual meter reading is not a validated meter reading; or

(ii) the Network Operator has been unable to read the meter on a special read date,

the Network Operator must use its reasonable endeavours to notify the User who requested the special read of that fact (and the reason for it), and to specify the next day on which a special read of that meter can be undertaken by the Network Operator, by 5.00 pm on the next business day after the special read date*.

(i) Where the Network Operator has substituted a meter reading in accordance with an approved substitution methodology, the Network Operator must use its reasonable endeavours to provide the FRO with the following information:

(i) the date to which the substituted meter reading pertains;
(ii) the substituted meter reading (identified as such) for that meter;
(iii) the next scheduled read date; and
(iv) details of the approved substitution methodology applied to obtain that substituted meter reading,

by 5.00 pm on the next business day after the day on which the substituted meter reading was calculated.

3.5.2 Meter Reading on Transfer Request

(a) Subject to clause 3.1.7(c) and clause 4.1, where AEMO has notified a Network Operator of a transfer request or an alternative transfer date notice under clause 6.7, the Network Operator must comply with the applicable requirements in this clause 3.5.2 for the provision of information to AEMO in respect of each meter for the delivery point to which the relevant transfer request relates (identified by reference to the MIRN for that delivery point).

(b) Where the Network Operator has obtained a validated meter reading during the allowable period in relation to the relevant transfer request, and the meter reading is an actual meter reading on a scheduled read date during the allowable period in relation to the relevant transfer request, the Network Operator must use its reasonable endeavours to provide to AEMO the following information:

(i) the dates of that validated meter reading and the immediately preceding validated meter reading; and
(ii) the consumed energy for that reading period,

* For the avoidance of doubt, nothing in this clause requires the Network Operator to attempt to read the meter on a specified day unless the relevant Retailer nominates that day for that purpose in a special read request, in which case clause 3.3.3 will apply.
by midnight on the next business day after the day on which a gas meter was read or by midnight on the 4th business day after the day on which a hot water meter was read;

(c) Where the Network Operator has obtained a validated meter reading during the allowable period in relation to the relevant transfer request, and the meter reading is an estimated meter reading, a substituted meter reading or an actual meter reading other than on a scheduled read date, the Network Operator must use its reasonable endeavours to provide to AEMO the following information:

(i) the dates of that validated meter reading and the immediately preceding validated meter reading;

(ii) the consumed energy for that reading period; and

(iii) if relevant, a flag indicating that the reading was a Customer-own read,

by midnight on the 2nd business day after the day on which a gas meter was read or by midnight on the 5th business day after the day on which a hot water meter was read.

3.5.3 Meter Reading on Registration

Where AEMO delivers a registration notice in respect of a delivery point under clause 6.8 or clause 11.7 to the relevant Network Operator, that Network Operator must use its reasonable endeavours to:

(a) provide to the User that has been registered as the FRO for the delivery point the validated meter reading referred to in clause 3.5.2 (excluding base reading, flow, consumed energy and the average heating value used to calculate the consumed energy) (whether that reading was obtained from a special read of the meter or as a result of a read conducted on a scheduled read date); and

(b) in relation to a registration notice under clause 6.8 only, provide to the person who was the FRO for that delivery point immediately prior to the registration of the new FRO, the validated meter reading referred to in clause 3.5.2 (where that reading was obtained from a special read of the meter),

by 5.00 pm on the next business day after the day on which the Network Operator receives the registration notice.

3.5.4 Historical Information

(a) Subject to paragraph (b), a Network Operator must use its reasonable endeavours to provide to the FRO for a delivery point in its network such information from its metering database in respect of that delivery point and the meter for that delivery point (other than information in relation to any special read requested by a person other than the FRO for that delivery point) as the FRO requests, as follows:

(i) if the request pertains to a time that is not more than 2 years prior to the day on which the request is delivered to the Network Operator, by 5.00 pm on the 5th business day after the day on which the request is delivered to the Network Operator;

(ii) if the request pertains to a time that is between 2 and 7 years prior to the day on which the request is delivered to the Network Operator, by 5.00 pm on the 10th business day after the day on which the request is delivered to the Network Operator; and

(iii) in either case, that information must be identified to the FRO by reference to the MIRN for the relevant delivery point.

(b) Subject to paragraph (c), the FRO for a delivery point may only request information from a Network Operator that relates to a period during which that FRO was registered as the FRO for that delivery point in the AEMO metering database.
(c) If the relevant Customer has consented, a Retailer is entitled to request and receive historical data relating to a Customer who has transferred to that Retailer in relation to the period prior to the date on which the Customer transferred to that Retailer.

(d) A Network Operator must use its reasonable endeavours to provide to AEMO such information from its metering database in respect of a delivery point and the meter relating to that delivery point as AEMO requests, as follows:

(i) if the request pertains to a time that is not more than two years prior to the day on which the request is delivered to the Network Operator, by 5.00 pm on the 5th business day after the day on which the request is delivered to the Network Operator;  

(ii) if the request pertains to a time that is between two and seven years prior to the day on which the request is delivered to the Network Operator, by 5.00 pm on the 10th business day after the day on which the request is delivered to the Network Operator; and

(iii) in either case, that information must be identified to AEMO by reference to the MIRN for the relevant delivery point.

3.6 Calculation and Provision of Energy Data

3.6.1 Heating Values

(a) The average heating value for a reading period is to be calculated by the Network Operator as the average, over the reading period, of the daily heating value applicable to a delivery point. Where the heating value for a day is not available, the Network Operator must use the heating value for the previous day.

(b) The Network Operator must use reasonable endeavours to provide the applicable daily heating values to AEMO for a gas day by 1.30 pm on the next day.

(c) AEMO must use reasonable endeavours to publish the daily heating values for the gas day by 5.00 pm on the next day.

3.6.2 Calculation of Energy Data – Non-daily Metered Gas

For gas meters at non-daily metered delivery points, where a Network Operator has obtained or made a validated meter reading (the “reference reading”), the Network Operator must calculate the consumed energy in relation to that meter during the reading period commencing on the date of the immediately preceding validated meter reading for that meter in its metering database (the “base reading”) and expiring on the date of the reference reading as follows:

(a) the Network Operator must calculate the flow during that reading period on the basis of the reference reading and the base reading;

(b) where the meter is calibrated in imperial units the Network Operator must convert the flow to metric units;

(c) the Network Operator must apply the applicable pressure correction factor to that flow; and

(d) the Network Operator must apply the average heating value for the reading period to the pressure corrected flow so as to obtain the consumed energy in relation to that meter during that reading period.

3.6.3 Calculation of Energy Data – Daily Metered Gas

For gas meters at daily metered delivery points, where a Network Operator has obtained or made a validated meter reading, the Network Operator must calculate the consumed energy in relation to each gas meter during each gas day as follows:
(a) If the meter records only uncorrected flow, the Network Operator convert the uncorrected flow to corrected flow in each gas day using the applicable pressure correction factor;

(b) If the meter records corrected flow the Network Operator must use the corrected flow in each gas day obtained from the meter;

(c) where the meter is calibrated in imperial units the Network Operator must convert the corrected flow to metric units; and

(d) the Network Operator must apply the daily heating value for the delivery point for the gas day to the corrected flow so as to obtain the consumed energy in relation to that meter on each gas day.

3.6.4 Calculation of Energy Data – Hot Water Meters

For hot water meters, where a Network Operator has obtained or made a validated meter reading (the reference reading), the Network Operator must calculate the volume of hot water consumed during the reading period commencing on the date of the immediately preceding validated meter reading for that hot water meter which is included in its metering database (the base reading) and expiring on the date of the reference reading as follows:

(a) the Network Operator must calculate the volume of hot water used during that reading period on the basis of the reference reading and the base reading;

(b) where the hot water meter is calibrated in imperial units the Network Operator must convert the volume of hot water to litres;

(c) the Network Operator must calculate the common factor applicable to that delivery point; and

(d) the Network Operator must apply the common factor for the reading period to the volume of hot water so as to obtain the consumed energy in relation to that hot water meter during that reading period.

3.6.5 Provision of Energy Data to FRO

(a) Subject to clause 3.1.7(c) and clause 4.1 in relation to the period within which such information must be provided, a Network Operator must use its reasonable endeavours to provide to the FRO for the delivery point to which a meter relates (unless the reference reading was obtained from a special read of the meter requested by a person other than the FRO for that delivery point):

(i) the MIRN for the delivery point;

(ii) the meter type (gas meter or hot water meter);

(iii) the meter number for the meter;

(iv) the flow used to calculate the consumed energy, together with:

(A) the reference reading and the base reading used to calculate the flow (identified as being actual meter readings, estimated meter readings or substituted meter readings as the case may be); and

(B) the dates on which those meter readings were obtained or made;

(v) the pressure correction factor, the common factor (if applicable) and the average heating value used to calculate the consumed energy; and

(vi) the consumed energy,

by the applicable time below:

(A) where the meter reading was a validated meter reading by the Network Operator, 5.00 pm on the next business day after the day on which a gas
meter was read or 5.00 pm on the 4th business day after the day on which a hot water meter was read; or

(B) where the meter reading was a validated meter reading provided by the FRO to the Network Operator, 5.00 pm on the next business day after the day on which the FRO provided a gas meter reading, or 5.00 pm on the 4th business day after the FRO provided a hot water meter reading; or

(C) where the Network Operator has been unable to obtain a validated meter reading in accordance with a scheduled read date, 5.00 pm on the 2nd business day after that scheduled read date for a gas meter or 5.00 pm on the 5th business day after that scheduled read date for a hot water meter; or

(D) where the meter reading was an estimated meter reading or a substituted meter reading, 5.00 pm on the 2nd business day after the scheduled read date for a gas meter or 5.00 pm on the 5th business day after that scheduled read date for a hot water meter.

(b) Where AEMO delivers a registration notice in respect of a delivery point under clause 6.8 or clause 11.7 to the relevant Network Operator, that Network Operator must use its reasonable endeavours to:

(i) provide to the User that has been registered as the FRO for the delivery point the information referred to in paragraph (a) (excluding base reading, flow, consumed energy and the average heating value used to calculate the consumed energy) in respect of the validated meter reading referred to in 3.5.2, which validated meter reading is the reference reading for the purposes of this clause 3.6.5 (whether that reading was obtained from a special read of the meter or as a result of a read conducted on a scheduled read date); and

(ii) in relation to a registration notice under clause 6.8 only, provide to the person who was the FRO for that delivery point immediately prior to the registration of the new FRO the information referred to in paragraph (a) in respect of the validated meter reading referred to in clause 3.5.2(b), which validated meter reading is the reference reading for the purposes of this clause 3.6.5 (where that reading was obtained from a special read of the meter), by 5.00 pm on the next business day after the day on which the Network Operator receives the registration notice.

(c) Where the Network Operator has provided any of the information referred to in paragraphs (a) or (b) to the FRO for a delivery point pursuant to clause 3.5, the Network Operator will have satisfied the relevant obligation under this clause 3.6.5 by providing the corresponding information under clause 3.5.

3.6.6 Provision of Energy Data to AEMO

(a) In respect of all non-daily metered delivery points, the Network Operator must provide to AEMO a consumed energy value based on a validated meter reading at least twice within any 12 month period.

(b) A Network Operator must provide the following data to AEMO for each delivery point in its network within the timeframes specified in this clause:

(i) MIRN;

(ii) MIRN checksum;

(iii) aggregated consumed energy data;

(iv) whether the delivery point meter is a basic meter or an interval meter;

(v) for a non-daily metered delivery point, the meter reading frequency;
(vi) start date of the period to which the consumed energy data relates; and
(vii) end date of the period to which the consumed energy data relates.

(c) In respect of daily metered delivery points, the Network Operator must:

(i) if the delivery point is on an STTM network section, use reasonable endeavours to provide the data specified in paragraph (b) by 9.30 am on the day of the meter read; or

(ii) otherwise, provide that data by 12.00 noon on the day of the meter read.

(d) In respect of non-daily metered delivery points, subject to clause 3.1.7(c) and clause 4.1, the Network Operator must use reasonable endeavours to provide the data specified in paragraph (b) by:

(i) where the meter reading was a validated meter reading, 5.00 pm on the next business day after the day on which a gas meter was read or 5.00 pm on the 4th business day after the day on which a hot water meter was read; or

(ii) where the meter reading was a validated meter reading provided by the FRO, 5.00 pm on the next business day after the day on which the FRO provided a gas meter reading, or 5.00 pm on the 4th business day after the day on which the FRO provided a hot water meter reading; or

(iii) where the meter reading was an estimated meter reading or a substituted meter reading, 5.00 pm on the 2nd business day after the scheduled read date for a gas meter or 5.00 pm on the 5th business day after the scheduled read date for a hot water meter.

(e) Where the Network Operator has provided any of the information referred to in paragraph (b) to AEMO in respect of a delivery point pursuant to clause 3.5, the Network Operator will have satisfied its obligations under this clause 3.6.6 by providing the corresponding information under clause 3.5.

3.6.7 Energy Data required by AEMO

(a) AEMO must, at least once every 3 months, use its reasonable endeavours to review all information received by it from each Network Operator pursuant to clause 3.6 for the purpose of determining whether it has been provided with all of the information which each Network Operator is required to provide.

(b) If that review reveals that a Network Operator has not provided to AEMO all of the information which the Network Operator is required to provide pursuant to clause 3.6, AEMO must notify the Network Operator as soon as practicable and the Network Operator must use its reasonable endeavours to provide the relevant information to AEMO by 5.00 pm on the next business day after the day on which AEMO gives that notice to the Network Operator.

3.6.8 AEMO to validate meter read transaction

(a) AEMO must validate the data provided to it under clause 3.6.6 by confirming each of the following matters:

(i) that the start date for the consumed energy data is the day immediately after the end date provided for the energy value data last provided to AEMO in relation to that delivery point;

(ii) in relation to consumed energy data provided for a non-daily metered delivery point, that the start date is earlier than the end date;

(iii) that the start and end dates for the consumed energy data provided for a daily metered delivery point are the same;
(iv) that the relevant delivery point was not de-energised or disconnected at any time in the period between the start date and end date;

(v) that, in the case of the first consumed energy data provided for a new delivery point, the start date for the consumed energy data is the date of installation of the meter;

(vi) that the Network Operator is the Network Operator recorded in AEMO’s metering database for that delivery point;

(vii) that either:

(A) the consumed energy provided for a non-daily metered delivery point in a network section is within the relevant consumed energy validation range for determined by AEMO under clause 3.6.10; or

(B) no consumed energy validation range has been determined by AEMO under clause 3.6.10 for non-daily metered delivery points in the relevant network section; and

(viii) that either:

(A) the consumed energy provided for a daily metered delivery point in a network section is within the relevant consumed energy validation range determined by AEMO under clause 3.6.10; or

(B) no consumed energy validation range has been determined by AEMO under clause 3.6.10 for daily metered delivery points in the relevant network section.

(b) If AEMO cannot confirm any of the matters listed in paragraph (a) then the data provided under clause 3.6.6 will be rejected.

(c) If:

(i) the data provided under clause 3.6.6 is rejected because AEMO is unable to confirm the matters in paragraph (a)(vii) or (viii); and

(ii) the relevant Network Operator confirms in writing to AEMO that the consumed energy provided by it is correct,

then AEMO may accept that consumed energy data notwithstanding paragraph (b) provided that AEMO can confirm the matters listed in paragraph (a)(i) to (vi) (inclusive) in relation to that data.

3.6.9 Replacement of energy value data by AEMO

(a) If AEMO is provided with consumed energy data for a delivery point that has the same reading period as consumed energy data already provided to AEMO in relation to that delivery point, it will replace the recorded consumed energy data with the new consumed energy data provided for that reading period. Any other consumed energy data recorded for that delivery point will remain unchanged.

(b) If AEMO is provided with consumed energy data for a delivery point that has the same start date but a different end date as consumed energy data already provided to AEMO in relation to that delivery point, then:

(i) the new consumed energy data will replace the recorded consumed energy data with the same start date; and

(ii) all consumed energy data recorded for that delivery point with start dates or end dates that fall chronologically after the start date for the new consumed energy data will be deleted from AEMO’s records.
3.6.10 AEMO to set consumed energy validation ranges

(a) AEMO may in respect of each network section determine and notify Participants of a consumed energy validation range (stated in joules) for all daily metered and all non-daily metered delivery points in that network section. The consumed energy validation range determined by AEMO must be the positive and negative values of one absolute consumed energy value. The consumed energy validation range will be used by AEMO for validation purposes under clause 3.6.8(a)(vii) and 3.6.8(a)(viii).

(b) AEMO must ensure that at any time there is an appropriate industry approved methodology for determining appropriate consumed energy validation ranges under this clause.

3.7 Data Change

3.7.1 Request for Verification

The FRO for a delivery point may request the relevant Network Operator to verify specified information provided by the Network Operator to the FRO under these Procedures in relation to a meter at that delivery point.

3.7.2 Network Operator to Verify Information

(a) The Network Operator must, as soon as reasonably practicable, verify the information specified by a FRO under clause 3.7.1 in any manner it considers appropriate (including by way of a special read), and must use its reasonable endeavours to provide the results of that verification (together with details of the method by which that specified information was verified) to the FRO by 5.00 pm on the next business day after the day on which the verification is concluded.

(b) If the verification reveals that the specified information is materially incorrect, the Network Operator must use its reasonable endeavours:

(i) to make such changes to the information included in its metering database as are necessary to correct that information;

(ii) to provide the changed information under paragraph (i) to the FRO by 5.00 pm on the next business day after the day on which the verification is concluded; and

(iii) to provide the changed information to AEMO by midnight on the next business day after the day on which the verification is concluded, where that information is required by AEMO under these Procedures.
CHAPTER 4. METER MANAGEMENT

4.1 Basic Meter Installation

(a) If a User requests a Network Operator to install a new basic meter for a delivery point in that Network Operator’s network, the Network Operator must install that new basic meter as soon as reasonably practicable, subject to satisfaction of any prerequisites for the installation of the basic meter under applicable laws.

(b) If a User requests a replacement basic meter (including by reason of a fault, malfunction or defect in relation to the existing basic meter or the existing basic meter having been damaged or destroyed), the Network Operator must install the replacement basic meter as soon as reasonably practicable after it has satisfied itself that the existing meter no longer complies with the requirements of any applicable laws.

(c) The Network Operator must comply with clause 4.2(a)(i) in relation to the meter (if any) which an installed basic meter replaces.

(d) The Network Operator must read the basic meter on the date of its installation.

(e) Where a new basic meter or replacement basic meter has been installed by a Network Operator, the Network Operator must use its reasonable endeavours:

(i) to include the relevant details relating to the new basic meter in its metering database;

(ii) to provide to the User that requested the installation of a new basic meter details of the MIRN for the delivery point to which the meter relates, together with the actual meter readings obtained under paragraphs (c) and (d) (or, where appropriate, a substituted meter reading) and such other information for Customer account establishment and billing purposes as is specified in the Gas Interface Protocol, to the User for that delivery point; and

(iii) to provide to AEMO all the relevant details which are required for the purposes of updating the AEMO metering database, by 5.00 pm on the 5th business day after the day on which the new basic meter is installed.

4.2 De-energising or Disconnecting Basic Meters

(a) Where a Network Operator de-energises or disconnects a basic meter relating to a delivery point in its network, the Network Operator must:

(i) on the date of de-energisation or disconnection, read that meter; and

(ii) use its reasonable endeavours:

(A) to include the relevant details relating to the basic meter in its metering database (and to make such changes to the details included in that database as are necessitated by the de-energisation or disconnection of that basic meter);

(B) to provide to the FRO for that delivery point the actual meter reading obtained under paragraph (a)(i) (or, where appropriate, a substituted meter reading) and notice that the meter has been de-energised or disconnected; and

(C) to provide to AEMO the information referred to in clause 3.6.6 in respect of the meter reading referred to in paragraph (B) (which is the reference reading for the purposes of clause 3.6.2), and notice that the meter has been de-energised or disconnected,
(b) Where, in accordance with its legal rights and obligations, a User de-energises or disconnects a basic meter relating to a delivery point for which it is the FRO, the User must:

(i) on the date of de-energisation or disconnection, read that meter; and

(ii) use its reasonable endeavours to provide the following information to the relevant Network Operator:

(A) the date on which the meter was de-energised or disconnected; and;

(B) the meter reading obtained on that date,

by 5.00 pm on the next business day after the day on which the meter is read.

(c) As soon as reasonably practicable after receiving information from a User under paragraph (b)(ii), the relevant Network Operator must update its metering database to reflect that information.

4.3 Meter Upgrade or Downgrade

(a) A User who is the FRO for a delivery point in a Network Operator’s network may request that Network Operator to:

(i) upgrade a basic meter at that delivery point to an interval meter; or

(ii) downgrade an interval meter at that delivery point to a basic meter.

(b) The Network Operator must use reasonable endeavours to complete an upgrade to an interval meter or downgrade to a basic meter as requested under paragraph (a) within 40 business days after the day on which that request was delivered to the Network Operator.

(c) Where a basic meter is upgraded to an interval meter by a Network Operator, the Network Operator must use its reasonable endeavours:

(i) to provide to AEMO all the relevant details relating to the interval meter which are required for the purposes of updating the AEMO metering database by 5.00 pm on the 2nd business day after the day on which the meter is to be upgraded; and

(ii) to include the relevant details relating to the interval meter in its metering database by 5.00pm on the 5th business day after the day on which the meter was upgraded; and

(d) Where an interval meter is downgraded to a basic meter by a Network Operator, the Network Operator must use its reasonable endeavours:

(i) to provide to AEMO all the relevant details relating to the basic meter which are required for the purposes of updating the AEMO metering database by 5.00 pm on the 2nd business day after the day on which the meter is to be downgraded; and

(ii) to include the relevant details relating to the basic meter in its metering database by 5.00 pm on the 5th business day after the day on which the meter was downgraded.

4.4 Time Expired Meters

If a Network Operator identifies a class of basic meters that is required to be replaced on the basis of having reached the life expectancy of that class of meter the Network Operator must:

(a) notify each FRO for a delivery point to which a meter which is a member of that class relates of its intention to replace all meters in that class;
(b) ensure that the meters to be replaced will be replaced by meters which comply with any applicable laws; and

(c) remove the meters requiring replacement and install the replacement meters in accordance with clauses 4.2 and 4.1 (as if the User had requested the installation of the replacement meter) respectively.

4.5 Deregistration of Delivery Points

If a Network Operator deregisters a delivery point in its network, the Network Operator must use its reasonable endeavours to notify both the FRO for that delivery point, and AEMO, of the date of the deregistration by 5.00 pm on the next business day after the day on which the delivery point is deregistered.
CHAPTER 5.  MIRN DISCOVERY PROCESS

5.1 MIRN Discovery Requests

5.1.1 Request

Subject to clause 5.1.2(a), any User or AEMO may deliver a MIRN discovery request in relation to a delivery point to a Network Operator. A MIRN discovery request as is specified in the Gas Interface Protocol must include at least the MIRN or the mandatory components of the discovery address for the delivery point to which the MIRN discovery request relates.

5.1.2 Explicit informed consent

(a) A User must not deliver a MIRN discovery request in relation to a delivery point to a Network Operator unless the User has received the explicit informed consent of the Customer to the provision by the Network Operator to that User of the information referred to in a MIRN discovery response in respect of that delivery point.

(b) A User who delivers a MIRN discovery request in relation to a delivery point to a Network Operator is taken to have represented to the Network Operator that the User has received the explicit informed consent of the Customer to the provision by the Network Operator to that User of the information referred to in a MIRN discovery response in respect of that delivery point.

(c) AEMO is not required to obtain the explicit informed consent of the Customer in relation to a delivery point to the provision by the Network Operator to AEMO of the information relating to that delivery point which is referred to in a MIRN discovery response.

5.2 Response to MIRN Discovery Requests

5.2.1 Street/Suburb Combination Listing

(a) Each Network Operator must make available in an electronic form, which can be electronically searched remotely by all Users and AEMO, a listing (which complies with paragraph (b)) of every street/suburb combination that is recorded in the metering database of that Network Operator.

(b) The entry relating to each street/suburb combination in the listing must exactly replicate the mandatory components of the discovery address (other than the street number or its equivalent) as it is recorded in the metering database of the relevant Network Operator, including without limitation:

(i) any abbreviations contained in the corresponding entry in the metering database (e.g. St, Str, Ave, Rd);

(ii) any capital and lower case letters contained in the corresponding entry in the metering database (e.g. Morrison road, mcgowan Street);

(iii) any spaces contained in the corresponding entry in the metering database (e.g. Deep Street, Bella Vista, Bell avista); and

(iv) any misspellings contained in the corresponding entry in the metering database (e.g. Belavista , Bella-vista),

provided however that the listing is not required to include an entry which, if it were so included, would exactly replicate an existing entry in that listing.

(c) The relevant Network Operator must ensure that:

(i) at least once every calendar month, the information required to be included in the listing referred to in paragraph (a) is updated, so that the listing contains the details
of every street/suburb combination in respect of which a discovery address is recorded in the metering database of that Network Operator; and

(ii) the listing specifies the most recent date on which it was so updated.

(d) If a Retailer or a Network Operator becomes aware of a change to the details of a discovery address:

(i) the Retailer must use its reasonable endeavours to provide the changed details to the Network Operator in whose network the delivery point for that discovery address is located; and

(ii) the Network Operator must use its reasonable endeavours to provide the changed details to the Retailer who is the FRO for the delivery point for that discovery address, as soon as practicable after becoming aware of the change.

(e) The relevant Network Operator must:

(i) ensure that where there has been an addition to existing street identifiers in the Network Operator’s street/suburb combination listing that this new street identifier is added to the aseXML Schema using the agreed industry change procedure for the management of aseXML enumerated lists.

(ii) where there has been an update to the enumerated list provide a notice via the FRC HUB broadcast email distribution list that an addition to the list has been implemented.

5.2.2 Complete MIRN Listing

(a) Each Network Operator must use its reasonable endeavours to update, format and deliver a new complete MIRN listing in accordance with the Gas Interface Protocol which is to be made available to AEMO by 5.00 pm on the 8th business day after the end of the calendar month or as otherwise agreed from time to time by all relevant parties.

(b) AEMO must make each complete MIRN listing available to all Retailers after it is received from the Network Operator.

(c) A Retailer must ensure that the complete MIRN listing is accessed and used solely to confirm the relevant discovery address and/or MIRN details of a Customer.

(d) A Retailer must ensure that the relevant Customer has provided explicit informed consent to access and use the complete MIRN listing to confirm the relevant discovery address and/or MIRN details of the Customer in relation to the delivery point.

5.2.3 Network Operator Response

(a) Provided that the discovery address or the MIRN (if any) specified in the MIRN discovery request exactly replicates (in the sense that term is used in clause 5.2.1(b)) a discovery address, or corresponds with a MIRN, contained in the metering database of the relevant Network Operator, the Network Operator must use its reasonable endeavours to provide to the Retailer or AEMO (as the case may be), the following information in respect of the delivery point to which that discovery address or MIRN relates (such information being identified by reference to that discovery address or MIRN):

(i) by midnight on the next business day after the day on which the MIRN discovery request is delivered to the Network Operator, the current information set out in clauses 2.2(a)(i) to 2.2(a)(vii); and

(ii) by midnight on the 2nd business day after the day on which the transfer error correction request notification was delivered to it, any other information required in accordance with the Gas Interface Protocol.
(b) Provided that the discovery address specified in the MIRN discovery request exactly replicates (in the sense that term is used in clause 5.2.1(b)) a discovery address, of multiple MIRNs contained in the metering database of the relevant Network Operator, the Network Operator must use its reasonable endeavours to provide to the Retailer or AEMO (as the case may be), by midnight on the next business day after the day on which the MIRN discovery request is delivered to the Network Operator, the current information set out in clauses 2.2(a)(i), 2.2(a)(ii) and 2.2(a)(vii)(A) in respect of up to the first 99 delivery points to which that discovery address relates (such information being identified by reference to that discovery address). If there are 100 or more MIRNs contained in the metering database of the relevant Network Operator with a matching discovery address, then the Network Operator must also advise the Retailer or AEMO (as the case may be) of this fact.

(c) If the discovery address or the MIRN (if any) specified in a MIRN discovery request does not exactly replicate (in the sense that term is used in clause 5.2.1(b)) a discovery address, or correspond with a MIRN, contained in the metering database of the relevant Network Operator, the Network Operator must use its reasonable endeavours to notify the Retailer or AEMO (as the case may be) of that fact by midnight on the next business day after the day on which the MIRN discovery request is delivered to the Network Operator.

5.3 Assistance in Searching

(a) If, pursuant to clause 5.2.3(c), a Retailer or AEMO is notified that the discovery address or MIRN relating to the delivery point in respect of which a MIRN discovery request has been made cannot be found in the metering database of the relevant Network Operator, the Retailer or AEMO (as the case may be) may request that the Network Operator assist in the location of that discovery address or MIRN in that metering database, in which case the Network Operator must use its reasonable endeavours to provide that assistance:

(i) where the request for assistance is made before midday on a day that is a business day – by 5.00 pm on that business day; and

(ii) where the request for assistance is made on or after midday on a day that is a business day, or is made on a day that is not a business day – by 5.00 pm on the next business day after the day on which the request is made.

(b) For the avoidance of doubt, paragraph (a) only requires the Network Operator to use its reasonable endeavours to assist the Retailer or AEMO to obtain the discovery address or MIRN relating to the relevant delivery point, for the purposes of enabling the Retailer or AEMO to make a further MIRN discovery request in relation to that delivery point.
CHAPTER 6. CUSTOMER TRANSFER PROCESS

6.1 Preconditions for Transfers

6.1.1 Register of Authorised Delivery Points

(a) AEMO must maintain a register of network sections in which each User is entitled to take delivery of gas at delivery points.

(b) The Network Operator must advise AEMO of the Users who hold all necessary rights to take delivery of gas at delivery points in a network section.

(c) The Network Operator must advise AEMO prior to the date on which a User becomes, or ceases to become, entitled to take delivery of gas at delivery points in a network section.

6.1.2 Unauthorised Transfer Requests

A User must use reasonable endeavours not to submit a transfer request relating to a delivery point unless it holds all necessary rights to take delivery of gas from the network at that delivery point.

6.1.3 Withdrawal of Prohibited Transfer Requests

A User must withdraw any transfer request submitted in circumstances where it does not hold the necessary rights under clause 6.1.2 as soon as practicable.

6.1.4 Termination of Transfer Process

AEMO must cease processing a transfer request relating to a delivery point to which the User that submitted the request is not registered under clause 6.1.1 as being entitled to supply gas.

6.2 Initiation of Transfer

6.2.1 Transfer Request

(a) A prospective FRO for any delivery point that:

(i) has an existing metering installation in place; and

(ii) is currently assigned in the AEMO metering database to another FRO,

must deliver a transfer request to AEMO in accordance with this clause 6.2.

(b) A transfer request must specify a proposed transfer date that falls within the permitted prospective period for that transfer request.

(c) A transfer request must include the following information in respect of the delivery point to which that transfer request relates:

(i) the MIRN;

(ii) the network receipt point;

(iii) the proposed transfer date (see paragraph (a)); and

(iv) if applicable, a statement that the current Customer at the delivery point intends to purchase gas at that delivery point from the prospective FRO following registration of that User in the AEMO metering database as the FRO for that delivery point (a Customer no-change statement).

(d) A transfer request must also contain the name of the prospective FRO who delivered the transfer request to AEMO.
6.2.2 Explicit Informed Consent

(a) A Retailer must not deliver a transfer request in relation to a delivery point to AEMO unless the Retailer has received the explicit informed consent of the Customer to the registration of that Retailer in the AEMO metering database as the FRO for that delivery point with effect from any time during the permitted prospective period in relation to the transfer request.

(b) A Retailer who delivers a transfer request in relation to a delivery point to AEMO is taken to have represented to AEMO that the Retailer has received the explicit informed consent of the Customer to the registration of that Retailer in the AEMO metering database as the FRO for that delivery point with effect from any time during the permitted prospective period in relation to the transfer request.

6.2.3 Existing Transfer Request

If:

(a) a prospective FRO delivers a transfer request in relation to a delivery point ("new request") to AEMO;

(b) a transfer request in relation to that delivery point ("existing request") has already been delivered to AEMO (whether by that or any other User); and

(c) the existing request is being processed by AEMO but the User who delivered the existing request to AEMO has not yet been registered in the AEMO metering database as the FRO for the delivery point to which the existing request relates,

then AEMO must not process the new request and must, by midnight on the next business day after the day on which the new request was delivered to AEMO, deliver a notice stating this fact to the User who delivered the new request.

6.3 Notification of Transfer

6.3.1 Notification by AEMO

Provided that the requirements of clause 6.2 have been complied with, AEMO must, by midnight on the next business day after the day on which a transfer request was delivered to it, deliver a notification of the transfer request (a transfer request notification) to:

(a) the FRO for the delivery point to which the transfer request relates; and

(b) the relevant Network Operator.

6.3.2 Transfer Request Notification Information

A transfer request notification must include the following information:

(a) the MIRN for the delivery point to which the transfer request relates;

(b) the proposed transfer date nominated in the transfer request;

(c) whether the transfer request contains a Customer no-change statement; and

(d) in the case of the transfer request notification delivered to the Network Operator for the delivery point, the name of the User who delivered the transfer request to AEMO.

6.4 Objections to Transfer

6.4.1 Objection Notice

(a) Where the Network Operator receives a transfer request notification for a delivery point from AEMO, and the condition in paragraph (c) is satisfied, the Network Operator may deliver a notice to AEMO objecting to the transfer request (an objection notice) by
midnight on the 5\textsuperscript{th} business day after the day on which AEMO delivered the transfer request notification to the Network Operator.

(b) An objection notice must include:
(i) the MIRN for the delivery point to which the transfer request relates; and
(ii) the name of the Network Operator delivering the objection notice.

(c) A Network Operator may only deliver an objection notice under paragraph (a) if, at the time the objection notice is delivered to AEMO, the prospective FRO does not hold all necessary rights to supply gas at the delivery point to which the transfer request relates, with effect from the proposed transfer date.

6.4.2 Withdrawal of Objection Notice

(a) A Network Operator may withdraw an objection notice by delivering to AEMO a notice of withdrawal (an objection withdrawal notice) at any time before midnight on the 20th business day after the day on which the Network Operator delivered the objection notice to AEMO.

(b) A Network Operator must withdraw an objection notice by the time specified in paragraph (a) if, by midnight on the 19th business day after the day on which the Network Operator delivered the objection notice to AEMO, the prospective FRO holds all necessary rights to supply gas at the relevant delivery point.

(c) An objection withdrawal notice must include the same information specified in clause 6.4.1(b).

6.4.3 Notification by AEMO

(a) AEMO must, by midnight on the next business day after the day on which an objection notice, or an objection withdrawal notice is delivered to AEMO, deliver a notification of that objection notice or objection withdrawal notice, as the case may be, to the User who delivered the transfer request to AEMO.

(b) A notification by AEMO under paragraph (a) must include the following information:
(i) the MIRN for the delivery point to which the transfer request relates; and
(ii) the name of the relevant Network Operator.

6.4.4 Termination of Transfer Process

If:

(a) an objection notice has been delivered to AEMO by a Network Operator under clause 6.4.1; and

(b) by midnight on the 20\textsuperscript{th} business day after the day on which that objection notice was delivered to AEMO, that Network Operator has not delivered to AEMO an objection withdrawal notice under clause 6.4.2,

then AEMO must:

(c) cease processing that transfer request; and

(d) by midnight on the 21\textsuperscript{st} business day after the day on which that objection notice was delivered to AEMO, deliver a notice that AEMO will not further process that transfer request to:
(i) the User who delivered the transfer request to AEMO;
(ii) the FRO for the delivery point to which the transfer request relates; and
(iii) the relevant Network Operator.

6.5 Potential Problems with Transfer

6.5.1 Notification of Potential Problems

(a) Any person who has received a transfer request notification under clause 6.3 may deliver to AEMO, at any time before the User who submitted the transfer request is registered in the AEMO metering database as the FRO for the delivery point to which that transfer request relates, a notice describing a potential problem in respect of that transfer request.

(b) A notice under paragraph (a) is not an objection notice for the purposes of clause 6.4.1.

6.5.2 Notification by AEMO

AEMO must, by midnight on the next business day after the day on which it receives a notice under clause 6.5.1, forward that notice to the User who delivered the relevant transfer request.

6.6 Withdrawal of Transfer Request

6.6.1 Transfer Withdrawal Notice

(a) A User who delivers a transfer request to AEMO:

(i) may deliver a notice withdrawing that transfer request (a transfer withdrawal notice) to AEMO at any time before (but not after) the registration of that User in AEMO metering database as the FRO for the delivery point to which the transfer request relates; and

(ii) must immediately deliver a transfer withdrawal notice to AEMO where it ceases to be a User at any time before the registration of that User in the AEMO metering database as the FRO for the delivery point to which the transfer request relates.

(b) A transfer withdrawal notice must include the MIRN for the delivery point to which the transfer request relates.

6.6.2 Termination of Transfer Process

AEMO must cease processing a transfer request if the relevant User delivers a transfer withdrawal notice to AEMO.

6.6.3 Notification by AEMO

AEMO must, by midnight on the next business day after the day on which it receives a transfer withdrawal notice under clause 6.6.1, deliver notice of the withdrawal of the transfer request, together with a notice that AEMO will not further process that transfer request, to:

(a) the FRO for the delivery point to which the transfer request relates; and

(b) the relevant Network Operator.

6.7 Registration of Transfer

6.7.1 Registration

Where:

(a) a User has delivered to AEMO a transfer request in relation to a delivery point which complies with clause 6.2.1; and

(b) the Network Operator for the delivery point to which the transfer request relates:

(i) has not delivered an objection notice in accordance with clause 6.4.1; or
(ii) has delivered such an objection notice but subsequently delivered to AEMO an objection withdrawal notice in accordance with clause 6.4.2; and

(c) the Network Operator has delivered the relevant information referred to in clause 3.5.2 to AEMO prior to the expiry of the data provision period; and

(d) the User who delivered the transfer request to AEMO remains a User, and has not delivered a transfer withdrawal notice pursuant to clause 6.6.1,

AEMO must, as soon as is practicable after the expiration of the data provision period, register that User in the AEMO metering database as the FRO for the delivery point to which that transfer request relates.

6.7.2 Read Failure

(a) If:

(i) the conditions described in clause 6.7.1(a) to 6.7.1(b) are met in respect of a transfer request; but

(ii) by the expiry of the data provision period, the Network Operator has not delivered to AEMO the information specified in clause 6.7.1(c),

then AEMO must, by midnight on the next business day after the expiry of the data provision period, deliver a notice to that effect (a read failure notice) to:

(iii) the User who delivered the transfer request to AEMO;

(iv) the FRO for the delivery point to which the transfer request relates; and

(v) the relevant Network Operator.

(b) A read failure notice must include the following information:

(i) the MIRN for the delivery point to which the transfer request relates; and

(ii) the information that has not been provided or obtained under clause 6.7.1(c).

6.7.3 Alternative Transfer Date Notice

(a) Where AEMO delivers a read failure notice under clause 6.7.2, the User who delivered the relevant transfer request may deliver to AEMO, by midnight on the 10th business day after the day on which AEMO delivered the read failure notice, a notice (an alternative transfer date notice) which nominates a new proposed transfer date in relation to that transfer request, being a day:

(i) which is on or after the proposed transfer date nominated in the transfer request; and

(ii) which falls during the permitted prospective period in relation to the transfer request.

(b) An alternative transfer date notice in relation to a transfer request must include the following information:

(i) the MIRN for the delivery point to which the transfer request relates; and

(ii) the new proposed transfer date in relation to the transfer request.

(c) AEMO must, by midnight on the business day after the day on which the User delivered the alternative transfer date notice to AEMO, deliver a notification of the alternative transfer date notice to:

(i) the FRO for the delivery point to which the relevant transfer request relates; and

(ii) the relevant Network Operator.
(d) AEMO’s notification must include the following information:

(i) the MIRN for the delivery point to which the relevant transfer request relates; and

(ii) the new proposed transfer date in relation to the transfer request.

(e) In respect of an alternative transfer date notice delivered under this clause, the other provisions of this clause 6.7 and the provisions of clause 3.5.2 will apply as if the new proposed transfer date nominated in the alternative transfer date notice had been the proposed transfer date specified in the transfer request.

6.7.4 Termination of Transfer Process

If:

(a) AEMO has delivered a read failure notice to a User under clause 6.7.2 in relation to a transfer request; and

(b) that User does not deliver an alternative transfer date notice to AEMO pursuant to clause 6.7.3,

then AEMO must cease processing the relevant transfer request and must, by midnight on the 11th business day after the day on which AEMO delivered the read failure notice, deliver a further notice to:

(c) that User;

(d) the FRO for the delivery point to which the transfer request relates; and

(e) the relevant Network Operator,

stating that AEMO will not further process the transfer request.

6.7.5 Registration Date

(a) Where AEMO registers a User in the AEMO metering database as the FRO for a delivery point under clause 6.7.1, that registration takes effect:

(i) for a non-daily metered delivery point, at the start of the gas day beginning on the day to which the validated meter reading under clause 6.7.1(c) relates*; or

(ii) for a daily metered delivery point, at the start of the gas day beginning on the proposed transfer date.

(b) AEMO must record in the AEMO metering database both the date of registration and the date on which the registration takes effect.

6.8 Registration Notification

6.8.1 Notification by AEMO

Where AEMO registers a User in the AEMO metering database as the FRO for a delivery point under clause 6.7.1, AEMO must, by midnight on the next business day, deliver notice of that registration, together with the date from which that registration takes effect (registration notice) to:

(a) that User;

(b) the person who was the FRO for that delivery point immediately prior to that registration; and

* Because the meter must be read on a day, or the substituted meter reading must relate to a date, that is within the allowable period in relation to the proposed transfer date, it is possible for the new FRO for the supply point to be registered in the AEMO metering database with effect from a day prior to the day on which the transfer request is delivered to AEMO (i.e. where the proposed transfer date is less than four business days after the day on which the transfer request was delivered to AEMO).
6.8.2 Registration Notice Information

A registration notice in relation to a transfer request must include the following information:

(a) in the notice to the Network Operator and the FRO for that delivery point immediately prior to the registration:
   (i) the MIRN for the delivery point to which the transfer request relates; and
   (ii) the User who delivered the transfer request to AEMO;

(b) in the notice to the User who delivered the transfer request to AEMO:
   (i) the MIRN for the delivery point to which the transfer request relates; and
   (ii) the FRO for that distribution point immediately prior to the registration.

6.9 Bulk Customer Transfers

6.9.1 Agreement of Retailers

If a person ("transferee") has agreed with a single Retailer ("transferor") to transfer multiple delivery points for which the transferor is the FRO from the transferor to the transferee ("Agreed Transfer"), the transferee may apply to AEMO under clause 6.9.2 for the Agreed Transfer to be completed in the supply point registry in accordance with this clause 6.9 (instead of clauses 6.2 to 6.7).

6.9.2 Form of Application for Agreed Transfer

An application by a transferee to AEMO for an Agreed Transfer of delivery points under this clause 6.9 must include:

(a) details of:
   (i) the transferor and the transferee;
   (ii) the delivery points to be transferred; and
   (iii) the network sections in which those delivery points are located;

(b) a statement as to whether the explicit informed consent of the Customer is required for the transfer of any of the relevant delivery points to the transferee;

(c) an undertaking from the transferee to pay AEMO the costs of its application within 10 business days of demand for payment being made;

(d) an undertaking from the transferor to pay AEMO the costs the application in the event of the default of the transferee under paragraph (c);

(e) a notice from the transferor that, subject to AEMO's consent, the transferor has consented to the transfer of the relevant delivery points to the transferee under this clause 6.9;

(f) any other information that the transferee considers relevant to its application (e.g. whether the delivery points sought to be transferred constitute more than 95% of the delivery points for which the transferor is the current Retailer in a network section); and

(g) a notice from the relevant Network Operator that, in respect of the relevant delivery points for which it is the Network Operator, the Network Operator has consented to the transfer in the application made under this clause 6.9.2.
6.9.3  AEMO to Consider Application

(a)  As soon as practicable after receiving an application under clause 6.9.2, AEMO must consider the application and, subject to paragraph (b), decide whether to:

(i)  consent to the Agreed Transfer being completed in AEMO’s metering database under this clause 6.9, with that consent being conditional on the transferee becoming a Retailer if applicable;

(ii) not consent to the Agreed Transfer being completed in AEMO’s metering database under this clause 6.9; or

(iii) request the transferee to provide more information in support of its application.

(b)  AEMO must consent to the Agreed Transfer being completed in its metering database under this clause 6.9 if the application:

(i)  includes the information required under clause 6.9.2;

(ii) contains a statement under clause 6.9.2(b) that customer consent is not required for the transfer of any of the delivery points sought to be transferred; and

(iii) relates to the transfer of more than 1,000 delivery points, or more than 95% of the delivery points for which the transferor is the FRO in a network section.

(c)  As soon as reasonably practicable after making a decision under paragraph (a), AEMO must notify the transferee and the transferor of its decision and the reasons for its decision.

(d)  If AEMO consents to the Agreed Transfer being completed in its metering database in accordance with this clause 6.9 then clauses 6.9.4 to 6.9.8 apply.

(e)  Subject to paragraph (f), if AEMO does not consent to the Agreed Transfer being completed in its metering database in accordance with this clause 6.9 or requests more information from the transferee in support of its application the transferee may revise and resubmit its application in accordance with clause 6.9.2, in which case the resubmitted application will be treated in the manner provided in paragraphs (a) to (c).

(f)  A transferee may only revise and resubmit an application in accordance with paragraph (e) once in respect of the same Agreed Transfer.

6.9.4  Transferee to Provide Information to AEMO

If AEMO consents to an Agreed Transfer being completed in its metering database in accordance with this clause 6.9 and the transferee wishes to proceed with the transaction then the transferee must provide to AEMO:

(a)  the MIRN of each delivery point to be transferred from the transferor to the transferee which must not include any delivery point for which customer consent for transfer is required but has not been obtained (“affected delivery points”) and, if an affected delivery point is in a network section that has more than one network receipt point, the proposed network receipt point for that delivery point;

(b)  a notice from the transferor that the transferor has consented to the transfer of the affected delivery points to the transferee in accordance with this clause 6.9;

(c)  evidence that it is a Retailer;

(d)  the proposed effective date for the transfer of the affected delivery points from the transferor to the transferee (“transfer effective date”) which must be:

(i)  the same day for each affected delivery point; and
(ii) no earlier than 5 business days after the date of the notice to AEMO under this clause 6.9.4, or the date that the transferee becomes a Retailer, whichever is later; and

(e) any other information reasonably requested by AEMO that AEMO considers is required in order to effect the Agreed Transfer in AEMO’s metering database in a cost effective and efficient manner.

6.9.5 AEMO to Provide Transfer Information to Network Operator

Not later than 2 business days after receiving from the transferee the information specified in clause 6.9.4, AEMO must provide the Network Operator with:

(a) the name of the transferee;

(b) the information provided to it under clause 6.9.4; and

(c) details of the mechanism to be used to effect the transfer in AEMO’s metering database.

6.9.6 Transfer Effective Date

(a) Prior to the proposed transfer effective date AEMO must request the relevant Network Operator and the transferee (each an “affected party”) to confirm whether or not it will be able to implement an Agreed Transfer in its systems on the transfer effective date proposed under clause 6.9.4.

(b) If each affected party confirms that it is able to implement the Agreed Transfer in its systems on the proposed transfer effective date then AEMO will notify the affected parties that the proposed transfer effective date will be the transfer effective date for the purpose of clause 6.9.7. AEMO must provide this notice as soon as practicable but in any event no later than one business day prior to the proposed transfer effective date.

(c) If any affected party notifies AEMO that it is not able to implement the transfer in its systems on the proposed transfer effective date then the affected parties must negotiate in good faith to agree the transfer effective date for the Agreed Transfer for the purposes of clause 6.9.7. AEMO must notify each affected party of the agreed transfer effective date as soon as practicable but in any event no later than one business day prior to the proposed transfer effective date.

6.9.7 AEMO to Transfer Delivery Points

(a) After receiving the information under clause 6.9.5 and notification of the transfer effective date under clause 6.9.6 and no later than the transfer effective date, AEMO must:

(i) identify any affected delivery point in respect of which there is an open transaction as at the end of the gas day prior to the transfer effective date; and

(ii) amend its metering database so that as at the transfer effective date:

(A) the transferee is the current Retailer of each affected delivery point (other than the affected delivery points identified by AEMO under paragraph (a)(i)); and

(B) the transferor remains the FRO for affected delivery points identified by AEMO under paragraph (a).

(b) As soon as practicable, but in any event not later than one business day after it has amended the metering database under paragraph (a), AEMO must provide the transferee, the transferor and the relevant Network Operator with a report setting out:

(i) the MIRN for each supply point transferred to the transferee under paragraph (a)(ii); and

(ii) the effective date of the transfer to the transferee under paragraph (a)(ii); and
(iii) the MIRN for each affected delivery point in respect of which an open transaction was identified under paragraph (a)(i) and which was not transferred to the transferee.

6.9.8 Manner of Effecting Agreed Transfer

Nothing in this clause 6.9 prescribes the mechanism by which the transfer of affected delivery points to the transferee must be effected in AEMO’s metering database and AEMO may in its discretion determine the manner in which the transfer is to be effected, provided that the transfer mechanism used:

(a) is cost effective and efficient;
(b) has been approved by the Network Operator for each of the affected delivery points;
(c) is consistent with these Procedures; and
(d) has results specified in clause 6.9.7(a)(ii).
CHAPTER 7. RETAILER OF LAST RESORT PROCESSES

7.1 AEMO Customer Details Database
(a) AEMO must create, maintain and administer a database to store Customer details provided to AEMO under this clause 7.1 to support the provisions of this Chapter 7.
(b) Each Retailer must update, format and deliver a new complete customer listing to AEMO by 5.00 pm on the 10th business day after the end of each month.
(c) Within 12 business days of receipt of a complete customer listing, AEMO must:
   (i) validate that:
      (A) all mandatory fields as defined in the complete customer listing are populated; and
      (B) all MIRNs in the complete customer listing correspond with the AEMO metering database as to who the FRO is for the site as at the data extraction date;
   (ii) store the complete customer listing in a secure database and archive previous versions of the complete customer listing; and
   (iii) where a complete customer listing fails validation, notify the relevant Retailer of the validation failure.

7.2 RoLR Event

7.2.1 Cancellation and Acceleration of Customer Transfers
(a) Where a RoLR event has occurred, AEMO must take the following actions in relation to any pending transfer request in respect of a delivery point involving a failed retailer:
   (i) where the failed retailer is the prospective FRO who submitted the transfer request, cancel the transfer request and deliver notice of that cancellation to the FRO, the failed retailer and the Network Operator for the delivery point by 6.30 am on the RoLR transfer date;
   (ii) where the failed retailer is the current FRO for the delivery point and the transfer request contains a Customer no-change statement, accelerate the transfer request and deliver notice of registration of the transfer to the prospective FRO, the failed retailer and the Network Operator for the delivery point by 6.30 am on the RoLR transfer date;
   (iii) where the failed retailer is the current FRO for the delivery point and the transfer request does not contain a Customer no-change statement:
      (A) if the prospective transfer date is not more than 10 days after from the RoLR transfer date, accelerate the transfer request and deliver notice of registration of the transfer to the prospective FRO, the failed retailer and the Network Operator for the delivery point by 6.30 am on the RoLR transfer date; or
      (B) if the prospective transfer date is more than 10 days after the RoLR transfer date, allow the transfer request to progress in accordance with Chapter 6 and include the delivery point in the transfer process under clause 7.2.2.
(b) Where a RoLR event has occurred, AEMO must take the following actions in relation to any pending transfer error correction request in respect of a delivery point involving a failed retailer:
(i) where the failed retailer submitted the transfer error correction request, cancel the transfer error correction request and deliver notice of that cancellation to the FRO, the failed retailer and the Network Operator for the delivery point by 6.30 am on the RoLR transfer date;

(ii) where the failed retailer is the affected FRO, accelerate the transfer error correction request and deliver notice of registration of the transfer to the User who submitted that request, the failed retailer and the Network Operator for the delivery point by 6.30 am on the RoLR transfer date;

7.2.2 Update of AEMO Metering Database
Before the RoLR transfer date, for each RoLR affected delivery point to which clause 7.2.1 does not apply, AEMO must update its metering database by recording the relevant designated RoLR as the FRO.

7.2.3 Data Exchange
Before the RoLR transfer date, AEMO must:

(a) provide each designated RoLR a file containing customer details for each delivery point for which it has been recorded as the FRO under clause 7.2.2, using the most recently received complete customer listing in accordance with the Gas Interface Protocol; and

(b) provide each Network Operator in respect of its network a file containing details of the MIRNs that have been updated in AEMO’s metering database under clause 7.2.2, in accordance with the Gas Interface Protocol.

7.2.4 Data Exchange from Failed Retailer
Before the RoLR transfer date, the failed retailer or its insolvency official must provide each designated RoLR a file containing Customer details for the MIRNs for which that designated RoLR will become the FRO, in accordance with the Gas Interface Protocol.

7.2.5 Update of Network Operator Metering Database
Each Network Operator with a RoLR affected delivery point in its network must:

(a) update its metering database by recording the relevant designated RoLR as the FRO for each RoLR affected delivery point to which clause 6.1.2 does not apply; and

(b) provide AEMO with a report of the details of the MIRNs that have been updated in the Network Operator’s metering database.

7.2.6 Meter Reading and Account Creation
Each Network Operator must:

(a) undertake an estimated meter reading in accordance with an approved estimation methodology for all MIRNs contained within the file provided by AEMO under clause 7.2.3 where the MIRN refers to a non-daily metered delivery point;

(b) provide the meter reading information as described in clause 3.5.1(d)(ii) and the energy data information as described in clause 3.6.5 to the failed Retailer for all MIRNs contained within that file;

(c) provide the energy data information as described in clause 3.6.6(b) to AEMO for all MIRNs contained within that file; and

(d) provide the current information set out in clause 2.2(a)(i) to 2.2(a)(vii) and the information set out in clause 3.5.3(a) to the designated RoLR in the format specified in the Gas Interface Protocol for all MIRNs contained within the file, and for the avoidance of doubt, in relation to clause 3.5.3(a) the information may include the estimated meter reading referred to in clause 3.5.1(d) and is provided solely for the purposes of this Chapter 7,
by the end of the 8th calendar day after the RoLR transfer date.

7.2.7 Updates to Estimated Meter Readings
Each Network Operator must provide any updates to estimated meter reading data provided under clause 7.2.6 to AEMO, the failed Retailer and designated RoLR as soon as practicable, but in any event by the 185th business day after the end of the month in which the provisions of Chapter 7 of these Procedures have been invoked.

7.2.8 Service Order Processes
Where a Network Operator has not yet completed service orders that were initiated prior to the RoLR transfer date by the failed Retailer, the Network Operator must provide a ‘service order in flight report’ in accordance with the Gas Interface Protocol to the designated RoLR.

7.2.9 Industry Reconciliation Program
By the 65th business day after the RoLR transfer date and after consulting with all affected Participants, AEMO must determine if an industry reconciliation program is required.

Note: This clause places an obligation on AEMO to determine the need for a reconciliation of the Customer transfers that have occurred during a RoLR event to ensure that Customers have been transferred to the correct Retailer of Last Resort and that the Network Operators’, Retailers’ and AEMO’s databases are aligned. The intention is to perform an exercise that would identify and correct any errors. This is also intended to meet the requirements of section 172 of the National Energy Retail Law.
CHAPTER 8. BALANCING AND STTM DISTRIBUTION SYSTEM ALLOCATION PROCESSES

8.1 Application and Interpretation

8.1.1 Application of Chapter
This Chapter applies to Participants and the network sections in which they participate as follows:

(a) for a no balancing network section, clauses 8.4, 8.9 and 8.10 only;
(b) for a no OBA network section, clauses 8.4, 8.6, 8.7, 8.8, 8.9 and 8.10 only;
(c) for an OBA network section, clauses 8.4, 8.5, 8.7, 8.9 and 8.10 only; and
(d) for a STTM network section, clauses 8.4, 8.11 and 8.12 only.

8.1.2 References to Nomination Day
In this Chapter, references to ‘nomination day –1’ and ‘nomination day +2’ mean, respectively, the day prior to, and two days after, the nomination day the subject of the nomination process in clause 8.5 or 8.6, as the case may be, and so on.

When nomination day -2 or nomination day -1 is not a business day, each User and the relevant Network Operator may agree to carry out their respective obligations for the nomination day on a business day prior to those days.

8.2 Balancing Arrangements Register
(a) AEMO must maintain an up-to-date register setting out in respect of each network section to which these Procedures apply:

(i) whether the network section is an OBA network section, a no OBA network section, an STTM network section or a no balancing network section; and
(ii) the date on which the current balancing arrangement, if any, in the network section came into effect.

(b) As soon as practicable after the type of balancing arrangement in place in a network section changes in accordance with the provisions of clause 8.3, AEMO must amend the balancing arrangements register, and give each Participant access to the amended balancing arrangements register.

8.3 Change in Balancing Arrangements
(a) A balanced network section may become a no balancing network section if:

(i) in respect of the ACTCanberra network section only, AEMO determines that it should become a no balancing network section if the same User would be the current FRO of all delivery points in this network section; or
(ii) an operational balancing arrangement in effect in that network section is terminated under paragraph (f).

(b) A no balancing network section may become a balanced network section if:

(i) in respect of the ACTCanberra network section only, AEMO determines under paragraph (e) that it should become a balanced network section; or
(ii) an operational balancing arrangement comes into effect in that network section in accordance with paragraph (e).
(c) A no OBA network section may become an OBA network section if an operational balancing arrangement comes into effect in that network section, in accordance with paragraph (e).

(d) An OBA network section may become a no OBA network section if an operational balancing arrangement in effect in that network section is terminated, in accordance with paragraph (f).

(e) If the Network Operator in a no balancing network section or a no OBA network section becomes aware that an operational balancing arrangement is to come into effect in that network section:

(i) the Network Operator must give AEMO a notice as soon as practicable and in any event no more than 2 business days after it becomes so aware, specifying the name of the relevant network section, and the date the operational balancing arrangement will come into effect (“OBA Effective Date”); and

(ii) as soon as practicable but in any event no later than one business day after receipt of a notice under paragraph (e)(i), AEMO will notify each Participant that with effect from the OBA Effective Date the relevant network section will be an OBA network section.

(f) If the Network Operator in an OBA network section becomes aware that the operational balancing arrangement in effect for that network section is going to terminate (whether as a result of agreement between the parties to the arrangement or otherwise):

(i) the Network Operator must give AEMO a notice as soon as practicable and in any event no more than 2 business days after it becomes so aware, specifying:

(A) the name of the relevant network section;

(B) the date that the operational balancing arrangement will terminate (“OBA Termination Date”);

(ii) within one business day after receipt of a notice under paragraph (f)(i), AEMO must confirm the number of FROs for delivery points in the relevant network section;

(iii) as soon as practicable but in any event no later than one business day after receipt of the information under paragraph (f)(ii), AEMO will notify each Participant that:

(A) if the relevant network section is ACTCanberra and one User is the FRO for all delivery points in that network section, and AEMO will determine whether the relevant network section will be a no OBA network section or a no balancing network section; or

(B) if the relevant network section is ACTCanberra and there is more than one FRO for the delivery points in that network section, that with effect from the OBA Termination Date the relevant network section will be a no OBA network section; or

(C) if the relevant network section is not ACTCanberra, that with effect from the OBA Termination Date the relevant network section will be a no balancing network section;

(iv) as soon as reasonably practicable after AEMO gives a notice under paragraph (f)(iii)(A) it must determine whether the relevant network section should become a no OBA network section or a no balancing network section; and

(v) by the next business day after AEMO’s determination under paragraph (f)(iv), AEMO will notify each Participant of the determination and the effective date of the
change to balancing arrangements which must not be later than 15 business days after the date of AEMO's determination.

(g) A network section will be or become an STTM network section if it is or becomes a network section to which Division 2 of Part 20 of the Rules applies (that is, an STTM distribution system, or part of such a system, as defined in the Rules).

(h) As soon as possible after AEMO becomes aware that a network section will become a network section to which Division 2 of Part 20 of the Rules applies, AEMO must notify all Participants of the date on which the network section will become an STTM network section.

8.4 Central Information and Forecasting

8.4.1 AEMO to Provide Information and Forecasts

(a) By 8.00 am each day, AEMO must prepare and provide to Users that have requested forecasting information under paragraph (c) as a minimum information and analysis in relation to the market including:

(i) relevant raw data used in the calculation of the forecast net section load; and

(ii) a rolling seven day forecast of the net section load for each network section.

(b) AEMO must prepare forecasts referred to in paragraph (a) in accordance with an algorithm developed by AEMO, the forecast accuracy of which must be consistent with the limit permitted by the operational balancing agreement from time to time when tested on actual historical net section load data.

(c) A User may, by notice to AEMO, request AEMO to provide forecasting information and, if required, additional information to that User which is relevant and specific to the User, but does not reveal commercial-in-confidence information relating to another User.

(d) Upon receipt of a notice under paragraph (c), AEMO must, as a minimum, provide forecasting information to the User.

(e) AEMO must provide forecasting information to the User on a daily basis at a time to enable the User to make a nomination as required under clause 8.5 or 8.6.

(f) When providing forecasting information, AEMO must specify the estimated accuracy of the information, which may be expressed by different confidence levels.

8.4.2 Recovery From System Failure

If for any period of time on a day that is not a business day, AEMO cannot perform its obligations under this clause 8.4 because the metering database is unavailable ("system down time"), then:

(a) on the next business day after the day on which the system down time occurred AEMO must commence work to rectify the system failure; and

(b) by 8.00 am on the day after the day on which the system failure is rectified, AEMO must provide the forecast information described in clause 8.4.1 to Users based on the relevant raw data received on the previous day; and

(c) on the next business day after the day on which the system failure is rectified (or at any later time agreed between the AEMO and the User), AEMO must provide forecasting information to a User as requested under clause 8.4.1(c).
8.5 Nomination Process for OBA Network Sections

8.5.1 Information to be Notified by Network Operators and Users

(a) By 2.00 pm on nomination day -2, a Network Operator must notify a User of the User’s prior imbalance account in each network section for nomination day -4.

(b) By 4.00 pm on nomination day -2, a User must notify the following details to the Network Operator for each network receipt point at which the User intends to receive gas:

(i) for the nomination day, the quantity of gas the User seeks to receive in total and for each shipper, not including the User’s reconciliation adjustment amount. The quantity nominated under this paragraph must be the User’s good faith estimate of the aggregate amount which the User intends to withdraw at the network receipt point on the nomination day under all transport arrangements and may include some or all of the User’s applicable FCLP amount;

(ii) in relation to the quantity referred to in paragraph (b)(i), the forecast requirement for non-daily metered delivery points for the nomination day;

(iii) for the nomination day, any User reconciliation adjustment amount that AEMO has calculated under clause 8.9.13(a)(ii) for inclusion in the User’s forecast requirement, provided that the Network Operator is not required to accept the User’s reconciliation adjustment amount as part of the forecast requirement unless the total of all Users’ reconciliation adjustment amounts on a day equals zero; and

(iv) when required by the Network Operator, the forecast withdrawal at certain delivery points and at times agreed between the User and the Network Operator.

(c) The Network Operator:

(i) must add the User reconciliation adjustment amount provided under paragraph (b)(iii) to the value provided by the User under paragraph (b)(i) such that a positive reconciliation adjustment amount will increase the total nomination for that User;

(ii) is not required to accept the User’s forecast requirement if that figure is less than zero. If the Network Operator does not accept the User’s forecast requirement it will notify the User; and

(iii) must use its reasonable endeavours to notify AEMO by nomination day +1 if the total of all Users’ reconciliation adjustment amounts for the nomination day does not equal zero.

8.5.2 User to Notify AEMO of Negative Forecast Requirement

(a) If a User determines that its forecast requirement for any network section as defined in clause 8.5.1(b) will be less than zero, then the User must notify AEMO of the following details:

(i) the nomination day on which the forecast requirement is less than zero;

(ii) the network section for which the forecast requirement is less than zero; and

(iii) the amount of the negative forecast requirement.

(b) The User must notify AEMO under paragraph (a) immediately upon the User determining that the forecast requirement will be less than zero, and in any case by no later than 4.00 pm on nomination day -2.

8.5.3 Revised Forecast Requirements

(a) By 9.00 am on nomination day -1 a User may, by notice to the Network Operator, revise a forecast requirement for a network receipt point provided for the nomination day.
(b) A User must not revise a forecast requirement if the revision would cause the User's forecast requirement to become either less than zero, or less than the sum of:

(i) where the Network Operator has accepted the User's reconciliation adjustment amount advised to it under clause 8.5.1(b)(iii), the User's reconciliation adjustment amount advised to the Network Operator under clause 8.5.1(b)(iii) and revised under this clause 8.5.3; and

(ii) the User's good faith estimate of the aggregate amount which the User intends to withdraw at the network receipt point on the nomination day under all transportation agreements.

8.5.4 Network Operator to Notify User of Revision

(a) By 10.00 am on nomination day -1, the Network Operator must notify the User of the quantity of gas (“adjusted requirement”) which the User should deliver to the network receipt point to enable the Network Operator:

(i) to satisfy the User's forecast requirement for the nomination day;

(ii) to reduce a User's prior imbalance account to zero; and/or

(iii) to satisfy any other aggregate needs for the relevant network section (including adjustment for the User's change in share of linepack) to ensure the safe and reliable supply of gas.

(b) Where a User has a single shipper at the network receipt point, the User's adjusted requirement notified under paragraph (a) will be that shipper's confirmed nomination.

(c) Where a User has more than one shipper at the network receipt point, the User must:

(i) apportion the adjusted requirement notified under paragraph (a) between its shippers; and

(ii) advise the Network Operator of this apportionment and, accordingly the confirmed nomination for each shipper, by 10.30 am on nomination day -1.

8.5.5 User Fails to Nominate

If a User fails to notify the Network Operator of its forecast requirement and/or confirmed nomination, the Network Operator must determine the User's confirmed nomination for a network receipt point based on:

(a) the User's forecast requirement adjusted for the User's reconciliation adjustment amount for the same day in the prior week; or

(b) the User's forecast requirement, adjusted for the User's reconciliation adjustment amount for the same day in the two weeks prior where the same day in the prior week is a public holiday in New South Wales.

8.5.6 Network Operator to Aggregate and Notify Nominations

(a) The Network Operator must:

(i) total the confirmed nominations assigned to each shipper in each transmission pipeline for the nomination day; and

(ii) total the confirmed nominations for all shippers in each transmission pipeline for the nomination day.

(b) By 11.00 am on nomination day -1 the Network Operator must notify each transmission pipeline operator of:

(i) the total confirmed nominations for each of the shippers in its transmission pipeline for the nomination day; and
(ii) the aggregate confirmed nominations of all shippers in its transmission pipeline for the nomination day.

(c) By 11.00 am on nomination day -1 the Network Operator must notify the shipper of:

(i) the confirmed nomination for each relevant User in a transmission pipeline for the nomination day; and

(ii) the total confirmed nominations for that shipper in a transmission pipeline for the nomination day.

(d) The Network Operator must ensure that forecast withdrawal data for each User for each nomination day for each network section is maintained for at least two years in a readily accessible format.

8.5.7 Variation or Suspension of Nomination Process for Emergency Supply Situations

(a) The Network Operator may determine that an emergency supply situation has occurred in a network section on a nomination day ("emergency supply situation"). The situations in which the Network Operator may determine that an emergency supply situation has occurred include, but are not limited to, situations in which the Network Operator or another person has been required to instigate load shedding in order to ensure that supply is maintained in a network section following a failure or constraint in a part or parts of the supply chain.

(b) If the Network Operator determines that an emergency supply situation has occurred on a nomination day, the Network Operator may vary or suspend the nomination process set out in clauses 8.5.1 to 8.5.6 for affected nomination days and the Network Operator will agree a replacement process for nominations with the relevant pipeline operator for the affected network sections. The Network Operator or pipeline operator will advise the affected Users and shippers of the new arrangements as soon as practicable.

(c) The Network Operator must notify AEMO as soon as practicable (but in any event no later than the next business day after the day on which the Network Operator determined that the emergency supply situation has occurred) of:

(i) the date on which the emergency supply situation occurred; and

(ii) the network section affected by the emergency supply situation.

(d) The Network Operator must notify AEMO as soon as practicable (but in any event no later than the next business day after the day on which the emergency supply situation ceases) of the date on which the emergency supply situation ceased.

(e) For the avoidance of doubt where an emergency supply situation continues for more than one consecutive nomination day then the Network Operator will have met its obligation under paragraph (c)(i) to notify AEMO if it does so in relation to the first of the consecutive days only.

8.6 Nomination Process (No OBA Network Sections)

8.6.1 Information to be Notified by Network Operators and Users

(a) By 2.00 pm on nomination day -2, a Network Operator must notify a User of the User's daily imbalance in each network section for nomination day -4.

(b) By 4.00 pm on nomination day -2, a User must notify the following details to the Network Operator for each network receipt point at which the User intends to receive gas:

(i) forecast of withdrawals for the nomination day and the two following nomination days;
(ii) for the nomination day the quantity of gas the User seeks to receive in total and for each shipper, not including the User’s reconciliation adjustment amount, and, if relevant, the User’s participant imbalance amount. The nomination under this paragraph (b)(ii) must be the User’s good faith estimate of the aggregate amount which the User intends to withdraw at the network receipt point on the nomination day under all transportation arrangements and may include some or all of the User’s applicable FCLP amount;

(iii) in relation to the quantity referred to in paragraph (b)(ii), forecast requirement for non-daily metered delivery points for the nomination day;

(iv) for the nomination day any User reconciliation adjustment amount that AEMO has calculated under clause 8.9.13(a)(ii) for inclusion in the User’s forecast requirement, provided that the Network Operator is not required to accept the User’s reconciliation adjustment amount as part of the forecast requirement unless the total of all Users’ reconciliation adjustment amounts for the nomination day equals zero;

(v) the User’s participant imbalance amount, provided that the Network Operator is not required to accept the participant imbalance amount as part of the forecast requirement unless the total of all Users’ participant imbalance amounts for the nomination day equals zero; and

(vi) when required by the Network Operator, the forecast withdrawal at certain delivery points and at times agreed between the User and the Network Operator.

(c) The Network Operator:

(i) will add the User’s reconciliation adjustment amount provided under paragraph (b)(iv) to the value provided by the User under paragraph (b)(ii) such that a positive reconciliation adjustment amount will increase the total nomination for that User;

(ii) will add the User’s participant imbalance amount provided paragraph (b)(v) to the value provided by the User under paragraph (b)(ii) such that a positive participant imbalance amount will increase the total nomination for that User;

(iii) is not required to accept the User’s forecast requirement if that figure is less than zero. If the Network Operator does not accept the User’s forecast requirement it will notify the User;

(iv) will use its reasonable endeavours to notify AEMO by nomination day +1 if the total of all Users’ reconciliation adjustment amounts for the nomination day does not equal zero; and

(v) will use its reasonable endeavours to notify AEMO by nomination day +1 if the total of all Users’ participant imbalance amounts for the nomination day does not equal zero.

(d) In respect of the User for a delivery point at which an automatic feedback flow control system is used to establish a direct relationship between its input at either the Eastern Gas Pipeline Horsley Park or the Eastern Gas Pipeline Wollongong network receipt points and the quantity actually withdrawn at the delivery point, the User must provide a forecast requirement for that delivery point and separately for the total of all delivery points other than at that delivery point.

8.6.2 Negative Forecast Requirement

(a) If a User determines that its forecast requirement for any network receipt point as defined in clause 8.6.1(b) will be less than zero, then the User must notify AEMO of the following details:

(i) the nomination day on which the forecast requirement is less than zero;
(ii) the network section in which the forecast requirement is less than zero; and

(iii) the amount of the negative forecast requirement.

(b) The User must notify AEMO under paragraph (a) immediately upon the User determining that the forecast requirement will be less than zero, and in any case by no later than 4.00 pm on nomination day -2.

8.6.3 Revised Forecast Requirements

(a) By 9.00 am on nomination day -1 a User may, by notice to the Network Operator, revise a forecast requirement for a network receipt point provided for the nomination day.

(b) A User must not revise a forecast requirement if the revision would cause the User's forecast requirement to become either less than zero, or less than the sum of:

(i) where the Network Operator has accepted the User's reconciliation adjustment amount advised to it under clause 8.6.1(b)(iv), the User's reconciliation adjustment amount advised to the Network Operator under clause 8.6.1(b)(iv) and revised under this clause 8.6.3;

(ii) where the Network Operator has accepted the User's participant imbalance amount advised to it under clause 8.6.1(b)(v), the User's participant imbalance amount advised to the Network Operator under clause 8.6.1(b)(v) and revised under this clause 8.6.3; and

(iii) the User's good faith estimate of the aggregate amount which the User intends to withdraw at the network receipt point on the nomination day under all transportation agreements.

8.6.4 Network Operator to Notify User of Revision

(a) By 10.00 am on nomination day -1, the Network Operator must notify the User of the quantity of gas which the User should deliver to the network receipt point to enable the Network Operator to satisfy:

(i) the User's forecast requirement for the nomination day; and

(ii) any other aggregate needs for the relevant network section (including adjustments for the User's change in share of linepack) to ensure the safe and reliable supply of gas.

(b) By 1.00 pm on nomination day -1 the User must advise the Network Operator of the quantity of gas which the User intends to deliver or have delivered to the network receipt point on the nomination day. The User must ensure that the quantity of gas advised to the Network Operator under this paragraph (b) is not less than zero, and not less than the sum of:

(i) where the Network Operator has accepted the User's reconciliation adjustment amount advised to it under clause 8.6.1(b)(iv), the User's reconciliation adjustment amount advised to the Network Operator under clause 8.6.1(b)(iv) and revised under clause 8.6.3;

(ii) where the Network Operator has accepted the User's participant imbalance amount advised to it under clause 8.6.1(b)(v), the User's participant imbalance amount advised to the Network Operator under clause 8.6.1(b)(v) and revised under clause 8.6.3; and

(iii) the User's good faith estimate of the aggregate amount which the User intends to withdraw at the network receipt point on the nomination day under all transportation agreements.
8.6.5 User Fails to Nominate

(a) If a User provides a forecast requirement under clause 8.6.1(b) but fails to notify the Network Operator of its confirmed nomination under clause 8.6.4(b), the Network Operator must determine the User’s confirmed nomination for a network receipt point based on the forecast requirement notified by the User under clause 8.6.1(b) (and revised under clause 8.6.3(a) if applicable).

(b) If a User fails to notify the Network Operator of its forecast requirement, the Network Operator must, for the purposes of notifying the User of the quantity of gas which the User should deliver to the network receipt point under clause 8.6.1(b), use:

(i) the User’s forecast requirement under clause 8.6.1(b) or as revised under clause 8.6.3(a) (if applicable), not including the User’s reconciliation adjustment amount or the User’s participant imbalance amount, for the same day in the prior week; or

(ii) the User’s forecast requirement under clause 8.6.1(b) or as revised under clause 8.6.3(a) (if applicable), not including the User’s reconciliation adjustment amount or the User’s participant imbalance amount, for the same day in the two weeks prior where the same day in the prior week is a public holiday in New South Wales.

8.6.6 AEMO May Audit User Nominations

(a) Except as permitted in clause 8.6.8, a User must not request its shipper or shippers to supply an amount of gas to a network receipt point on a nomination day that is, in aggregate, less than the User’s confirmed nomination for that network receipt point for the relevant nomination day.

(b) AEMO may, in its discretion, audit a User’s compliance with paragraph (a) and, if paragraph (a) is not complied with, clause 8.6.8 provided that AEMO must not:

(i) audit a User’s compliance with paragraph (a) and, if paragraph (a) is not complied with, clause 8.6.8, in respect of more than 180 nomination days at any one time, or any nomination day that is more than 180 days before the date that the audit commenced; or

(ii) perform more than one audit of a User’s compliance with paragraph (a) and, if paragraph (a) is not complied with, clause 8.6.8 within any six month period, unless AEMO has reasonable suspicion that the User is not complying with paragraph (a) or clause 8.6.8.

(c) If a User receives a request from AEMO to provide information for the purposes of an audit under paragraph (b) then the User must provide that information to AEMO as soon as practicable after receiving the request.

(d) Each User agrees that, notwithstanding any contrary provision in these Procedures or other contract, arrangement or understanding between it and a Network Operator, the Network Operator is entitled to provide to AEMO the User’s forecast requirement or confirmed nomination data if requested by AEMO for the purposes of an audit under paragraph (b).

8.6.7 User May Apply for Forecast Change in Linepack Amount

(a) A User may at any time request AEMO to provide it with an FCLP amount for use in its nominations for gas days immediately after a non-business day in the ACTCanberra network section during the six month period ending on 31 March in a year.

(b) Notwithstanding paragraph (a) a User must not apply for a FCLP amount for use in its nominations in the ACTCanberra network section unless it intends routinely to use the FCLP amount in its nominations for gas days immediately after a non-business day in that network section.

(c) A request under paragraph (a) must include:
(i) the User's name;
(ii) a statement that the User is a FRO for one or more delivery points in the ACTCanberra network section;
(iii) the period during which the User wishes to use the FCLP amount, being a six month period ending on 31 March in a year; and
(iv) a statement that the User intends routinely to use the FCLP amount in its nominations for gas days immediately after a non-business day in that network section.

(d) If a User makes a request under paragraph (a) in relation to the ACTCanberra network section, the User is deemed to have authorised the Network Operator to provide to AEMO the User's aggregate MDQ for that network section.

(e) If AEMO receives a request under paragraph (a) it may request the Network Operator to provide it with a User's aggregate MDQ for a network section and the Network Operator must provide that data to AEMO within 2 business days of receiving the request.

(f) Within 10 business days of receiving a request from a User in the form required by paragraph (c) AEMO must calculate, using the FCLP amount calculation methodology, and provide to the User an FCLP amount that is valid for use in the period specified under paragraph (c)(iii). For the avoidance of doubt, AEMO will not issue a User in the ACTCanberra network section with an FCLP amount that is valid for use in that network section in the six month period ending on 30 September in a year.

(g) AEMO must ensure that at any time there is an industry approved methodology to enable AEMO to calculate an FCLP amount for a User as required under this clause 8.6.7 (FCLP amount calculation methodology). The FCLP amount calculation methodology must result in an FCLP amount that is an absolute value. AEMO will publish the FCLP amount calculation methodology.

8.6.8 Use of FCLP Amounts in Nominations

A User will not be in breach of clause 8.6.6(a) if:

(a) the relevant User's request to its shipper or shippers is in respect of a network receipt point on the ACTCanberra network section;
(b) the relevant nomination day is a gas day immediately after a non-business day;
(c) the difference between the amount of gas the User requests its shipper or shippers to supply to a network receipt point on the relevant nomination day and its confirmed nomination for the network receipt point for that nomination day is not more than the User's change in share of linepack notified to the User under clause 8.6.4(a)(ii); and
(d) the total amount of gas the User requests its shipper or shippers to supply to a network receipt point on the relevant nomination day is greater than or equal to the sum of the User's forecast requirement for the network receipt point for the nomination day and the User's applicable FCLP amount.

8.6.9 FCLP Validity Criteria

(a) AEMO must ensure that at any time there is an industry approved methodology to determine the FCLP validity criteria.

(b) At any time after the date of determination under paragraph (a) a Participant may request AEMO to consider whether one or more of the FCLP validity criteria continues to be met or is appropriate. AEMO must consider a request under this paragraph (b) as soon as practicable.
(c) Subject to paragraph (d) AEMO may from time to time amend the *FCLP validity criteria* on 10 business days prior notice to *Participants*.

(d) AEMO must not amend the *FCLP validity criteria* without the consent of the Network Operator for the ACTCanberra network section.

(e) Subject to paragraph (f), AEMO may, on not less than 10 business days’ notice to *Participants*, determine that clauses 8.6.7 and 8.6.8 will cease to be effective on a date determined by AEMO.

(f) AEMO may only make a determination under paragraph (e) if in its reasonable opinion one or more of the *FCLP validity criteria* is no longer met.

(g) AEMO must publish the *FCLP validity criteria* or amended *FCLP validity criteria* (as the case may be) as soon as practicable after a determination under paragraph (a) or (c).

8.6.10 **Maintenance of Data by the Network Operator**

The Network Operator must ensure that forecast withdrawal data for each User for each nomination day for each network section is maintained for at least two years in a readily accessible format.

8.6.11 **Variation or Suspension of Nomination Process for Emergency Supply Situations**

(a) The Network Operator may determine that an emergency supply situation has occurred in a network section on a nomination day (*emergency supply situation*). The situations in which the Network Operator may determine that an emergency supply situation has occurred include, but are not limited to, situations in which the Network Operator or another person has been required to instigate load shedding in order to ensure that supply is maintained in a network section following a failure or constraint in a part or parts of the supply chain.

(b) If the Network Operator determines that an emergency supply situation has occurred on a nomination day then:

(i) the Network Operator may vary or suspend the nomination process set out in clauses 8.6.1 to 8.6.5 for affected nomination days and the Network Operator will agree a replacement process for nominations with the relevant pipeline operator for the affected network sections. The Network Operator or pipeline operator will advise the affected Users and shippers of the new arrangements as soon as practicable;

(ii) the Network Operator must notify AEMO as soon as practicable (but in any event no later than the next business day after the day on which the Network Operator determined that the emergency supply situation occurred) of the date on which the emergency supply situation occurred, and the affected network section; and

(iii) the Network Operator must notify AEMO as soon as practicable (but in any event no later than the next business day after the day on which the emergency supply situation ceases) of the date on which the emergency supply situation ceased.

(c) For the avoidance of doubt where an emergency supply situation continues for more than one consecutive nomination day then the Network Operator will have met its obligation under paragraph (b)(i) to notify AEMO if it does so in relation to the first of the consecutive days only.

8.7 **Variations to Nominations Timetable**

8.7.1 **Effect of Variation to Nominations Timetable**

(a)Clauses 8.5 and 8.6 set out the process and timeframes with which *Participants* must comply in relation to the exchange of *nominations information* with each other,
transmission pipeline operators, shippers, and AEMO. The timeframes for exchange of nomination information may be varied under this clause 8.7.

(b) If a new nominations timetable comes into effect in accordance with this clause 8.7 then Participants must comply with clause 8.5 or 8.6 (as applicable in the relevant network section) as if:

(i) the timeframes for exchange of nominations information are the timeframes set out in the new nominations timetable; and

(ii) in all other respects the requirements of clauses 8.5 and 8.6 remain unchanged.

8.7.2 Network Operator and Transmission Pipeline Operator may Propose Variation

(a) The Network Operator with the concurrence of relevant transmission pipeline operators in a network section, in accordance with paragraphs (b) or (d), propose a new timetable for exchange of nominations information in that network section (new nominations timetable) that is different from the timetable currently in effect.

(b) If the Network Operator and transmission pipeline operators in a network section wish to introduce a new nominations timetable and:

(i) the timeframes for the Network Operator to provide nominations information under the proposed new nominations timetable are not later than the timeframes specified in either clause 8.5 or 8.6 or any previously varied nominations timetable in effect at that time in the relevant network section; and

(ii) the proposed new nominations timetable would not require a User to prepare and provide nominations information sooner after receipt of nominations information from the Network Operator than required in either clause 8.5 or 8.6 (as applicable), then the Network Operator must notify AEMO of the proposed new nominations timetable.

(c) As soon as practicable but in any event no later than one business day after it receives a notice from a Network Operator under paragraph (b), AEMO will notify all Users in the relevant network section that the new nominations timetable will come into effect on the effective date specified in the notice. The effective date must be the later of a date specified by the Network Operator in its notice under paragraph (b)) or 5 business days after the date of the notice provided under this paragraph (c).

(d) If the Network Operator and transmission pipeline operators in a network section wish to introduce a new nominations timetable that does not meet the criteria in paragraph 8.7.3(b), then the Network Operator must notify all Users in the relevant network section, and AEMO of the proposed new nominations timetable.

8.7.3 User May Object

(a) No later than 10 business days after the date of a notice under clause 8.7.2(d), a User in a network section in which the new nominations timetable would apply may object to that proposed timetable by notice provided to the Network Operator and AEMO. The notice must set out the basis for the User’s objections to the new nominations timetable, which must be consistent with paragraph (b).

(b) A User may object to the new nominations timetable under paragraph (a) if it is of the view (based on a reasonable assessment of its circumstances) that the timeframes provided in the proposed timetable:

(i) would put that User in breach of or give rise to a material financial disadvantage under an existing gas supply agreement or transportation agreement; or

(ii) would not provide the User with adequate time to prepare and provide nominations information.
8.7.4 AEMO Impact Assessment

No later than 10 business days after the date of a notice under clause 8.7.2(d), AEMO must undertake an assessment of how the introduction of the new nominations timetable would impact AEMO. The assessment must include:

(a) whether AEMO would be required to change its systems or processes as a result of the new nominations timetable;

(b) if AEMO was required to change its systems or processes as a result of the new nominations timetable, the likely costs associated with such changes; and

(c) whether the introduction of the new nominations timetable would increase the likelihood of a breach of the Procedures by AEMO.

8.7.5 Determination if no Objection from Users

(a) If no objections are received from Users within the period specified in clause 8.7.3(a), then as soon as reasonably practicable after the completing its assessment under clause 8.7.4 AEMO must determine whether the proposed new nominations timetable should come into effect in the relevant network section, having regard to the impacts on AEMO identified in that assessment.

(b) As soon as practicable but in any event no later than 3 business days after the determination under paragraph (a) AEMO will notify the relevant Network Operator and each User of:

(i) whether or not the new nominations timetable will come into effect; and

(ii) if the new nominations timetable will come into effect, the date it will come into effect. The effective date specified in the notice must be no earlier than 5 business days after the date of the notice provided under this paragraph (b).

8.7.6 Determination if User Objects

(a) If a User gives notice of an objection within the period specified in clause 8.7.3(a), then, as soon as practicable but in any event no later than 3 business days after the end of that period, the Network Operator must notify AEMO either that it is withdrawing the proposed new nominations timetable or that it believes the objections received are not reasonable.

(b) If the Network Operator notifies AEMO under paragraph (a) that it is withdrawing the proposed new nominations timetable, AEMO must as soon as practicable but in any event no later than 3 business days after receipt of a notice under paragraph (a), notify each User in the relevant network section that the new nominations timetable will not come into effect in the relevant network section.

(c) If the Network Operator notifies AEMO under paragraph (a) that it believes the objections to the new nominations timetable are not reasonable then as soon as practicable, but in any event no later than 3 business days after receipt of a notice under paragraph (a), AEMO must notify the Network Operator and each User in the network section that:

(i) the issue of whether the new nominations timetable should come into effect in the relevant network section will be referred to AEMO for determination; and

(ii) if the Network Operator or a User wishes to make submissions to AEMO in relation to the issue of whether the new nominations timetable should come into effect in the relevant network section, they must provide those submissions to AEMO within 10 business days of receiving a notice under this paragraph (c)(ii) (“Submission Period”).

(d) As soon as reasonably practicable but in any event not later than 3 business days after the end of the Submission Period, AEMO must determine whether the proposed new
nominations timetable should come into effect in the relevant network section, having regard to the information provided in User objections and Network Operator submissions.

(e) As soon as practicable but in any event not later than 3 business days after AEMO’s determination under paragraph (d), AEMO will notify the relevant Network Operator and each User of:

(i) whether or not the new nominations timetable will come into effect; and

(ii) if the new nominations timetable will come into effect, the date it will come into effect. The effective date specified in the notice must be no earlier than ten business days after the date of the notice provided under this paragraph (e).

8.7.7 Publication of New Nominations Timetable
AEMO must publish a new nominations timetable on its website not later than the day on which it comes into effect under clauses 8.7.2(b), 8.7.5 or 8.7.6.

8.8 Imbalances (No OBA Network Sections)

8.8.1 Cumulative Participant Imbalance

(a) The Network Operator will provide AEMO with each User’s provisional daily imbalance for each network section for a nomination day by 3.00 pm on nomination day +2. If the Network Operator does not provide a User’s provisional daily imbalance for a network section by that time, AEMO will assume the User’s provisional daily imbalance for that network section is zero.

(b) AEMO must calculate for each User in each network section, the User’s provisional cumulative imbalance for a nomination day (in MJ) by adding the User’s provisional daily imbalance for the nomination day to its provisional cumulative imbalance from the day before the nomination day. The cumulative imbalance continues from one month to the next.

(c) The Network Operator will provide AEMO with each User’s revised daily imbalance for each network section for each nomination day in a month by 9.00 am on the 5th business day after the 15th day of the following month. If the Network Operator does not provide a User’s revised daily imbalance for a network section for each nomination day in a month by that time, AEMO will assume that the User’s revised daily imbalance is the same as the User’s provisional daily imbalance.

(d) AEMO must calculate for each nomination day for each User in each network section, the User’s revised cumulative imbalance (in MJ) by adding the User’s revised daily imbalance for nomination day to its revised cumulative imbalance from the day prior to nomination day.

(e) AEMO will calculate the difference between the revised cumulative imbalance at the end of the previous month and the provisional cumulative imbalance at the end of the previous month. The difference will be included in the next day’s User’s provisional cumulative imbalance for the current month.

(f) By no later than the 7th business day after the 15th day of the following month, AEMO will notify each User of the following information for each network section for each nomination day:

(i) the User’s revised daily cumulative imbalance;

(ii) the User’s matched trades of cumulative imbalance under clause 8.8.3;

(iii) the User’s revised daily cumulative imbalance for each day in the month after an agreed trade.
8.8.2 User to use Reasonable Endeavours to Remain in Balance

(a) A User must use its reasonable endeavours to maintain a cumulative imbalance for each network section of zero.

(b) If a User’s cumulative imbalance exceeds the limit in clause 8.8.6(b) as a result of the transfer to the User of some or all of another User’s cumulative imbalance under clause 8.8.5 then the User will not be in breach of paragraph (a) provided that it uses its reasonable endeavours to bring its cumulative imbalance within the limit in clause 8.8.6(b) within a reasonable period of time after the transfer under clause 8.8.5.

8.8.3 Users May Trade Imbalances

(a) A User may trade all or part of its cumulative imbalance in a network section on a nomination day with another User. A trade may be proposed by a User at any time on a day for the next nomination day.

(b) Following a trade referred to in paragraph (a), the buying User and the selling User must notify AEMO of:

(i) the identity of the buying User and selling User;

(ii) the relevant network section;

(iii) the relevant nomination day; and

(iv) the quantity of cumulative imbalance traded (in whole MJ).

(v) On receipt of a notification from a User under paragraph (b), AEMO must confirm that:

(vi) the selling User’s provisional cumulative imbalance for the relevant nomination day is greater or equal to the quantity of cumulative imbalance that the User proposes to trade on that day;

(vii) if the trade is notified by a selling User, it matches a trade notified by a buying User and vice versa; and

(viii) the proposed trade would not increase either trading party’s cumulative imbalance for the relevant nomination day.

(c) If AEMO can confirm the matters referred to in paragraph (c) then it will:

(i) in respect of trades notified before 5.00 pm on the day, notify both Users that their trade has been matched by 6.00 pm on the day;

(ii) in respect of trades notified on or after 5.00 pm on the day, notify both Users that their trade has been matched by 6.00 pm on the next business day; and

(iii) notify both Users of their adjusted provisional cumulative imbalances after a matched trade.

(d) If AEMO cannot confirm the matters referred to in paragraph (c) then:

(e) in respect of trades notified before 5.00 pm on the day, notify the User by 6.00 pm on the day of any unmatched trades and cancel the unmatched trades; and

(f) in respect of trades notified on or after 5.00 pm on the day, notify the User of the unmatched trade by 6.00 pm on the next business day and cancel the unmatched trades.

(g) Trades are permitted by this clause 8.8.3 based on a User’s provisional cumulative imbalance for a nomination day and will remain valid irrespective of whether the User’s revised cumulative imbalance for that nomination day is different from its provisional cumulative imbalance.
8.8.4 Users May Vary Nominations

(a) By 12.00 noon on nomination day -8, a User may, by notice, apply to AEMO to include in the User's forecast requirement for a network section on the nomination day an amount for imbalance correction purposes (a participant imbalance amount) (in whole MJ). A User may not request a participant imbalance amount that is negative and could reasonably be expected to be greater in magnitude than the User's forecast withdrawal for the network section on the nomination day.

(b) Upon receipt of a notice from a User under paragraph (a), AEMO must determine a participant imbalance amount that the User may include in its forecast requirement for a network section on the nomination day, on the basis that:

(i) the amount for the User in a network section does not exceed the amount applied for under paragraph (a); and

(ii) the total of the participant imbalance amounts for all Users in a network section for a nomination day equals zero.

(c) AEMO will determine the participant imbalance amount in accordance with an algorithm approved by AEMO.

(d) By 3.00 pm on nomination day -8, AEMO must notify the User of the participant imbalance amount that the User must include in its forecast requirement for a network section for the nomination day. The participant imbalance amount will be included in the daily imbalance for the nomination day.

8.8.5 Existing User May Transfer Imbalance

(a) A User that is not a FRO for any delivery points in a network section may apply to AEMO to transfer all or part of its transferable cumulative imbalance to another User or Users (each a “recipient”), provided that the recipient is the FRO for at least one delivery point in the relevant network section.

(b) The first day that a User can apply to transfer all or part of its transferable cumulative imbalance in a network section to a recipient is the 8th business day after the 15th day of the month after the month in which the transferring User ceased to be a FRO for any delivery points in the relevant network section.

(c) An application under paragraph (a) must include the following information:

(i) the date on which the User ceased to be the FRO for any delivery points in the relevant network section;

(ii) the amount of the User’s transferable cumulative imbalance that it seeks to transfer (“CI transfer amount”);

(iii) the name of each proposed recipient. If there is more than one proposed recipient, then the application must specify what percentage of the User’s CI transfer amount is to be transferred to each proposed recipient and the total of those percentages must equal 100%. Each proposed recipient must be the FRO for at least one delivery point in the relevant network section;

(iv) the nomination day on which the transfer is to take place, which must be no earlier than seven business days after the date that the User makes an application under paragraph (a);

(v) a notice from each of the proposed recipients to AEMO stating that it has agreed to the transfer to it of the whole or a specified percentage of the CI transfer amount on the day specified under paragraph (c)(iv); and
(vi) if the likely effect of the transfer would be that the proposed recipient’s cumulative imbalance would exceed the limits specified under clause 8.8.6(b), the proposed recipient's plan for reducing that imbalance.

(d) Within one business day of receiving an application under paragraph (a) AEMO must:

(i) provide a report confirming whether the applicant and each proposed recipient specified in the application under paragraph (a) is the FRO for any delivery points in the relevant network section, and identifying any delivery points in the relevant network section in respect of which there is an:

(A) open transfer request initiated by the applicant; or

(B) open transfer error correction request relating to a genuine transfer error where the applicant is the previous FRO; and

(ii) provide the applicant's revised cumulative imbalance for the last nomination day of the month in which the applicant ceased to be the FRO in the relevant network section.

(e) Within 2 business days of completing the steps under paragraph (d), AEMO must notify the applicant:

(i) whether the application to transfer the transferable cumulative imbalance has been accepted;

(ii) if the application has not been accepted, the reason why; and

(iii) if the application has been accepted:

(iv) the amount of transferable cumulative imbalance that will be transferred to each proposed recipient; and

(v) the date for the transfer of the transferable cumulative imbalance, as specified under paragraph (c)(iv).

(f) AEMO must not accept an application to transfer a User's transferable cumulative imbalance unless:

(i) the application made under paragraph (a) does not contain the information required by paragraph (c);

(ii) the applicant’s transferable cumulative imbalance is zero;

(iii) the applicant's is the FRO for one or more delivery points in the relevant network section;

(iv) there is an open transaction of the type referred to in paragraph (d)(i)(B); or

(v) a proposed recipient is not the FRO for at least one delivery point in the relevant network section.

(g) If under paragraph (e) the application to transfer the applicant’s transferable cumulative imbalance has been accepted by AEMO, then AEMO must on the date specified under paragraph (c)(iv):

(i) add the amount of cumulative imbalance notified under paragraph (e)(iv) to each recipient’s cumulative imbalance;

(ii) notify the applicant and each recipient that the transfer has been completed; and

(iii) notify each recipient of its adjusted provisional cumulative imbalance after the transfer.
8.8.6 User to be Notified

(a) If a User's cumulative imbalance at the end of a month exceeds the limit referred to in paragraph (b), AEMO may, by notice to the User, require the User to increase, limit or suspend deliveries of gas into, or withdrawals of gas from the network section so as to return the User's cumulative imbalance to within that limit.

(b) For the purposes of paragraph (a) the cumulative imbalance limit is the greater of:

(i) 30% of the average daily quantity withdrawn from the network section by or on behalf of a User during the relevant month; and

(ii) five TJ of gas.

(c) A notice under paragraph (a) must include:

(i) the date of measurement of the User's cumulative imbalance;

(ii) the network section to which the cumulative imbalance relates;

(iii) the level of cumulative imbalance (expressed as a percentage of the average daily quantity withdrawn from the network section by or on behalf of the User during that month);

(iv) the percentage limit for cumulative imbalance which the User has exceeded;

(v) whether AEMO requires the User to increase, limit or suspend deliveries of gas into, or withdrawals of gas from the network section; and

(vi) a timescale for the preparation and agreement of the plan referred to in paragraph (d).

(d) Upon receipt of a notice under paragraph (a), a User must use its reasonable endeavours to prepare and agree with AEMO on a reasonable plan to reduce the User's cumulative imbalance to within the limit referred to in paragraph (b).

(e) The plan referred to in paragraph (d) will include the:

(i) timescale for the plan (e.g. 2 calendar months);

(ii) target percentage cumulative imbalance to be achieved within the timescale;

(iii) times during the plan period at which the User's progress against the plan will be monitored; and

(iv) the consequences of a failure by a User to reduce cumulative imbalance in accordance with the plan,

(v) and may include action by a User under clauses 8.8.3 or 8.8.4.

(f) The notice under paragraph (a) and the plan agreed under paragraph (d) will be sent by AEMO to the User (at the address provided to AEMO and will be copied to the Network Operator.

(g) If a User and AEMO fail to prepare and agree on a reasonable plan referred to in paragraph (d) within a reasonable period, AEMO may impose a plan upon the User to reduce the User's cumulative imbalance. The plan imposed will include the information referred to in paragraph (e).

8.8.7 User Fails to Reduce Cumulative Imbalance

If a User fails to reduce its cumulative imbalance in accordance with a plan agreed under clause 8.8.6(d) or imposed under clause 8.8.6(g), AEMO may direct the Network Operator to vary the quantities of gas received, transported and delivered to or on behalf of the User. The direction to the Network Operator will take the form of the submission of a participant imbalance amount for that User at that network section by AEMO, subject always to the requirement that
on any day, the participant imbalance amounts nominated by or on behalf of all Users must equal zero when calculated using the algorithm referred to in clause 8.8.4(c).

8.8.8 AEMO to Correct Divergent Cumulative Imbalances

(a) For each network section AEMO must calculate the amount of divergence between the aggregate of cumulative imbalances provided to Users under clause 8.8.1(f) and the change in the linepack position as advised by the Network Operator at the request of AEMO between the last day of the previous correction period and the last day of the current correction period.

(b) AEMO must carry out the calculation described in paragraph (a):
   (i) at six-monthly intervals;
   (ii) as soon as practicable after any User ceases to be a FRO for any network section; and
   (iii) as soon as practicable after:
         (A) any no OBA network section becomes an OBA network section; or
         (B) there is any other change to balancing arrangements, as provided for under the relevant applicable access arrangement, which has the result that the relevant network section is to be treated as an OBA network section under these Procedures.

(c) AEMO may also perform a calculation in accordance with paragraph (a) if it becomes aware, or has reasonable grounds to believe, that the divergence as calculated under paragraph (a) is likely to exceed 10 TJ of gas.

(d) If any calculation carried out under paragraph (b) shows an amount of divergence that is greater than 10 TJ, AEMO must calculate a correction amount for each User that is a FRO for at least one delivery point in a network section during the correction period.

(e) AEMO must calculate the amount of divergence in cumulative imbalances under paragraphs (a) to (c) and the correction amounts under paragraph (d) using the methodology that it develops for that purpose. AEMO may amend the methodology from time to time after consultation with Participants.

(f) AEMO and the Network Operator must co-operate to facilitate the development of a methodology under paragraph (e) and assist AEMO to apply this methodology to correct divergent cumulative imbalances as set out in the methodology.

(g) AEMO must include the correction amounts in the relevant Users’ revised cumulative imbalances as soon as practicable after receiving the correction amounts.

(h) As soon as practicable following the provision of the correction amounts AEMO must provide each User for which it has calculated a correction amount under paragraph (d) with its correction amount and the data used to calculate it.

8.8.9 Recovery from (No OBA) Imbalances Failure

If for any period of time on a day that is not a business day, AEMO cannot perform its obligations under this clause 8.8 because of failure of the metering database ("system down time"), then:

(a) on the next business day after the day on which the system down time occurred AEMO must commence work to rectify the system failure; and

(b) following rectification of the system failure:
   (i) AEMO may request the Network Operator to resend to AEMO any information sent to AEMO but not received by AEMO as a result of the system down time;
(ii) the Network Operator must, as soon as practicable, send the information referred to in paragraph (b)(i) to AEMO; and

(iii) AEMO must, as soon as practicable after receiving that information from the Network Operator, perform the obligations that could not be performed because of the system down time.

8.9 Estimation and Reconciliation (No OBA and OBA Network Sections)

8.9.1 Net Section Load

(a) On nomination day +1, AEMO must calculate the net section load for each network section for the nomination day in accordance with the following formula:

\[
\text{NSL} = \text{TDQ} - \text{TDM} - \text{UAG} - \text{CLP}
\]

If NSL < 0 then set NSL = 0

Where:

- NSL = net section load for nomination day (in MJ);
- TDQ = total quantity of gas injected (in MJ) at all network receipt points within the network section for the nomination day;
- TDM = total quantity of gas withdrawn (in MJ) from all daily metered delivery points within the network section for the nomination day;
- UAG = unaccounted for gas (in MJ) for the network section for the nomination day; and
- CLP = change in linepack (in MJ) for the network section for the nomination day.

(b) If AEMO has not received the relevant data for a daily metered delivery point as required under clause 3.6.6 to calculate the net section load for a network section, AEMO must estimate the consumption of that delivery point by adopting one of the following methods:

(i) where metering data is available for the delivery point for at least the previous seven days, then AEMO must adopt an estimation based on the data from the corresponding period in the previous week;

(ii) where metering data is available for the delivery point for at least the previous day, but for less than the previous seven days, then AEMO must adopt an estimation based on the data from the previous day; or

(iii) where no metering data is available for the delivery point for the previous day, then AEMO must adopt a consumption figure of zero.

(c) The Network Operator will provide TDQ, UAG and CLP (as defined in paragraph (a)) to AEMO by 3.00 pm on nomination day +1 in order to enable AEMO to calculate net section load under paragraph (a). TDM (as defined in paragraph (a)), is part of the data provided under clause 3.6.6(c).

(d) Notwithstanding paragraph (c), a failure by the Network Operator to provide TDQ, UAG and CLP (as defined in paragraph (a)) to AEMO by 3.00 pm on nomination day +1 will not constitute a breach of paragraph (c) unless:

(i) if nomination day +1 is a business day, the Network Operator failed to comply with paragraph (c) on at least two previous business days in the same month;

(ii) if nomination day +1 is not a business day, the Network Operator failed to comply with paragraph (c) on at least three previous non business days in the same month; or
(iii) nomination day +1 is the 4th consecutive day that the Network Operator has failed to comply with paragraph (c).

(e) AEMO must validate the data provided under paragraph (c) by confirming each of the following matters:

(i) that either:
   (A) TDQ (as defined in paragraph (a)) provided for a network section is within the TDQ validation range for that network section determined by AEMO under paragraph (h); or
   (B) no TDQ validation range has been determined by AEMO under paragraph (h) for the relevant network section; and

(ii) that either:
   (A) UAG (as defined in paragraph (a)) provided for a network section is within the UAG validation range for that network section determined by AEMO under paragraph (h); or
   (B) no UAG validation range has been determined by AEMO under paragraph (h) for the relevant network section; and

(iii) that either:
   (A) CLP (as defined in paragraph (a)) provided for a network section is within the CLP validation range for that network section determined by AEMO under paragraph (h); or
   (B) no CLP validation range has been determined by AEMO under paragraph (h) for the relevant network section.

(f) If AEMO cannot confirm any of the matters listed in paragraph (e) then that data provided under paragraph (c) will be rejected.

(g) If:

(i) the data provided under paragraph (c) is rejected because AEMO is unable to confirm the matters in paragraph (e); and

(ii) the Network Operator confirms in writing to AEMO that the TDQ, UAG or CLP data provided by it is correct, then AEMO may accept TDQ, UAG or CLP data (as the case may be) notwithstanding paragraph (e).

(h) AEMO may determine and notify in respect of each network section:

(i) a TDQ validation range;

(ii) a UAG validation range; and

(iii) a CLP validation range.

Each of the TDQ, UAG and CLP validation ranges determined by AEMO must be the positive and negative values of one absolute TDQ, UAG or CLP value (as the case may be). The validation ranges determined under this paragraph (h) will be used by AEMO for the purposes of the validations under paragraph (e).

(i) AEMO will adopt such processes as it sees fit for determining appropriate TDQ, UAG and CLP validation ranges under paragraph (h).

(j) If the Network Operator does not provide information under paragraph (c), or that data is rejected under paragraph (f) (and not accepted under paragraph (g)), then AEMO must estimate the missing items of data in accordance with the following rules:
(i) UAG – use the value from the previous day as an estimate;
(ii) CLP – use zero as an estimate; and
(iii) TDQ – use the NSL from the same day in the previous week, plus the TDM for the nomination day, plus the UAG for the nomination day (if known, otherwise the UAG from the previous day), plus the CLP for the nomination day (if known, otherwise zero).

8.9.2 Total Daily Withdrawals
On nomination day +1, AEMO must determine, for each User in a network section, the total quantity of gas withdrawn for that nomination day from all daily metered delivery points for which the User is responsible.

8.9.3 Apportionment Factor for Non-daily Metered Delivery Points
On nomination day +1, AEMO must calculate an apportionment factor for each active non-daily metered delivery point within the network section included in AEMO's metering database for the nomination day in accordance with the following formula:

\[ AF = \frac{T}{SNSL} \]

Where:
- \( AF \) = apportionment factor for the non-daily metered delivery point within the network section for the nomination day;
- \( T \) = total withdrawals (in MJ) that have been measured or estimated for the non-daily metered delivery point over a period to be determined from time to time by AEMO (provided that the last day of that period will be no later than nomination day –1); and
- \( SNSL \) = sum of the net section loads (in MJ) calculated (and where relevant subsequently revised) each gas day for the network section in which the non-daily metered delivery point is located over the same period of time as that used for ‘T’.

The total of the apportionment factors for all such active non-daily metered delivery points for a nomination day should be normalised.

8.9.4 Base Loads for New Delivery Points
(a) Prior to supplying gas to a new non-daily metered distribution supply point (for which AEMO holds no consumption history), the relevant Network Operator must notify AEMO of the base load for that non-daily metered delivery point.
(b) AEMO must adopt the base load provided by the Network Operator for the new delivery point.
(c) If a Network Operator fails to notify AEMO of the base load, AEMO must deem the base load of the new non-daily metered delivery point as one thousand MJ.
(d) AEMO must use the base load provided under paragraph (a) or the deemed base load under paragraph (c) to determine the apportionment factor for that new non-daily metered delivery point for the nomination day.

8.9.5 User's Percentage of Net Section Load
(a) On nomination day +1, AEMO must calculate, for each User in a network section, that User's percentage of the net section load for the nomination day (apportionment percentage).
(b) The sum of the apportionment percentages for all Users calculated under paragraph (a) must be 100%.
8.9.6 Estimated Withdrawal

On nomination day +1, AEMO must calculate an estimated withdrawal for each active non-daily metered delivery point in a network section for the nomination day in accordance with the following formula:

\[ EW = NSL \times AF \]

Where:

- \( EW \) = estimated withdrawal for the non-daily metered delivery point for the nomination day;
- \( NSL \) = net section load for the nomination day; and
- \( AF \) = apportionment factor for the non-daily metered delivery point for the nomination day.

8.9.7 Total of Estimated Withdrawals

On nomination day +1, AEMO must calculate, for each User in a network section, the total of the estimated withdrawals for the nomination day for each of that User’s non-daily metered delivery points within that network section.

8.9.8 Distributed Withdrawal

(a) AEMO must adopt the method in either paragraphs (b) or (c). The same method must be applied to all delivery points.

(b) If an actual meter reading (“latest read”) for a non-daily metered delivery point is received by AEMO, AEMO must determine the distributed withdrawal for each nomination day in the period from the last notified actual meter read to the latest read (including the day of the latest read) (“sculpting period”) in accordance with the following formula:

\[ DWL(A)_i = AQ \times SF(A)_i \]

Where:

- \( i \) = each nomination day in the sculpting period;
- \( DWL(A)_i \) = distributed withdrawal for each nomination day in the sculpting period;
- \( AQ \) = total actual quantity (in energy) withdrawn at the delivery point during the sculpting period. Estimated meter readings must not be used in any calculations; and
- \( SF(A)_i \) = the sculpting factor for each nomination day, which is determined by dividing the net section load for that nomination day by the sum of the net section loads for each nomination day during the sculpting period.

(c) If a latest read for a non-daily metered delivery point is received by AEMO, AEMO must determine the distributed withdrawal for each nomination day for the sculpting period (including the day of the latest read) in accordance with the following formula:

\[ DWL(B)_i = AQ \times SF(B)_i \]

Where:

- \( i \) = each nomination day in the sculpting period;
- \( DWL(B)_i \) = distributed withdrawal for a nomination day in the sculpting period;
- \( AQ \) = total actual quantity (in energy) withdrawn at the delivery point during the sculpting period. Estimated meter readings must not be used in any calculations; and
8.9.9 Total Distributed Withdrawals

AEMO must calculate, for each User, the total of the distributed withdrawals for the gas day for each of the User's non-daily metered delivery points within a network section.

8.9.10 Miscellaneous Reconciliation Amounts

(a) For each network section, AEMO may determine one or more miscellaneous reconciliation amounts for a nomination day for one or more Users in the network section.

(b) If AEMO is notified by the Network Operator under clauses 8.5.1(c)(ii) or 8.6.1(c)(iv) that the total of all Users' reconciliation adjustment amounts for a nomination day does not equal zero then AEMO will determine a miscellaneous reconciliation amount for each User that had a User's reconciliation adjustment amount on that nomination day. The miscellaneous reconciliation amount determined by AEMO must be equal to the User's reconciliation adjustment amount for the nomination day that AEMO used in its calculation under clause 8.9.12(c) but of the opposite sign.

(c) If AEMO determines one or more miscellaneous reconciliation amounts for a nomination day under paragraphs (a) or (b), it must notify each miscellaneous reconciliation amount by not later than 2 business days prior to the nomination day in respect of which AEMO wishes to incorporate the miscellaneous reconciliation amount under clause 8.9.12(a).

8.9.11 Reconciliation Amounts for Non-daily metered Delivery Points

(a) On nomination day +1, AEMO must determine the reconciliation amount for a non-daily metered delivery point for the nomination day in accordance with the following formula:

\[ RA_i = EWi - DWLi \]

Where:

- \( i \) = each gas day in the sculpting period;
- \( RA_i \) = reconciliation amount for a non-daily metered delivery point for gas day \( i \) in the sculpting period;
- \( EWi \) = the estimated withdrawal for the gas day; and
- \( DWLi \) = the distributed withdrawal for the gas day.

(b) The reconciliation amount on nomination day +1 will be zero for those non-daily metered delivery points for which no meter reading was received for the nomination day.

8.9.12 AEMO to Calculate User's Reconciliation Account Balance

On nomination day +1, for each User in each network section AEMO must carry out the following steps:

(a) calculate the User's total reconciliation amount for nomination day +1 in accordance with the following formula:

\[ TRA = \sum RA + \sum MRA \]

Where:

- \( RA_i \) = the sculpting factor for each nomination day in the sculpting period which is the reciprocal of the number of days in the period.

(d) AEMO must record the distributed withdrawal for each nomination day in the sculpting period.

(e) For the purposes of calculating the distributed withdrawal for a period for a delivery point, AEMO must use the most recent meter readings received for the delivery point.
TRÅ = the User's total reconciliation amount;

RA = reconciliation amounts determined under clause 8.9.11 for the nomination day for each of a User's non-daily metered delivery points in the network section plus the single revision to the User's total reconciliation amount for the nomination day as described in clause 8.9.17(a)(iii); and

MRA = each of the User's miscellaneous reconciliation amounts for the network section for the nomination day;

(b) calculate the User's reconciliation account balance at the beginning of nomination day +1 as the addition of the User's total reconciliation amount and the User's reconciliation account balance at the end of the nomination day; and

(c) calculate the User's reconciliation account balance at the end of nomination day +1 by adding the User's reconciliation adjustment amount for the nomination day determined under clause 8.9.13(a)(ii) to the User's reconciliation account balance at the beginning of nomination day +1.

8.9.13 AEMO to Provide Users with Monthly RAB Reduction Targets

(a) On the last calendar day of each month (M + 0), AEMO must determine and notify to each User a:

(i) monthly reconciliation account balance reduction target (monthly RAB reduction target) for the settlement period commencing on the 1st day of M +2. The monthly RAB reduction target is calculated under paragraph (b) and is the total amount of gas that the User is required to include in its forecast requirements for days during the settlement period that commences on the first nomination day of M +2 for the purposes of reconciling its reconciliation account balance; and

(ii) daily User reconciliation adjustment amount that the User must include in its forecast requirement for each day of the settlement period. The daily User reconciliation adjustment amount is calculated by dividing the monthly RAB reduction target by the number of days in the settlement period.

(b) AEMO will calculate a User's monthly RAB reduction target as follows:

(i) by calculating:

(A) the sum of all Users' positive reconciliation account balances as at the last nomination day of M +0; and

(B) the sum of all Users' negative reconciliation account balances as at the last nomination day of M +0,

and of the two amounts calculated under this paragraph (b)(i), that which is closer to zero is the available offsetting amount;

(ii) if the absolute value of each of the amounts calculated under paragraphs (b)(i) is equal then each User's monthly RAB reduction target will be equal to the User's reconciliation account balance as at the last nomination day of M +0 but of the opposite sign;

(iii) if the value of one of the amounts calculated under paragraph (b)(i) is zero then each User's monthly RAB reduction target will be zero and the daily User reconciliation adjustment amounts calculated under paragraph (a)(ii) will each be zero; and

(iv) if neither of sub-paragraphs (ii) or (iii) applies, then:

(A) if a User has a reconciliation account balance that is of the same sign as the available offsetting amount, then it will have a monthly RAB reduction target

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equal to the User's reconciliation account balance as at the last nomination day of M +0 but of the opposite sign; and

(B) the total monthly RAB reduction target of all Users that have reconciliation account balances that are not of the same sign as the available offsetting amount is equal to the available offsetting amount. AEMO will determine the monthly RAB reduction target for each such User (being its share of the available offsetting amount) by notionally applying the available offsetting amount as follows:

(1) the User with the largest reconciliation account balance, in absolute terms, takes all of the available offsetting amount until either the available offsetting amount is used up or the User's reconciliation account balance (after the application of the available offsetting amount) is equal to at least one other User's reconciliation account balance;

(2) where two or more Users have reconciliation account balances that are of the same amount, the Users equally share the available offsetting amount until the available offsetting amount is used up or each User's reconciliation account balance (after the application of the available offsetting amount) is equal to at least one other User's reconciliation account balance; and

(3) so on, until the available offsetting amount is used up.

8.9.14 Users’ Obligations
Provided it has not received a contrary direction from AEMO each User in a balanced network section must meet its monthly RAB reduction target and include in its forecast requirement the User reconciliation adjustment amount calculated by AEMO under clause 8.9.13.

8.9.15 AEMO to Attempt to Correct Negative Nominations
(a) If a User notifies AEMO of a negative forecast requirement as defined in clauses 8.5.2 or 8.6.2, then AEMO must immediately:

(i) inform the Network Operator associated with the affected network section that a negative forecast requirement has been received for that network section and nomination day; and

(ii) subsequently notify each of the Users that supply delivery points in the affected network section that a negative forecast requirement has been received.

(b) If requested by AEMO, the Network Operator must provide a list of all the FROs of delivery points in the affected network section.

(c) Upon receipt of a notification under paragraph (a)(iii) each relevant User must provide as soon as possible, and by no later than 4.00 pm on nomination day -2, its forecast requirement for the affected network section and for the affected nomination day to AEMO.

(d) When AEMO has received notification from each relevant User under paragraph (c), or at 4.00 pm on nomination day -2 (whichever occurs earlier), AEMO will immediately begin attempting to define a correcting amount for each User in the affected network section such that:

(i) each User in the affected network section will have a forecast requirement for the affected nomination day that is not less than zero (and, if possible, above zero);
the sum of each User’s reconciliation adjustment amounts and correcting amounts for each User in the affected network section for the affected nomination day is equal to zero; and

any Users that have a zero value for their User reconciliation adjustment amount will have a correcting amount equal to zero.

(e) After calculating a correcting amount for each User in the affected network section, AEMO must:

(i) calculate the corrected User’s reconciliation adjustment amount for each User in the affected network section on the affected nomination day by taking the User’s reconciliation adjustment amount for the nomination day, adding the correcting amount for the nomination day and subtracting any correcting amount for the previous nomination day;

(ii) as soon as possible, but in any event by no later than 5.00 am on nomination day - 1, notify each User in the affected network section of the User’s corrected reconciliation adjustment amount; and

(iii) as soon as possible, but in any event by no later than 5.00 am on nomination day - 1, notify the Network Operator of the total estimated withdrawal and corrected reconciliation adjustment amount for each User in the affected network section.

(f) If AEMO cannot define a correcting amount for each User under paragraph (d) either because no solution is possible or because there was not enough time to reach a solution, then AEMO may determine that some or all of a User’s reconciliation adjustment amount and/or participant imbalance amount for the relevant nomination day will not be taken into account in calculating that User’s forecast requirement for that day, such that no User has a negative forecast requirement for that day. In making a determination under this paragraph (f), AEMO must ensure that:

(i) the sum of all Users’ reconciliation adjustment amounts for the relevant nomination day and network section, as adjusted by AEMO under this paragraph (f), is equal to zero; and

(ii) the sum of all Users’ participant imbalance amounts for the relevant nomination day and network section, as adjusted by AEMO under this paragraph (f), is equal to zero.

(g) If AEMO makes a determination under paragraph (f) that some or all of a User’s reconciliation adjustment amount and/or participant imbalance amount for the relevant nomination day will not be taken into account in calculating that User’s forecast requirement for that day, AEMO must:

(i) as soon as possible, notify each User in the affected network section of the User’s reconciliation adjustment amount and participant imbalance amount that will be taken into account in calculating that User’s forecast requirement for the nomination day (the “adjusted reconciliation adjustment amount” and “adjusted participant imbalance amount”). An adjusted reconciliation adjustment amount or adjusted participant imbalance amount will not be recorded in the metering database;

(ii) as soon as possible, notify the Network Operator of the total estimated withdrawal and adjusted reconciliation adjustment amount and adjusted participant imbalance amount; and

(iii) agree and implement a plan with each User and for the purposes of paragraph (g)(iii)(A) the relevant Network Operator, in the affected network section with the aim of making each User’s:
(A) reconciliation account balance recorded in the AEMO metering database consistent with the reconciliation account balance calculated by AEMO (taking into account the adjusted reconciliation adjustment amount referred to in paragraph (g)(i); and

(B) cumulative imbalance recorded in the AEMO metering database consistent with the cumulative imbalance calculated by AEMO (taking into account the adjusted participant imbalance amount referred to in paragraph (g)(i).

8.9.16 Withdrawal Quantity under the Jemena Access Arrangement

(a) For the purposes of Jemena’s applicable access arrangement, the withdrawal quantity for a User for all of its non-daily metered delivery points on a nomination day is the User’s total estimated withdrawal plus the User’s reconciliation adjustment amount for that nomination day.

(b) On any day, if a notification under clause 8.10.2 is not issued, then Jemena may in relation to each User of its network, estimate a withdrawal quantity in relation to that User’s non-daily metered delivery points.

8.9.17 Revision of Net Section Load and other Calculations

(a) AEMO must revise the net section load for a previous nomination day (up to previous 364 days) due to:

(i) adjustments made to the measurement of the total quantity of gas injected at network receipt points within the network section on that previous nomination day;

(ii) adjustments made to the measurement of the total quantity of gas withdrawn from all daily metered delivery points within the network section on that previous nomination day; or

(iii) error corrections made in accordance with Chapter 11.

(b) AEMO must revise the distributed withdrawal for a non-daily metered delivery point for a previous nomination day (up to previous 364 calendar days) due to adjustments made to the measurement of the quantity of gas withdrawn from the non-daily metered delivery point within the network section on the previous nomination day.

(c) The revisions referred to in paragraphs (a) and (b) must be carried out on each day for all adjustments that AEMO has received since the previous day.

(d) Where the net section load for a network section for a nomination day and/or the distributed withdrawal for a non-daily metered delivery point has been revised, AEMO must also revise, where relevant:

(i) for each non-daily metered delivery point in the network section for that nomination day, the estimated withdrawal, distributed withdrawal and reconciliation amount;

(ii) for each User in the network section for that nomination day, the total estimated withdrawal and User’s total reconciliation amount; and

(iii) for each User in the network section, the single change to the User’s total reconciliation amount resulting from all new adjustments.

8.9.18 Existing User may Transfer Reconciliation Account Balance

(a) A User that is not a FRO for any delivery points in a network section may apply to AEMO to transfer all or part of its transferable reconciliation account balance to another User or Users (each a “recipient”) provided that the recipient is the FRO for at least one delivery point in the relevant network section.
(b) The first day that a User can apply to transfer all or part of its transferable reconciliation account balance in a network section to a recipient is the 8th business day after the 15th day of the month after the month in which the transferring User ceased to be a FRO for any delivery points in the relevant network section.

(c) An application under paragraph (a) must include the following information:

(i) the date on which the User ceased to be a FRO for any delivery points in the relevant network section;

(ii) the amount of the User’s transferable reconciliation account balance that it seeks to transfer (“RA transfer amount”);

(iii) the name of each proposed recipient, which must be the FRO for at least one delivery point in the relevant network section and, if there is more than one proposed recipient, what percentage of the User’s RA transfer amount is to be transferred to each proposed recipient (the total to equal 100%);

(iv) the nomination day on which the transfer is to take place, which must be no earlier than seven business days after the date that the User makes an application under paragraph (a); and

(v) a notice from each of the proposed recipients to AEMO stating that it has agreed to the transfer to it of the whole, or a specified percentage of, the RA transfer amount on the day specified under paragraph (iv).

(d) On receiving an application under paragraph (a) AEMO must:

(i) confirm whether the applicant and each proposed recipient specified in the application under paragraph (a) is the FRO for any delivery points in the relevant network section; and

(ii) identify any delivery points in the relevant network section in respect of which there is an open transfer request initiated by the applicant, or an open transfer error correction request relating to a genuine transfer error where the applicant is the previous FRO; and

(iii) confirm the applicant’s reconciliation account balance for the relevant network section for the nomination day on which the application for transfer was made under paragraph (a).

(e) Within 5 business days of receiving an application under paragraph (a), AEMO must notify the applicant either:

(i) that the application has not been accepted, and the reason why; or

(ii) that the application has been accepted, with the following details:

(A) the amount of transferable reconciliation account balance that will be transferred to each proposed recipient; and

(B) the nomination day on which the transfer of the transferable reconciliation account balance will occur, as specified under paragraph (c)(iv); and

(C) any miscellaneous reconciliation amount under clause 8.9.10 to be included in AEMO’s calculation of the total reconciliation amounts for the applicant and each recipient.

(f) AEMO must accept an application to transfer a User’s transferable reconciliation account balance unless:

(i) the application made under paragraph (a) does not contain the information required by paragraph (c);
(ii) the applicant’s transferable reconciliation account balance is zero;

(iii) the applicant is the FRO for one or more delivery points in the relevant network section;

(iv) there is an open transaction of the type referred to in paragraph (d)(ii): or

(v) a proposed recipient is not the FRO for at least one delivery point in the relevant network section.

If under paragraph (f) the application to transfer the applicant’s transferable reconciliation account balance has been accepted by AEMO, then AEMO must include the miscellaneous reconciliation amounts advised to it under paragraph (e)(ii)(C) in the calculation of the total reconciliation amount for the applicant and each recipient for the relevant nomination day under clause 8.9.12; and

Within one business day of including amounts referred to under paragraph (g), AEMO must notify the applicant and each recipient that the transfer has been completed.

8.10 AEMO to Provide Information (No OBA and OBA Network Sections)

8.10.1 AEMO to Notify User

(a) By 12.00 noon on nomination day +2, AEMO must notify each User of the following information for each network section for the nomination day:

(i) total estimated withdrawals;

(ii) apportionment percentage;

(iii) reconciliation account balance;

(iv) total daily withdrawals, including:

(A) the total daily withdrawals, defined under clause 8.9.2 as the total quantity of gas withdrawn from all daily metered delivery points for which the User is the FRO in the no OBA and OBA network sections; and

(B) the quantity of gas withdrawn from each of the User’s daily metered delivery points for which the User the FRO in the NO OBA and OBA network sections; and

(v) for each User, the User’s total non-daily metered withdrawals, by summing:

(A) the total distributed withdrawals for that User calculated under clause 8.9.9; and

(B) the estimated withdrawal for each of the User’s active non-daily metered delivery points in the network section for which there is no distributed withdrawal on the gas day.

(b) Where adjustments have been made as described in clause 8.9.17(d) then by 12.00 noon on nomination day +2, AEMO must notify each User of the total estimated withdrawals for each network section for each nomination day:

(i) total estimated withdrawals;

(ii) total daily withdrawals, including:

(A) the total daily withdrawals, defined under clause 8.9.2 as the total quantity of gas withdrawn from all daily metered delivery points for which the User is the FRO; and
(B) the quantity of gas withdrawn from each of the User's daily metered delivery points for which the User is the FRO; and

(iii) for each User, the User's total non-daily metered withdrawals, by summing:

(A) the total distributed withdrawals for that User; and

(B) the estimated withdrawal for each of the User's active non-daily metered delivery points for which there is no distributed withdrawal on the gas day.

(c) AEMO must notify each User of the following information, current as at the time and date it is provided:

(i) net section load,

(ii) apportionment percentage,

(iii) non-daily metered delivery points,

(iv) metering data,

(v) energy values for those active non-daily metered delivery points, and

(vi) total injection data.

(d) The total injection data referred to in paragraph (c), for no OBA Network sections or OBA network sections, will be TDQ as defined by clause 8.10.1(c). Where the total gas injection has been revised due to adjustments made in accordance with clause 8.9.17(a)(i), this adjusted amount is to be notified to the User.

8.10.2 AEMO to Notify Network Operator

(a) By 12.00 noon on nomination day +2, AEMO must notify the Network Operator of the following information for each User for each network section for the nomination day:

(i) total estimated withdrawal; and

(ii) the User's corrected reconciliation adjustment amount.

(b) Where adjustments have been made as described in clause 8.9.17(d) then by 12.00 noon on nomination day +2, AEMO must notify the Network Operator of each User's total estimated withdrawals for each network section for each nomination day.

8.10.3 AEMO to have Withdrawal Information Available

(a) By no later than 3 business days after 15 days after the end of the month, AEMO must have available information for each User for each network section and for each nomination day in the previous month:

(i) total estimated withdrawals; and

(ii) total daily withdrawals.

(b) The total estimated withdrawals and total daily withdrawals will be calculated using the most recent information available to the AEMO.

8.10.4 AEMO to Notify Miscellaneous Reconciliation Amount

If a User's total reconciliation amount for the nomination day contains a miscellaneous reconciliation amount, then within 2 business days after calculating that amount AEMO must provide to the User, for each miscellaneous reconciliation amount contained in the total reconciliation amount:

(a) the miscellaneous reconciliation amount;
(b) information regarding the event that gave rise to AEMO’s determination of the miscellaneous reconciliation amount;

(c) the sum, across all Users in the network section, of the miscellaneous reconciliation amounts that arose from the event referred to in paragraph (b);

(d) the nomination day or nomination days in respect of which the miscellaneous reconciliation amount arose; and

(e) details of the approach used by AEMO to determine the miscellaneous reconciliation amount.

8.10.5 Recovery from System Failure

(a) If for any period of time on any day that is not a business day, AEMO cannot perform its obligations under this clause 8.10.5 because of failure of the metering database (“system down time”), then:

(i) on the next business day after the day on which the system down time occurred AEMO must commence work to rectify the system failure; and

(ii) on the day the system failure is rectified AEMO must, as soon as practicable, provide the information described in clauses 8.10.1, 8.10.2 and 8.10.3 for each day during the system down time up to and including the day on which the information is provided. The information must be provided in chronological order.

(b) If the system failure only affects the input of information into AEMO, then AEMO will perform for each day during the system down time the calculations described in clause 8.9 using estimates for the each piece of data that it does not receive under that clause. Any discrepancy between the estimates used by AEMO and the actual data will be treated as an adjustment under clause 8.9.17 and the calculations under clause 8.9 will be revised as described in clause 8.9.17.

8.11 Estimation and Reconciliation (STTM Network Sections)

8.11.1 Network Operator to Provide Data to AEMO

(a) The Network Operator must use reasonable endeavours to provide the following data for each network section for a gas day to AEMO by 9.30 am on gas day + 1:

(i) the total quantity of gas injected (in MJ) at all network receipt points within the network section (TDQ);

(ii) each User’s SUAG;

(iii) each User’s share of change in linepack (in MJ) for the network section for the gas day (CLP), based on the relevant applicable access arrangement provision; and

(iv) each matched allocation quantity, together with:

(A) the Network section ID of the network section for which the matched allocation quantity applies; and

(B) the Participant IDs of any Participants who are parties to the registered matched allocation agreement in accordance with which the matched allocation quantity is allocated.

(b) By no later than 11.00 am on gas day + 1, AEMO must calculate:

(i) the unaccounted for gas (UAG) for a network section for the gas day, by summing:

(A) the SUAG for each User in the network section for that gas day; and
(B) all matched allocation quantities allocated to the Network Operator for the NSW-Wilton network section (for so long as it is an STTM network section) for the gas day where those quantities relate to the purchase of gas by that Network Operator to meet the operational requirements of that network section; and

(ii) the SCLP for each User in the network section for that gas day using an industry approved methodology;

(iii) CLP for the network section by aggregating each User’s share of CLP as provided by the Network Operator under paragraph (a)(iii).

(c) AEMO must validate the data provided under paragraph (a)(i) by confirming that either:

(i) the TDQ provided for the network section is within the TDQ validation range for that network section determined by AEMO under paragraph (h); or

(ii) no TDQ validation range has been determined by AEMO under paragraph (h) for the relevant network section.

(d) AEMO must validate the data calculated under paragraph (b)(i) or calculated under paragraph (b)(iii) by confirming:

(i) in case of the UAG, that either:

(A) the UAG provided for the network section is within the UAG validation range for that network section determined by AEMO under paragraph (h); or

(B) no UAG validation range has been determined by AEMO under paragraph (h) for the relevant network section; and

(ii) in the case of the CLP, that either:

(A) the CLP provided for the network section is within the CLP validation range for that network section determined by AEMO under paragraph (h); or

(B) no CLP validation range has been determined by AEMO under paragraph (h) for the relevant network section.

(e) If AEMO cannot confirm the matter in paragraph (c), then the data provided under paragraph (a)(i) will be rejected.

(f) If AEMO cannot confirm any of the matters in paragraph (d), then the data provided under paragraph (a)(ii) and paragraph (a)(iii) will be rejected.

(g) If:

(i) any of the data provided under paragraph (a) is rejected because AEMO cannot confirm the matters in paragraphs (c) or (d) (as the case may be); and

(ii) the Network Operator confirms in writing to AEMO that the TDQ, User’s SUAG or User’s share of CLP data provided by it is correct (as the case may be),

then AEMO may accept the TDQ, User’s SUAG or User’s share of CLP data (as the case may be) notwithstanding paragraphs (e) or (f).

(h) AEMO may determine in respect of each network section:

(i) a TDQ validation range;

(ii) a UAG validation range; and

(iii) a CLP validation range.

Each of the TDQ, UAG and CLP validation ranges determined by AEMO must be the positive and negative values of one absolute TDQ, UAG or CLP value (as the case may
be). The validation ranges determined by AEMO under this paragraph (h) will be used by AEMO for the purposes of the validations under paragraph (c) and paragraph (d) (as the case may be).

(i) AEMO will adopt such processes as it sees fit for determining appropriate TDQ, UAG and CLP validation ranges under paragraph (h).

(j) If the Network Operator does not provide information under paragraph (a)(i) in respect of a gas day, or that data is rejected under paragraphs (e) or (f) (and not accepted under paragraph (g)), then AEMO must estimate the missing items of data in accordance with the following rules:

(i) User's SUAG – use the value for the User's SUAG from gas day -1 as an estimate;
(ii) each User's share of CLP – use zero as an estimate; and
(iii) TDQ – use the NSL from the same day in the previous week, plus the TDM for the gas day, plus the UAG for the gas day (if known, otherwise the UAG for gas day -1), plus the CLP for the gas day (if known, otherwise zero).

8.11.2 Net Section Load

(a) By 11.00 am on gas day +1, AEMO must calculate the net section load for each network section for the gas day in accordance with the following formula:

\[ \text{NSL} = \text{TDQ} - \text{TDM} - \text{UAG} - \text{CLP} \]

If NSL < 0 then set NSL = 0

where:

\[ \text{NSL} = \text{net section load for the gas day (in MJ)}; \]
\[ \text{TDQ} = \text{total quantity of gas injected (in MJ) at all network receipt points within the network section for the gas day}; \]
\[ \text{TDM} = \text{total quantity of gas withdrawn (in MJ) from all daily metered delivery points within the network section for the gas day}; \]
\[ \text{UAG} = \text{unaccounted for gas (in MJ) for the network section for the gas day as calculated under clause 8.11.1(b)(i); and} \]
\[ \text{CLP} = \text{change in linepack (in MJ) for the network section for the gas day as calculated under clause 8.11.1(b)(iii).} \]

(b) If AEMO has not received the relevant data for a daily metered delivery point as required under clause 3.6.6 to calculate the net section load for a network section for a gas day, AEMO must estimate the consumption of that delivery point by adopting one of the following methods:

(i) where metering data is available for the delivery point for at least the previous 7 days, then AEMO must adopt an estimation based on the data from the corresponding period in the previous week;
(ii) where metering data is available for the delivery point for at least the previous day, but for less than the previous 7 days, then AEMO must adopt an estimation based on the data from the previous day; or
(iii) where no metering data is available for the delivery point for the previous day, then AEMO must adopt a consumption figure of zero.
8.11.3 Total of Daily Withdrawals

By 11.00 am on gas day + 1, AEMO must determine, for each User in a network section, the total quantity of gas withdrawn for that gas day from all daily metered delivery points for which the User is responsible.

8.11.4 Apportionment Factor for Non-daily Metered Delivery Points

By 11.00 am on gas day +1, AEMO must calculate an apportionment factor for each active non-daily metered delivery point within the network section, as included in AEMO’s metering database, for the gas day in accordance with the following formula:

\[
AF = \frac{T}{SNSL}
\]

where:

- \(AF\) = apportionment factor for the non-daily metered delivery point within the network section for the gas day;
- \(T\) = total withdrawals (in MJ) that have been measured or estimated for the non-daily metered delivery point over a period to be determined from time to time by AEMO (provided that the last day of that period will be no later than gas day –1); and
- \(SNSL\) = sum of the net section loads (in MJ) calculated (and where relevant subsequently revised) each gas day for the network section in which the non-daily metered delivery point is located over the same period of time as that used for ‘T’.

The total of the apportionment factors for all such active non-daily metered delivery points for a gas day should be normalised.

8.11.5 Base Loads for New Delivery Points

(a) Prior to supplying gas to a new non-daily metered delivery point (for which AEMO holds no consumption history), the relevant Network Operator must notify AEMO of the base load for that non-daily metered delivery point.

(b) If a Network Operator notifies AEMO under paragraph (a), AEMO must adopt the base load provided for the new delivery point.

(c) If a Network Operator fails to notify AEMO of the base load for a new delivery point, AEMO must deem the base load of the new non-daily metered delivery point as 1000 MJ.

(d) AEMO must use the base load provided under paragraph (a) or the deemed base load under paragraph (c) to determine the apportionment factor for that new non-daily metered delivery point for the gas day.

8.11.6 Estimated Withdrawal

By 11.00 am on gas day +1, AEMO must calculate an estimated withdrawal for each active non-daily metered delivery point in a network section for the gas day in accordance with the following formula:

\[
EW = NSL \times AF
\]

where:

- \(EW\) = estimated withdrawal for the non-daily metered delivery point for the gas day;
- \(NSL\) = net section load for the gas day; and
- \(AF\) = apportionment factor for the non-daily metered delivery point for the gas day.
8.11.7 Total of Estimated Withdrawals

By 11.00 am on gas day +1, AEMO must calculate, for each User in a network section, the total of the estimated withdrawals for the gas day for each of that User’s non-daily metered delivery points within that network section.

8.11.8 User’s Percentage and Share of Net Section Load

(a) By 11.00 am on gas day +1, AEMO must calculate, for each User in a network section:
   (i) that User’s percentage share of the net section load for the gas day (apportionment percentage); and
   (ii) that User’s share of the net section load for the gas day (in MJ).

(b) The sum of the percentages for all Users calculated under paragraph (a)(i) must be 100 percent.

8.11.9 STTM Distribution System Allocation – Daily Calculation

By 11.00 am on gas day +1, AEMO must calculate, for each User in a network section, the STTM distribution system allocation for the gas day.

8.11.10 Distributed Withdrawal

(a) AEMO must adopt the method in either paragraph (b) or (c). The same method must be applied to all delivery points.

(b) If an actual meter reading ("latest read") for a non-daily metered delivery point is received by AEMO, AEMO must determine the distributed withdrawal for each gas day in the period from the last notified actual meter reading to the latest read (including the day of the latest read) ("sculpting period") in accordance with the following formula:

\[
\text{DWL}(A)_i = AQ \times SF(A)_i
\]

where:

- \(i\) = each gas day in the sculpting period;
- \(\text{DWL}(A)_i\) = distributed withdrawal for each gas day in the sculpting period;
- \(AQ\) = total actual quantity (in energy) withdrawn at the delivery point during the sculpting period. Estimated meter readings must not be used in any calculations; and
- \(SF(A)_i\) = the sculpting factor for each gas day, which is determined by dividing the net section load for that gas day by the sum of the net section loads for each gas day during the sculpting period.

(c) If a latest read for a non-daily metered delivery point is received by AEMO, AEMO must determine the distributed withdrawal for each gas day for the sculpting period (including the day of the latest read) in accordance with the following formula:

\[
\text{DWL}(B)_i = AQ \times SF(B)_i
\]

where:

- \(i\) = each gas day in the sculpting period;
- \(\text{DWL}(B)_i\) = distributed withdrawal for a gas day in the sculpting period;
- \(AQ\) = total actual quantity (in energy) withdrawn at the delivery point during the sculpting period. Estimated meter readings must not be used in any calculations; and
SF(B)i = the sculpting factor for each gas day in the sculpting period, which is the reciprocal of the number of days in the period.

(d) AEMO must record the distributed withdrawal for each gas day in the sculpting period.

(e) For the purposes of calculating the distributed withdrawal for a period for a delivery point, AEMO must use the most recent meter readings received for the delivery point.

8.11.11 Total of Distributed Withdrawals

AEMO must calculate, for each User, the total of the distributed withdrawals for the gas day for each of the User's non-daily metered delivery points within a network section.

8.11.12 Network Operator to Provide Updated Information

(a) The Network Operator must notify AEMO of any revisions to:

(i) a matched allocation quantity;

(ii) TDQ;

(iii) TDM;

(iv) a User's share of CLP; or

(v) a User's SUAG,

that were previously notified by the Network Operator to AEMO in respect of a gas day for a network section.

(b) The Network Operator must notify AEMO of any revisions under paragraph (a) as soon as practicable after it becomes aware that such revisions are necessary. A notification under paragraph (a)(i) must contain the following information:

(i) the gas day to which the matched allocation quantity applies;

(ii) the Network section ID of the network section to which the matched allocation quantity applies; and

(iii) the Participant IDs of any Participants who are parties to the registered matched allocation agreement in accordance with which the matched allocation quantity is allocated.

(c) The Network Operator may notify AEMO of any revisions to a matched allocation quantity at any time up to and including the gas day that is 18 months after the gas day for which the matched allocation quantity applies.

(d) For the avoidance of doubt, where the Network Operator has notified AEMO of a revision under paragraph (a), the revised information must be used in any recalculation contemplated by this clause 8.11.

8.11.13 Recalculations

When required by any of clauses 8.11.14, 8.11.15, or 8.11.16 to recalculate a User's STTM distribution system allocation, AEMO must calculate or recalculate (as the case may be), for each relevant gas day and each relevant network section:

(a) net section load by:

(i) to the extent such data is available, replacing TDQ with the aggregate of the relevant STTM facility allocations for that gas day and all matched allocation quantities (using the most up-to-date information available to AEMO); and

(ii) for the other components used in the calculation of net section load, using the most up-to-date information available to AEMO;
(b) the estimated withdrawal for each active non-daily metered delivery point in the network section based on the net section load calculated under paragraph (a);

(c) for each User, the total distributed withdrawals, using the most up-to-date information available to AEMO;

(d) for each User, the User's total non-daily metered withdrawals, by summing:
   (i) the total distributed withdrawals for that User; and
   (ii) the estimated withdrawal for each of the User's active non-daily metered delivery points in the network section for which there is no distributed withdrawal on the gas day;

(e) for each User, the User's apportionment percentage, being the User's total non-daily metered withdrawals calculated under paragraph (d) divided by the aggregate of all Users' total non-daily metered withdrawals calculated under paragraph (d), expressed as a percentage;

(f) the total adjustment amount, calculated as follows:
   \[ TAA = \text{NSL} - \Sigma \text{TNMW} \]
   where:
   \[ TAA = \text{the total adjustment amount}; \]
   \[ \text{NSL} = \text{the net section load calculated under paragraph (a)}; \] and
   \[ \Sigma \text{TNMW} = \text{the sum of the total non-daily metered withdrawals for each User calculated in accordance with paragraph (d)}; \] and

(g) for each User, the User's adjustment amount, calculated as follows:
   \[ AA = TAA \times \text{AP} \]
   where:
   \[ AA = \text{the User's adjustment amount}; \]
   \[ TAA = \text{the total adjustment amount calculated under paragraph (f)} \] and
   \[ \text{AP} = \text{the User's apportionment percentage calculated under paragraph (e)}. \]

### 8.11.14 STTM Distribution System Allocation – Weekly Calculation

On each weekly calculation day for a month, AEMO must recalculate each User's STTM distribution system allocation, and each component of the User's STTM distribution system allocation, for a network section for each gas day during the period that:

(a) commences on (and includes) the gas day which begins on the 1\textsuperscript{st} day of that month; and

(b) ends on (and includes) the gas day which begins on the day immediately before the weekly calculation day.

### 8.11.15 STTM Distribution System Allocation – Monthly Recalculations

(a) By no later than the gas day which begins on:
   (i) the 6\textsuperscript{th} business day after the end of a month; and
   (ii) the 15\textsuperscript{th} business day after the end of a month,

AEMO must recalculate each User's STTM distribution system allocation, and each component of the User's STTM distribution system allocation, for a network section for each gas day in the month.
(b) By the 4th business day after the end of the 9th month after month M, AEMO must recalculate each User's STTM distribution system allocation, and each component of the User's STTM distribution system allocation, for a network section for each gas day in month M.

(c) During the period commencing on the 1st day of the 10th month after month M and ending on the last day of the 18th month after month M, AEMO must recalculate a User's STTM distribution system allocation, or a component of the User's STTM distribution system allocation, for a network section for a gas day in month M if required under rule 422(4) of the Rules.

8.11.16 User's Allocation – 28 Day Rolling Report
On each gas day AEMO must recalculate each User's STTM distribution system allocation, and each component of the User's STTM distribution system allocation, for a network section for each of the immediately preceding 28 gas days.

8.11.17 Use of Data
For the avoidance of doubt, AEMO may use the data provided to it under clause 8.11 for the purposes of performing its functions as operator of the Short Term Trading Market.

8.12 AEMO to Provide Information (STTM Network Sections)

8.12.1 AEMO to Notify User

(a) By 11.00 am on gas day +1, AEMO must notify each User in a network section of the following information for that network section for the gas day:
   (i) the User's STTM distribution system allocation;
   (ii) each component of the User's STTM distribution system allocation;
   (iii) the User's apportionment percentage; and
   (iv) metering data for all daily metered delivery points for which the User is responsible.

(b) On each gas day, AEMO must provide each User in a network section with the report prepared under clause 8.11.16 in respect of that User and that network section for the immediately preceding 28 gas days.

(c) On each gas day that AEMO recalculates a User's STTM distribution system allocation under clause 8.11.14, 8.11.15, or 8.11.16, AEMO must notify each User in the relevant network section of the following information for that network section for each gas day to which that recalculation applied:
   (i) the User's STTM distribution system allocation;
   (ii) each component of the User's STTM distribution system allocation;
   (iii) the User's apportionment percentage; and
   (iv) metering data for all daily metered delivery points for which the User is responsible.

(d) AEMO will provide to a Participant information related to:
   (i) net section load;
   (ii) apportionment percentage;
   (iii) non-daily metered delivery points;
(iv) metering data;
(v) energy values for those active non-daily metered delivery points; and
(vi) total injection data.

The format and timing of this report will be agreed by AEMO in consultation with Participants and the information would be current as at the time and date that the data is provided.

(e) The total injection data referred to in paragraph (c), is either TDQ as defined by clause 8.11.1(a)(i), or to the extent that such data is available, the aggregate of the relevant STTM facility allocations.

8.12.2 AEMO to Notify Network Operator

(a) By 11.00 am on gas day +1, AEMO must notify the Network Operator for the relevant network section of the total estimated withdrawal for each User in that network section for the gas day.

(b) On each gas day that AEMO recalculates a User's STTM distribution system allocation under clause 8.11.14, 8.11.15, or 8.11.16, AEMO must notify the Network Operator for the relevant network section of the total estimated withdrawal for each User in that network section for each gas day to which that recalculation applied.

8.12.3 Recovery from System Failure

(a) If, for any period of time on any day that is not a business day, AEMO cannot perform its obligations under this clause 8.11 because of failure of the metering database ("system down time"), then:

(i) on the next business day after the day on which the system down time occurred AEMO must commence work to rectify the system failure; and

(ii) on the day the system failure is rectified AEMO must, as soon as practicable, provide the information described in clause 8.12.1 and clause 8.12.2 for each day during the system down time up to and including the day on which the information is provided. The information must be provided in chronological order.

(b) If the system failure only affects the input of information into AEMO, then AEMO will perform for each day during the system down time the calculations described in clause 8.11 using estimates for each piece of data that it does not receive under that clause.
CHAPTER 9. PROCESS DEVELOPMENT, REPORTING AND REVIEW

9.1 Forecasting Development and Reporting

(a) AEMO must initiate and manage the development and enhancement of the forecasting algorithm over time.

(b) A User must co-operate with AEMO to facilitate the effective development and implementation by AEMO of the forecasting algorithm and related matters as required from time to time.

(c) AEMO must provide to each User a report each month on the overall outcomes (including accuracy) of the processes used to prepare and provide forecasting information.

9.2 Nomination Process Development and Reporting

(a) The Network Operator must initiate and manage the development and enhancement of the nomination process over time in a manner consistent with the Network Operator’s applicable access arrangement with particular attention to the refinement of:

(i) the timing of nominations and information transfer; and

(ii) the manner in which the nomination process enhances operational balancing, either under the operational balancing arrangements or otherwise.

(b) Each month, the Network Operator must provide to each User a report on the overall outcomes of the nomination processes implemented under clauses 8.5 and 8.6.

9.3 Estimation and Reconciliation Processes Development

AEMO must initiate and manage the development and enhancement of the data estimation and reconciliation methods over time with particular attention given to the refinement of calculation of more accurate apportionment factors as consumption research becomes available. Where requests for enhancements are initiated by Users or Network Operators these will be collated by AEMO.
CHAPTER 10. LOST GAS CUSTOMER PROCESS

10.1 Lost Gas Customer Service Protocol

(a) AEMO may provide a service that enables a Customer to find out the identity of the current FRO of the delivery point at which that Customer is supplied with gas ("lost gas customer service").

(b) The lost gas customer service must be provided in accordance with a protocol ("Lost Gas Customer Protocol").

10.1.1 Amendment

The Lost Gas Customer Protocol may only be amended by AEMO when such amendments are agreed with the recognised energy industry ombudsman for New South Wales and after undertaking one of the following consultative processes:

(a) the ordinary process for making Procedures under section 135EE of the Rules; or

(b) the expedited process for making Procedures under section 135EF of the Rules.

10.1.2 Publication

AEMO must publish the Lost Gas Customer Protocol as amended from time to time.

10.1.3 Effect

Network Operators, Retailers and AEMO must comply with, and are bound by, the Lost Gas Customer Protocol in respect of the provision of information, giving of notice, delivery of notices or documents and making of requests, and the receipt of information, notices and documents or requests.
CHAPTER 11. CUSTOMER TRANSFER ERROR CORRECTION PROCESS

11.1 Initiation of Transfer Error Correction

11.1.1 Transfer Error Correction Request

(a) A User may deliver a transfer error correction request to AEMO in relation to a delivery point in respect of a genuine transfer error where:

(i) that User was a User holding all necessary rights to take delivery of gas from the network at the delivery point at all times when it would have been the FRO for the delivery point if it were registered in the AEMO metering database in accordance with the transfer error correction request; and

(ii) the affected FRO in relation to that transfer error correction request is a User as at the day on which the transfer error correction request is delivered to AEMO.

(b) A transfer error correction request must include the following information:

(i) the MIRN for the delivery point to which the transfer error correction request relates;

(ii) a proposed error correction date that is within the error correction permitted period; and

(iii) the name of the User who delivered the transfer error correction request to AEMO.

11.1.2 Notification of Existing Transfer Request or Transfer Error Correction Request

If:

(a) a User delivers a transfer error correction request in relation to a delivery point to AEMO;

(b) a transfer request or transfer error correction request ("existing request") in relation to that delivery point has already been delivered to AEMO (whether by that or any other User); and

(c) the existing request is being processed by AEMO but the User who delivered the existing request has not yet been registered in AEMO’s metering database as the FRO for the delivery point,

then AEMO must not process the transfer error correction request referred to in clause 11.1.2(a) and must, by midnight on the next business day after the day on which that transfer error correction request was delivered to AEMO, deliver a notice stating this fact to the User who delivered that transfer error correction request.

11.2 Notification of Transfer Error Correction Request

11.2.1 Notification by AEMO

(a) Provided that the requirements of clause 11.1 have been complied with in relation to a transfer error correction request, AEMO must, by midnight on the next business day after the day on which the transfer error correction request was delivered to it, deliver a notification of the transfer error correction request (transfer error correction request notification) to:

(i) the affected FRO; and

(ii) the Network Operator in whose network the delivery point is located.

(b) If AEMO considers that the requirements of clause 11.1 have not been complied with, AEMO must notify the User who delivered the transfer request of the non-compliance and cease processing the transfer error correction request.
11.2.2 Information Required

A transfer error correction request notification by AEMO under clause 11.2.1 must include the following information:

(a) the MIRN for the delivery point to which the transfer error correction request relates;
(b) the proposed error correction date nominated in the transfer request; and
(c) in the case of the transfer error correction request notification to the affected FRO and the Network Operator, the name of the User who delivered the transfer error correction request to AEMO.

11.3 Objections to Transfer Error Correction

11.3.1 Error Correction Objection Notice

(a) Where AEMO delivers a transfer error correction request notification under clause 11.2.1, the affected FRO may deliver to AEMO a notice objecting to the transfer error correction request (an error correction objection notice) by midnight on the 5th business day after the day on which AEMO delivered the transfer error correction request notification to the affected FRO.

(b) An error correction objection notice must include the following information:

(i) the MIRN for the delivery point to which the transfer error correction request relates; and
(ii) the name of the affected FRO who delivered the error correction objection notice to AEMO.

11.3.2 Withdrawal of Error Correction Objection Notice

(a) An affected FRO who delivers an error correction objection notice to AEMO may withdraw that error correction objection notice by delivering to AEMO a notice of withdrawal (an error correction objection withdrawal notice) at any time before midnight on the 20th business day after the day on which the affected FRO delivered the error correction objection notice to AEMO.

(b) An affected FRO who delivers an error correction objection notice to AEMO must withdraw that error correction objection notice before midnight on the next business day after the day (if any) on which the affected FRO agrees with the User who delivered the transfer error correction request to AEMO to withdraw that error correction objection notice.

(c) An error correction objection withdrawal notice must include the MIRN for the delivery point to which the transfer error correction request relates.

11.3.3 Notification by AEMO

(a) AEMO must, by midnight on the next business day after the delivery of an error correction objection notice or an error correction objection withdrawal notice, deliver a notification of the objection or withdrawal, as the case may be, to:

(i) the User who delivered the transfer error correction request to AEMO; and
(ii) the Network Operator in whose network the delivery point is located.

(b) A notification of an error correction objection notice or an error correction objection withdrawal notice delivered by AEMO under paragraph (a) must include the following information:

(i) the MIRN for the delivery point to which the transfer error correction request relates; and
(ii) the name of the affected FRO who delivered the relevant notice to AEMO.

11.3.4 Termination of Transfer Error Correction Request

If:

(a) an error correction objection notice has been delivered to AEMO by the affected FRO; and

(b) by midnight on the 20th business day after the day on which that error correction objection notice was delivered to AEMO, that affected FRO has not delivered to AEMO an error correction objection withdrawal notice in relation to that transfer error correction request,

then AEMO must:

(c) cease processing that transfer error correction request; and

(d) by midnight on the 21st business day after the day on which that error correction objection notice was delivered to AEMO, deliver a notice that AEMO will not further process that transfer error correction request to:

(i) the User who delivered the transfer error correction request to AEMO;

(ii) the affected FRO; and

(iii) the Network Operator in whose network the delivery point is located.

11.4 Potential Problems with Transfer Error Correction Request

11.4.1 Notification of potential problems

(a) Any Participant who has received a transfer error correction request notification under clause 11.2 may deliver to AEMO, at any time before the User who delivered the transfer error correction request is registered in the AEMO metering database as the FRO for the delivery point to which that transfer error correction request relates, a notice describing a potential problem in respect of that transfer error correction request.

(b) A notice delivered by a person under paragraph (a) does not constitute an error correction objection notice.

11.4.2 Notification by AEMO

AEMO must, by midnight on the next business day after delivery of a notice described in clause 11.4.1, forward that notice to the User who delivered the relevant transfer error correction request.

11.5 Withdrawal of Transfer Error Correction Request

11.5.1 Transfer Correction Error Withdrawal Notice

(a) A User who delivers a transfer error correction request to AEMO:

(i) may deliver a notice withdrawing that transfer error correction request (a transfer error correction withdrawal notice) to AEMO before the registration of that User in AEMO’s metering database as the FRO for the delivery point to which the transfer error correction request relates; and

(ii) must immediately deliver a transfer error correction request withdrawal notice to AEMO where it ceases to be a User at any time before the registration of that User in AEMO’s metering database as the FRO for the delivery point to which the transfer error correction request relates.
(b) A transfer error correction withdrawal notice must include the MIRN for the delivery point to which the transfer error correction request relates.

11.5.2 Termination of Transfer Error Correction Request
AEMO must cease processing a transfer error correction request if the relevant User delivers a transfer error correction withdrawal notice to AEMO.

11.5.3 Notification by AEMO
AEMO must, by midnight on the next business day after the day on which a transfer error correction withdrawal notice is delivered to it, deliver notice of the withdrawal of the transfer error correction request, together with a notice that AEMO will not further process that transfer error correction request, to:

(a) where the proposed transfer date nominated in the transfer error correction request is an error correction transfer date, the affected FRO; and

(b) the Network Operator in whose network that delivery point is located.

11.6 Registration of Transfer Error Correction

11.6.1 Registration Requirements
Where:

(a) a User has delivered to AEMO a transfer error correction request in relation to a delivery point for which the requirements of clause 11.1 are met;

(b) the affected FRO in relation to that transfer error correction request:

(i) has not delivered to AEMO, by midnight on the 5th business day after the day on which AEMO delivered to it the transfer error correction request notification in relation to the transfer error correction request, an error correction objection notice pursuant to clause 11.3.1; or

(ii) has delivered an error correction objection notice but has subsequently delivered to AEMO an error correction objection withdrawal notice pursuant to clause 11.3.2; and

(c) the User who delivered the transfer error correction request remains a User, and has not delivered to AEMO a transfer error correction withdrawal notice pursuant to clause 11.5.1,

AEMO must, as soon as is practicable, register the User who delivered the transfer error correction request in AEMO’s metering database as the FRO for the delivery point to which that transfer error correction request relates with effect from the error correction date.

11.6.2 Registration Date

(a) Where, pursuant to clause 11.6.1, AEMO registers the User who delivered the transfer error correction request in its metering database as the FRO for a delivery point, that registration will be deemed to take effect at the start of the gas day on the error correction date.

(b) AEMO must record the date on which such registration takes place, the date on which such registration is deemed to take effect and the period of registration in AEMO metering database.
11.6.3 Termination of Transfer Error Correction
Where a notice has been delivered to AEMO by the Network Operator in respect of a delivery point, stating that the proposed transfer date nominated in the transfer error correction request is invalid, then AEMO must:

(a) cease processing that transfer error correction request; and
(b) by midnight on the next business day, deliver a notice that the transfer error correction request has been terminated, to:
   (i) the User who delivered the transfer error correction request to AEMO;
   (ii) the affected FRO; and
   (iii) the relevant Network Operator.

11.7 Registration Notification

11.7.1 Notification by AEMO
Where, pursuant to clause 11.6.1, AEMO registers the User who delivered the transfer error correction request in its metering database as the FRO for a delivery point, AEMO must, by midnight on the next business day, deliver notice of that registration, together with the date from which that registration is deemed to take effect (registration notice) to:

(a) that User;
(b) the affected FRO; and
(c) the Network Operator in whose network the delivery point is located.

11.7.2 Registration Notice Information
A registration notice in relation to a transfer error correction request must include the following information:

(a) in relation to the Network Operator and the affected FRO:
   (i) the MIRN for the delivery point to which the transfer error correction request relates; and
   (ii) the User who delivered the transfer request to AEMO;
(b) in relation to the User who delivered the transfer error correction request to AEMO:
   (i) the MIRN for the delivery point to which the transfer error correction request relates; and
   (ii) the affected FRO.
CHAPTER 12. MANIFEST DATA ERRORS

12.1 Notice by Participant

(a) If a Participant becomes aware of a manifest error in the data it has provided to or received from AEMO under Chapter 3 or Chapter 8 of these Procedures it may notify AEMO that it reasonably believes there is a manifest error in the data it has provided or received.

(b) The notification provided to AEMO under paragraph (a) must include at least the following:

(i) the clause of these Procedures under which the data containing the manifest error was provided to, or received from, AEMO;

(ii) if the manifest error relates to data provided under clauses 3.5 or 3.6, the delivery point for which the data is erroneous;

(iii) if the manifest error relates to data provided to AEMO under clause 8.8.1(c) or received from AEMO under clause 8.8.1(f), the Retailer and nomination day for which the data is erroneous;

(iv) if the manifest error relates to data provided under clause 8.9.1(c) or clause 8.11.1(a), the component of the net section load data that is erroneous and the network section to which it relates; and

(v) the gas day or period to which the relevant data relates.

(c) A Participant must not give a notice under paragraph (a) which is fraudulent, frivolous or vexatious.

12.2 Resolution of Manifest Data Error

(a) On receipt of a notice under clause 12.1, or on itself identifying a manifest error in data provided or received under Chapter 3 or Chapter 8, AEMO must determine as soon as practicable whether:

(i) it is reasonably satisfied that the data specified in the notice under clause 12.1 or otherwise identified by AEMO contains a manifest error; and

(ii) the manifest data error is able to be resolved under any other provisions of these Procedures.

(b) AEMO may request further information from a Participant in relation to the contents of a notice provided under clause 12.1 or the circumstances surrounding the provision or receipt of erroneous data.

(c) A Participant must promptly respond to any reasonable requests for information made by AEMO under paragraph (b).

(d) If AEMO is not reasonably satisfied that any data specified in a notice under clause 12.1 is erroneous it must notify the Participant that provided the notice of the reasons for its view and that it proposes to take no further action in response to the notice.

(e) If AEMO is reasonably satisfied that the data specified in a notice clause 12.1 or otherwise identified by AEMO is erroneous but considers that the error is able to be resolved under another provision of these Procedures, AEMO must notify the affected Participants that they should seek to resolve the error under the relevant provision of the Procedures.

(f) If AEMO is reasonably satisfied that the relevant data is erroneous and the error is not able to be resolved under any other provision of these Procedures, AEMO will as soon as practicable:
(i) notify the affected Participants that the relevant data contains a manifest error, and how and when AEMO proposes to correct the error;

(ii) if required, direct the Participant that provided the erroneous data to provide the correct data to AEMO within a timeframe specified in the direction; and

(iii) recalculate any reconciliation or imbalance results affected by the manifest data error based on the correct data provided to AEMO and publish the corrected results to the affected Participants.

(g) If AEMO:

(i) provides a notice to affected Participants under paragraph (f)(i); and

(ii) considers that delaying the provision of notices and publication of information under Chapter 3 or Chapter 8 is reasonably required for the fair, orderly and proper operation of these Procedures,

then AEMO will not be required to comply with the relevant timing requirements for provision of notices and publication of information to the extent that such non-compliance results from the need to correct a manifest data error under this Chapter 12.

(h) A Participant must comply with any reasonable direction under paragraph (f)(ii).

(i) Nothing in this Chapter 12 relieves a Participant from its obligations under Chapter 3 or Chapter 8.
CHAPTER 12A. TRANSITIONAL PROVISIONS

12A.1 Application of this Chapter

(a) AEMO must, after consultation with affected Participants, set a date (a “Transition End Date”) from which the provisions of clause 12A.1.2 will cease to have effect.

(b) The Transition End Date must not be later than 31 March 2017.

(c) AEMO must publish the Transition End Date no less than three calendar months before that date.

(d) The provisions of clause 12A.2 and 12A.3 apply from the effective date of this Chapter 12A until the end of the day before the Transition End Date.

12A.2 Transitional Timeframes for Meter Readings and Energy Data

(a) In each of clauses 3.5.1(b), 3.6.5(a)(vi)(A) and (B), and 3.6.6(d)(i) and (ii):
   (i) the words “5.00 pm on the next business day” are taken to be replaced by “5.00 pm on the 3rd business day”; and
   (ii) the words “5.00 pm on the 4th business day” are taken to be replaced by “5.00 pm on the 5th business day”

(b) In each of clauses 3.5.1(c), (d) and (e), 3.6.5(a)(vi)(C) and (D), and 3.6.6(d)(iii):
   (i) the words: “5.00 pm on the 2nd business day” are taken to be replaced by “5.00 pm on the 4th business day”; and
   (ii) the words: “5.00 pm on the 5th business day” are taken to be replaced by “5.00 pm on the 7th business day”.

12A.3 Transitional Provision for Complete Customer Listings

A Retailer must comply with its obligation to provide a complete customer listing under clause 7.1 as far as is reasonably practicable based on the information available to the Retailer at the relevant time.

12A.4 Controlled Production Start Plan

(a) AEMO may establish, and may amend, a Controlled Production Start Plan (CPS Plan) that limits the number of transactions that a Retailer or Network Operator may submit within a specified period of time (such as a day).

(b) The CPS Plan may specify overall limits, or limits on particular types of transactions under the Gas Interface Protocol.

(c) The limits in the CPS Plan must only apply to the extent and for such time as AEMO considers is reasonably necessary to mitigate the risk of significant disruption to the processing of a backlog of transactions after the effective date of this Chapter 12A.

(d) AEMO must consult with Retailers and Network Operators before establishing or amending the CPS Plan.

(e) AEMO, Retailers and Network Operators must comply with the CPS Plan.
ATTACHMENT 1 APPROVED VALIDATION METHODOLOGY

A Network Operator must apply at least the following validation tests to a meter reading:

(a) The meter reading value is numeric and greater than or equal to zero.
(b) The meter reading value is greater than or equal to the previous meter reading value (except where there has been a full revolution of the meter index).
(c) In respect of an actual meter reading, the meter reading value passes the high/low tolerance test, as determined separately for NSW and the ACT, and published by AEMO. AEMO must consult on any changes to this test as it would in respect of an industry approved methodology.
(d) The date of the meter reading is later than or the same as the date of the immediately preceding validated meter reading.
(e) The average daily flow volume calculated from the meter reading does not exceed the meter's maximum daily flow capacity.
ATTACHMENT 2 APPROVED ESTIMATION METHODOLOGY

A2.1 Gas Meters

(a) Criteria and EDD

A Network Operator must undertake an estimated meter reading in the circumstances required under clause 3.5 of these Procedures.

On each gas day AEMO must use its reasonable endeavours to calculate a New South Wales “effective degree day” or “EDD” value and an Australian Capital Territory EDD value for use in the calculation of Type 1 estimations prescribed in paragraph (b), and publish those EDDs by midnight on the next business day after the day to which the EDD applies.

The EDD calculations will be the EDD (NSW or ACT), calculated in accordance with clause A1.3, applicable to the network section to which the meter is connected.

(b) Type 1 Estimation Methodology (Gas non-daily metered)

A Network Operator must use this estimation methodology where the delivery point in respect of which the estimated meter reading is to be undertaken has at least 12 months’ consumption history.

A Network Operator must utilise the calculated daily base load and the calculated usage per effective degree day for the relevant delivery point as follows:

(i) The Network Operator must estimate the consumed energy for a basic meter based on the weather measured in effective degree days and the base load and temperature sensitivity factor as follows:

\[
\text{Consumed energy} = (\text{BL} \times P) + (\text{TSF} \times \Sigma \text{EDD})
\]

Where:

- consumed energy is the estimated consumed energy over the reading period;
- BL is the base load;
- P is the number of days in the reading period;
- TSF is the temperature sensitivity factor; and
- \(\Sigma \text{EDD}\) is the sum of the effective degree days over the reading period.

(ii) The base load is derived from the smallest consumed energy measured in a reading period during the summer period (defined as between 1 October and 31 March within the current 12 month period) according to the following formula:

\[
\text{BL} = \frac{\text{SE}}{\text{PSE}}
\]

Where:

- BL is the base load;
- SE is the smallest consumed energy (in terms of average daily consumption) between two consecutive scheduled read dates during the summer period; and
- PSE is the number of days in the reading period during the summer period.

(iii) The temperature sensitivity factor applies a weather impact to the base load by reference to the effective degree day for each day in the reading period. The temperature sensitivity factor is derived from the difference between:
(A) the largest consumed energy measured in a reading period during the winter period (between 1 April and 30 September within the current 12 month period); and

(B) the smallest consumed energy (in terms of average daily consumption) between two consecutive meter readings measured in a reading period during the summer period,

divided by the sum of the effective degree days for the reading period over which the largest consumed energy value was derived. This is represented by the following formula:

$$TSF = \max \{0, \frac{(LE - (BL \times PLE))}{\Sigma EDD (LE)}\}$$

Where:

• TSF is the temperature sensitivity factor;

• LE is largest consumed energy between two consecutive scheduled reads during the winter period;

• BL is the base load;

• PLE is the number of days in the reading period during the winter period; and

• $\Sigma EDD (LE)$ is the sum of the effective degree days over the reading period during the winter period.

(iv) The Network Operator must use the latest available effective degree days published by AEMO. Where the effective degree day for a reading period for a day is not available, the Network Operator must use the effective degree day for the previous day.

(c) Type 2 Estimation Methodology (Gas non-daily metered)

A Network Operator must use this estimation methodology where a delivery point in respect of which the estimated meter reading is to be undertaken has less than 12 months’ consumption history.

A Network Operator must use the categories of Customers in accordance with the customer characterisation as follows:

<table>
<thead>
<tr>
<th></th>
<th>NSW metropolitan</th>
<th>NSW Non-metropolitan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>R1</td>
<td>R2</td>
</tr>
<tr>
<td>Business</td>
<td>B1</td>
<td>B2</td>
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<tr>
<td></td>
<td>ACT metropolitan</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>R1</td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>B1</td>
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</tbody>
</table>

(i) A Network Operator must calculate the average base load and average temperature sensitivity factor for each customer characterisation as follows:

(A) The average base load is:

• the sum of the base load consumption for all customers within that Network Operator’s network which have that customer characterisation and 12 months or more consumption history; divided by
the number of delivery points within that Network Operator’s network which have that customer characterisation and 12 months or more consumption history.

(B) The average temperature sensitivity factor is:

- the sum of temperature sensitivity factors for all customers within that Network Operator’s network which have that customer characterisation and 12 months or more consumption history; divided by
- the number of delivery points within that Network Operator’s network which have that customer characterisation and 12 months or more consumption history.

(ii) A Network Operator must determine the estimated usage for a delivery point by applying the relevant average base load and average temperature sensitivity factor for that delivery point to each day occurring during the period to which the estimated meter reading relates. A Network Operator must use the latest available effective degree days published by AEMO. Where the effective degree day for a reading period for a day is not available, the Network Operator must use the effective degree day for the previous day.

(iii) A Network Operator must apply the applicable average heating value and pressure correction factors to the estimated consumed energy to determine the estimated flow for the period and the relevant estimated meter reading.

(d) Type 3 Estimation (Gas non-daily metered)

Where neither a Type 1 nor Type 2 Estimate is appropriate, a Retailer and a Network Operator may agree an estimated consumed energy value for a delivery point for a reading period.

(e) Interval Meter Estimation

For a daily metered delivery point, an estimated meter reading will be calculated using the following method:

(i) if an agreement exists between the Network Operator and the current User, the calculation prescribed in that arrangement for the relevant delivery point will be used; or

(ii) if metering data exists for the delivery point for the same day in the previous week (and there is a validated meter reading for that day and it is not a public holiday), by adopting an estimation based on the same day in the previous week; or

(iii) if paragraph (ii) does not apply and the same day in the previous week is a public holiday, by adopting an estimation based on the same day in the week before the previous week; or

(iv) if it is not possible to use any of the above methods, adopt such other method agreed from time to time by the Network Operator and current User for the relevant delivery point.

A2.2 Hot Water Meters

(a) Application

The estimation of hot water meter readings and consumption utilises the existing methodology applicable in NSW and the ACT for buildings with centralised hot water systems (CHWS). If the scheduled reading of meters (master meters and sub-hot water meters) in a CHWS has been completed with one or more resulting “missed” readings (readings that cannot be obtained due to blocked access, safety hazards, meter fault or other factors), or readings that fail validation, an estimate for each missed or failed reading will be calculated as follows.
(b) **Method W1: Hot Water Estimation Based on Corresponding Past Year Period**

If the meter whose consumption is to be estimated has at least 365 calendar days of validated meter reading history with the same Customer, calculate MJest and Rest, the meter's estimated consumed energy and meter reading index respectively, as follows:

(i) **Examine the meter's reading history for a qualifying corresponding past year period, determined as follows:**

   (A) Calculate Dest, the number of billing days in the period to be estimated, from the date of the last validated meter reading to the end date of the estimation period.

   (B) Subtract 365 days from the last validated meter reading (Rprev) and the estimation period's end date to obtain the corresponding past year period's start and end dates (Dp_start and Dp_end).

   (C) Examine the meter's reading history for a qualifying corresponding past year period meeting the following criteria:

   - Its start and end dates exactly or closely matches Dp_start and Dp_end to within 10 calendar days on either side of Dp_start and Dp_end.
   - The number of billing days Dcpyp in the corresponding past year period must be within plus or minus 10 calendar days of Dest.
   - The meter readings in the corresponding past year period must be validated meter readings.

(ii) **If a qualifying corresponding past year period is found:**

   (A) Calculate the raw metered units (MUraw) from the qualifying corresponding past period standardised to the number of days to be estimated (Dest).

   (B) Convert MUraw to standard litres (L) by:

   - Multiplying MUraw by the meter model's multiplier number.
   - Multiplying the result in (a) by 4.546 to convert from imperial gallons to litres, if the hot water meter is read in imperial units.

(iii) **Calculate the average daily litres (Ld_avg) for the qualifying corresponding past year period by dividing L by Dcpyp.**

(iv) **Multiply Ld_avg by Dest to obtain the estimated number of litres Lest for the estimation period.**

(v) **Multiply Lest by CF, the CHWS's common factor (in MJ per litre) in the current reading period, to obtain MJest, the meter's estimated consumed energy.**

(vi) **Add Lest to Rprev to obtain Rest, the estimated meter reading index.**

(vii) **Populate MJest and Rest into the MDN (MeterDataNotification) to be provided to the delivery point's current FRO and AEMO.**

(c) **Method W2: Hot Water Estimation Based on Immediately Preceding Period**

If the meter whose reading is to be estimated has less than 365 days of validated meter reading history, or a qualifying corresponding past year period is not found, examine the meter's reading history for an immediately preceding period with a validated meter reading that is an actual meter reading. If such a reading is found:

(i) **Retrieve the preceding period's meter reading (Rprev), raw metered units (MUraw) and number of billing days (Dprev).**

(ii) **Convert MUraw to standard metered units (L) by:**
(A) Multiplying MUraw by the meter model’s multiplier number.

(B) Multiplying the result in (a) by 4.546 to convert from imperial gallons to litres, if the meter is a hot water meter reading in imperial units.

(iii) Calculate the litres (Ld_avg) by dividing L by Dprev.

(iv) Calculate the estimated litres (Lest) by multiplying Ld_avg by Dest.

(v) Adjust Lest to reflect seasonality (higher gas usage in cold months, lower in warm months):
   (A) Multiply Lest by 0.5 if the last bill was read in Aug/Sep/Oct.
   (B) Divide Lest by 1.5 if the last bill was in Jun/Jul/Nov/Dec.
   (C) Multiply Lest by 2 if the month of the estimate-to is Aug/Sep/Oct.
   (D) Multiply Lest by 1.5 if the month of the estimate-to is Jun/Jul/Nov/Dec.

(vi) Multiply Lest by CF, the CHWS’s common factor (in MJ per litre) in the current reading period, to obtain MJest, the meter’s estimated consumed energy.

(vii) Add Lest to Rprev to obtain Rest, the estimated meter reading index.

(viii) Populate MJest and Rest into the MeterDataNotification to be provided to the delivery point’s current FRO and AEMO.

(d) Method W3: Where Methods W1 and W2 cannot be applied

If the meter whose consumption is to be estimated has (a) less than 365 calendar days of validated meter reading history with the same customer, or (b) its reading in the immediately preceding period is not validated, AND (c) the scheduled read of all meters in the CHWS has been completed (whether readings have been successfully obtained or otherwise for all meters in the CHWS), for any meter whose reading was not successfully obtained or failed validation, calculate MJest and Rest, the meter’s estimated consumed energy and meter reading index, using the following steps:

(i) Calculate Li_est, meter i’s estimated litres, as:
   \[ Li_{\text{est}} = \min (\frac{\text{Average litres of sub-meters with validated meter readings}}{\text{Average “residual” litres of sub-meters without validated meter readings}}) \]
   \[ Li_{\text{est}} = \min (\frac{\sum L_{j,\text{validated}}}{N_{\text{validated}}}, \frac{(L_{\text{HW, master}} - \sum L_{j,\text{validated}})}{N_{\text{est}}}) \]

   Where:
   - Ri_est is the meter reading to be estimated for sub-hot water meter i,
   - Ri_prev is meter i’s previous validated meter reading,
   - Li_est is the metered units in litres to be estimated for meter i,
   - Lj_validated is the validated metered units in litres of sub-hot water meter j,
   - LHW_master is the number of metered units in litres measured by the CHWS’s master hot water meter for the period to be estimated,
   - N is the total number of sub-hot water meters in the CHWS,
   - Nest is the number of sub-hot water meters in the CHWS that failed validation and require estimation in the current reading period,
   - Nvalidated is the number of sub-meters in the CHWS with validated readings in the current reading period,
   - \( N = N_{\text{validated}} + Nest \) and \( 0 \leq N_{\text{validated}} , Nest \leq N \).
If a master hot water meter does not exist in the CHWS, then
\[ L_{i,est} = \frac{\text{Average litres of sub-meters with validated readings}}{N_{\text{validated}}} \]

(ii) Calculate \( R_{i,est} \) the estimated meter reading index, as:
\[ R_{i,est} = L_{i,est} + R_{i,prev} \]

(iii) Multiply \( L_{i,est} \) by \( CF \), the CHWS’s common factor (in MJ per litre) in the current reading period, to obtain \( MJ_{i,est} \), the meter’s estimated consumed energy.

(iv) Populate \( MJ_{i,est} \) and \( R_{i,est} \) into the MeterDataNotification to be provided to the FRO and AEMO.

A2.3 Calculation of EDDs

(a) Purpose of Effective Degree Day
Effective degree days are required for the calculation of the sensitivity factor. The effective degree day is used to measure coldness which is directly related to gas demand for area heating. The effective degree day is a composite measure of weather coldness incorporating the effect of temperature, wind, sunshine and day of the year.

(b) Calculation for NSW

(i) The effective degree day (EDD) for NSW is calculated as follows:
\[ \text{EDD} = \text{DD (temperature effect)} + 0.0092 \times \text{DD} \times \text{average wind (wind chill factor)} - 0.0628 \times \text{sunshine hours (warming effect of sunshine)} + 5.0805 \times \cos \left( \frac{(2\pi \times (\text{day} - 198))}{365} \right) \] (seasonal factor)

Where:
• EDD is the effective degree day;
• DD is the degree day and is described in paragraph (ii);
• average wind is described in paragraph (iii);
• sunshine hours is described in paragraph (iv);
• Cos is cosine and is described in paragraph (v); and.
• day is the day number of a calendar year where 1st January is 1.
EDD will be 0 if the calculated value is negative.

(ii) The degree day (DD) is calculated as follows:
\[ \text{DD} = \begin{cases} 21.0578 - T & \text{if } T < 21.0578 \\ 0 & \text{if } T \geq 21.0578 \end{cases} \]

Where:
• DD is degree day;
• T is the average of 8 three-hourly Sydney temperature readings (in degrees Celsius) from 3.00am to midnight inclusive as measured at the Sydney Airport Weather Station (Location ID 66037);

Note: The gas day is defined as 6:30am day-1 to 6:30am AEST day+0 so the effective degree day formula implies a 3.5 hour lag in demand to changes in ambient temperature.
• 21.0578 degrees Celsius represents the threshold temperature for residential gas heating.

The colder the average temperature the higher the degree day and, accordingly, effective degree day.

(iii) The average wind is the average of the 8 three-hourly Sydney NSW wind (measured in knots) from 3:00 am (day-1) to midnight inclusive (day+0) as measured at the Sydney Airport weather station (Location ID 66037). Average wind is represented by the following formula:

(iv) Average wind = 1.000 x average (Sydney Airport) wind

Sunshine hours is the number of hours of sunshine above a standard intensity as measured at the Sydney Airport weather station (Location ID 66037) for the same duration of time between 3:00 am (day-1) to midnight inclusive (day+0).

(v) The cosine term models seasonality in Customers’ response to different weather. Residential Customers more readily turn on the heaters or leave heaters on in winter than in other seasons (early spring, late autumn) for the same change in weather conditions. This change in Customers’ behaviour is captured in the cosine term in the effective degree day formula, which implies that for the same weather conditions heating demand is higher in winter than in the shoulder seasons or in summer.

(c) Calculation for ACT

(i) The effective degree day (EDD) for ACT is calculated as follows:

\[
\text{EDD} = \text{DD (temperature effect)} + 0.0163 \times \text{DD} \times \text{average wind (wind chill factor)} - 0.1326 \times \text{sunshine hours (warming effect of sunshine)} + 3.1277 \times \cos \left(\frac{2\pi(d-195)}{365}\right) \text{ (seasonal factor)}
\]

Where:
• EDD is the effective degree day;
• DD is the degree day and is described in paragraph (ii);
• average wind is described in paragraph (iii);
• sunshine hours is described in paragraph (iv); and
• day is the day number of a calendar year where 1st January is 1
• Cos is cosine and is described in paragraph (v).

EDD will be 0 if the calculated value is negative.

(ii) The degree day (DD) is calculated as follows:

\[
\text{DD} = \begin{cases} 
14.6057 - T & \text{if } T < 14.6057 \\
0 & \text{if } T \geq 14.6057 
\end{cases}
\]

Where:
• DD is degree day;
• T is the average of 8 three-hourly Canberra temperature readings (in degrees Celsius) from 3.00am to midnight inclusive as measured at Canberra Airport (Location ID 70351);

Note: The gas day is defined as 6:30am day-0 to 6:30am AEST day+0 so the effective degree day formula implies a 3.5 hour lag in demand to changes in ambient temperature.
• 14.6057 degrees Celsius represents the threshold temperature for residential gas heating. The colder the average temperature the higher the degree day and, accordingly, effective degree day.

(iii) The average wind is the average of the 8 three-hourly Canberra ACT wind (measured in knots) from 3:00am (day-1) to midnight inclusive (day+0) as measured at Canberra Airport (Location ID 70351). Average wind is represented by the following formula:

\[
\text{Average wind} = 1.000 \times \text{average (Canberra Airport) wind}
\]

(iv) Sunshine hours is the number of hours of sunshine above a standard intensity as measured at Canberra Airport (Location ID 70351) for the same duration of time between 3:00am (day-1) to midnight inclusive.

The cosine term models seasonality in Customers' response to different weather. Residential Customers more readily turn on the heaters or leave heaters on in winter than in other seasons (early spring, late autumn) for the same change in weather conditions. This change in Customers' behaviour is captured in the cosine term in the effective degree day formula, which implies that for the same weather conditions heating demand is higher in winter than in the shoulder seasons or in summer.

(d) Sunshine hours for ACT

There is not a physical sensor located in Canberra to obtain sunshine hour values, therefore these are derived from meter and synoptic data based on cloud cover at Canberra Airport (Location ID 70351).

This is achieved through the following calculation:

\[
@\text{hrlyssm} = @\text{psm} \times @\text{percentsun} \times 0.01
\]

Where:

- @hrlyssm is the hourly Sunshine minutes
- @psm is possible minutes of sunshine during that hour based on sunrise/sunset times
- @percentsun is the inverse of cloud coverage from meters with the values set out below.

Cloud Coverage:

- CLR = 0
- SCT = 30
- BKN = 70
- OVC = 100

As an example between noon and 1pm, the possible sunshine minutes (@psm) would be 60. If the meter observation was BKN or Cloud Coverage 70, @percentsun would be 30.

In that hour, \(@\text{hrlyssm} = 18 \times 60 \times 30 \times 0.01\)

@hrlyssm is then converted to hours by dividing by 60

Therefore sunshine hours for that hour = 0.3 (18/60)
ATTACHMENT 3 APPROVED SUBSTITUTION METHODOLOGY

A3.1 Criteria

A Network Operator must undertake a substituted meter reading where:

(i) a basic meter has failed or is shown to be defective; or

(ii) in other circumstances where there is no prospect of obtaining an actual meter reading or an accurate actual meter reading from that meter.

A3.2 Gas Meters

(a) Type 1 Substitution Methodology (Gas non-daily metered)

A Network Operator must use this substitution methodology where the delivery point in respect of which the substituted meter reading is to be undertaken has at least 12 months’ consumption history.

A Network Operator must utilise the calculated daily base load and the calculated usage per effective degree day for the relevant delivery point as follows:

(i) The Network Operator must estimate the consumed energy for a basic meter based on the weather measured in effective degree days and the base load and temperature sensitivity factor as follows:

\[
\text{Consumed energy} = (BL \times P) + (\text{TSF} \times \Sigma EDD)
\]

Where:

- consumed energy is the estimated consumed energy over the reading period;
- BL is the base load;
- P is the number of days in the reading period;
- TSF is the temperature sensitivity factor; and
- \( \Sigma EDD \) is the sum of the effective degree days over the reading period.

(ii) The base load is derived from the smallest consumed energy measured in a reading period during the summer period (defined as between 1 October and 31 March within the current 12 month period) according to the following formula:

\[
BL = \frac{SE}{PSE}
\]

Where:

- BL is the base load;
- SE is the smallest consumed energy between two consecutive scheduled reads during the summer period; and
- PSE is the number of days in the reading period during the summer period.

(iii) The temperature sensitivity factor applies a weather impact to the base load by reference to the effective degree day for each day in the reading period. The temperature sensitivity factor is derived from the difference between:

(A) the largest consumed energy measured in a reading period during the winter period (between 1 April and 30 September within the current 12 month period); and

(B) the smallest consumed energy between two consecutive scheduled reads measured in a reading period during the summer period,
divided by the sum of the effective degree days for the reading period over which the largest consumed energy value was derived. This is represented by the following formula:

$$TSF = \max(0, \frac{LE - (BL \times PLE)}{\Sigma EDD (LE)})$$

Where:

- TSF is the temperature sensitivity factor;
- LE is largest consumed energy between two consecutive scheduled reads during the winter period;
- BL is the base load;
- PLE is the number of days in the reading period during the winter period; and
- $\Sigma EDD (LE)$ is the sum of the effective degree days over the reading period during the winter period.

(iv) The Network Operator must use the latest available effective degree days published by AEMO. Where the effective degree day for a reading period for a day is not available, the Network Operator must use the effective degree day for the previous day.

(b) Type 2 Substitution Methodology (Gas non-daily metered)

A Network Operator must use this substitution methodology where the delivery point in respect of which the substituted meter reading is to be undertaken has less than 12 months’ consumption history.

A Network Operator must use the categories of customers in accordance with the customer characterisation Network Operator as follows:

<table>
<thead>
<tr>
<th></th>
<th>NSW metropolitan</th>
<th>NSW Non-metropolitan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>R1</td>
<td>R2</td>
</tr>
<tr>
<td>Business</td>
<td>B1</td>
<td>B2</td>
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<table>
<thead>
<tr>
<th></th>
<th>ACT metropolitan</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>R1</td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>B1</td>
<td></td>
</tr>
</tbody>
</table>

(i) A Network Operator must calculate the average base load and average temperature sensitivity factor for each customer characterisation as follows:

(A) The average base load is:

- the sum of the base load consumption for all customers within that Network Operator’s network which have that customer characterisation and 12 months or more consumption history; divided by
- the number of delivery points within that Network Operator’s network which have that customer characterisation and 12 months or more consumption history.

(B) The average temperature sensitivity factor is:
- the sum of temperature sensitivity factors for all customers within that Network Operator's network which have that customer characterisation and 12 months or more consumption history; divided by
- the number of delivery points within that Network Operator's network which have that customer characterisation and 12 months or more consumption history.

(ii) A Network Operator must determine the substituted usage for a delivery point by applying the relevant average base load and average temperature sensitivity factor for that delivery point to each day occurring during the period to which the substituted meter reading relates. A Network Operator must use the latest available effective degree days published by AEMO. Where the effective degree day for a reading period for a day is not available, the Network Operator must use the effective degree day for the previous day.

(iii) A Network Operator must apply the applicable average heating value and pressure correction factor to the substituted consumed energy to derive the substituted flow for the period and the relevant substituted meter reading.

(c) Type 3 Substitution Methodology

Where neither a Type 1 nor Type 2 substitution methodology is appropriate, a Retailer and a Network Operator may agree a substituted consumed energy for a delivery point for a reading period.

(d) Interval Meter Substitution Methodology

For a daily metered delivery point, a substituted meter reading will be calculated using the following method:

(i) if metering data exists for the delivery point for the same day in the previous week (and that day is not a public holiday), by adopting an substitution based on the same day in the previous week; or

(ii) If paragraph (i) does not apply and the same day in the previous week is a public holiday, by adopting an substitution based on the same day in the week before the previous week.

A3.3 Hot Water Meters

(a) Application

The substitution of hot water meter readings and consumption utilises the existing methodology applicable in NSW and the ACT for buildings with centralised hot water systems (CHWS). If the scheduled reading of meters (master meters and sub-hot water meters) in a CHWS has been completed with one or more resulting "missed" readings (readings that cannot be obtained due to blocked access, safety hazards, meter fault or other factors), or readings that fail validation, an estimate for each missed or failed reading will be calculated as follows.

(b) Method W1: Hot Water Substitution Based on Corresponding Past Year Period

If the meter whose consumption is to be substituted has at least 365 calendar days of validated meter reading history with the same Customer, calculate Mest and Rest, the meter's substituted consumed energy and meter reading index respectively, as follows:

(i) Examine the meter's reading history for a qualifying corresponding past year period, determined as follows:

(A) Calculate Dest, the number of billing days in the period to be substituted, from the date of the last validated meter reading to the end date of the substitution period.
(B) Subtract 365 days from the last validated meter reading (Rprev) and the substitution period’s end date to obtain the corresponding past year period’s start and end dates (Dp_start and Dp_end),

(C) Examine the meter’s reading history for a qualifying corresponding past year period meeting the following criteria:

- Its start and end dates exactly or closely match Dp_start and Dp_end to within 10 calendar days on either side of Dp_start and Dp_end.
- The number of billing days Dcyp in the corresponding past year period must be within plus or minus 10 calendar days of Dest.
- The meter readings in the corresponding past year period must be validated meter readings.

(ii) If a qualifying corresponding past year period is found:

(A) Calculate the raw metered units (MUraw) from the qualifying corresponding past period standardised to the number of days to be substituted (Dest).

(B) Convert MUraw to standard litres (L) by:

- Multiplying MUraw by the meter model’s multiplier number.
- Multiplying the result in (a) by 4.546 to convert from imperial gallons to litres, if the hot water meter is read in imperial units.

(iii) Calculate the average daily litres (Ld_avg) for the qualifying corresponding past year period by dividing L by Dcyp.

(iv) Multiply Ld_avg by Dest to obtain the substituted number of litres Lest for the substitution period.

(v) Multiply Lest by CF, the CHWS’s common factor (in MJ per litre) in the current reading period, to obtain MJest, the meter’s substituted consumed energy.

(vi) Add Lest to Rprev to obtain Rest, the substituted meter reading index.

(vii) Populate MJest and Rest into the MDN (MeterDataNotification) to be provided to the delivery point’s current FRO and AEMO.

(c) Method W2: Hot Water Substitution Based on Immediately Preceding Period

If the meter whose reading is to be substituted has less than 365 days of validated meter reading history, or a qualifying corresponding past year period is not found, examine the meter’s reading history for an immediately preceding period with a validated meter reading that is an actual meter reading. If such a reading is found:

(i) Retrieve the preceding period’s meter reading (Rprev), raw metered units (MUraw) and number of billing days (Dprev).

(ii) Convert MUraw to standard metered units (L) by:

(A) Multiplying MUraw by the meter model’s multiplier number.

(B) Multiplying the result in (a) by 4.546 to convert from imperial gallons to litres, if the meter is a hot water meter reading in imperial units.

(iii) Calculate the litres (Ld_avg) by dividing L by Dprev.

(iv) Calculate the substituted litres (Lest) by multiplying Ld_avg by Dest.

(v) Adjust Lest to reflect seasonality (higher gas usage in cold months, lower in warm months):

(A) Multiply Lest by 0.5 if the last bill was read in Aug/Sep/Oct.
(B) Divide Lest by 1.5 if the last bill was in Jun/Jul/Nov/Dec.
(C) Multiply Lest by 2 if the month of the estimate-to is Aug/Sep/Oct.
(D) Multiply Lest by 1.5 if the month of the estimate-to is Jun/Jul/Nov/Dec.

(vi) Multiply Lest by CF, the CHWS’s common factor (in MJ per litre) in the current reading period, to obtain MJest, the meter’s substituted consumed energy.

(vii) Add Lest to Rprev to obtain Rest, the substituted meter reading index.

(viii) Populate MJest and Rest into the MeterDataNotification to be provided to the delivery point’s current FRO and AEMO.

(d) Method W3: Where Methods W1 and W2 cannot be applied

If the meter whose consumption is to be substituted has (a) less than 365 calendar days of validated meter reading history with the same customer, or (b) its reading in the immediately preceding period is not validated, AND (c) the scheduled read of all meters in the CHWS has been completed (whether readings have been successfully obtained or otherwise for all meters in the CHWS), for any meter whose reading was not successfully obtained or failed validation, calculate MJest and Rest, the meter’s substituted consumed energy and meter reading index, using the following steps:

(i) Calculate Li_est, meter i’s substituted litres, as:

\[
Li_{est} = \min \left( \frac{\text{Average litres of sub-meters with validated meter readings}}{\text{Average “residual” litres of sub-meters without validated meter readings}} \right)
\]

Where:
- Ri_est is the meter reading to be substituted for sub-hot water meter i,
- Ri_prev is meter i’s previous validated meter reading,
- Li_est is the metered units in litres to be substituted for meter i,
- Lj_validated is the validated metered units in litres of sub-hot water meter j,
- LHW_master is the number of metered units in litres measured by the CHWS’s master hot water meter for the period to be substituted,
- N is the total number of sub-hot water meters in the CHWS,
- Nest is the number of sub-hot water meters in the CHWS that failed validation and require substitution in the current reading period,
- Nvalidated is the number of sub-meters in the CHWS with validated readings in the current reading period,
- N = Nvalidated + Nest and 0 <= Nvalidated, Nest <= N.

If a master hot water meter does not exist in the CHWS, then

\[
Li_{est} = \frac{\text{Average litres of sub-meters with validated readings}}{Nvalidated}.
\]

(ii) Calculate Ri_est the substituted meter reading index, as:

\[
Ri_{est} = Li_{est} + Ri_{prev}
\]

(iii) Multiply Li_est by CF, the CHWS’s common factor (in MJ per litre) in the current reading period, to obtain MJi_est, the meter’s substituted consumed energy.
(iv) Populate MJi_est and Ri_est into the MeterDataNotification to be provided to the FRO and AEMO.
ATTACHMENT 4 WAGGA WAGGA & TAMWORTH INFORMATION

The provisions of this Attachment apply only to the Wagga Wagga and Tamworth (WWT) network sections.

A4.1 Validation, Substitution and Estimation – WWT Interval Meters

(a) Requirement to validate meter readings

Actual meter readings must be validated. The validation rules applied to the metering data from an interval meter are:

(i) consumption metering data for the read period = sum of interval metering data for the read period;
(ii) accumulated meter reading value is numeric and ≥ 0;
(iii) accumulated meter reading value is ≥ previous accumulated meter reading value;
(iv) accumulated meter reading value passes high/low test;
(v) meter reading date and time > previous meter reading date and time;
(vi) maximum value (to ensure no spikes are created);
(vii) null checks;
(viii) dial capacity and decimal point check; and
(ix) metering data is consistent with the correct meter type for the delivery point.

(b) Requirement to produce substituted metering data

Metering data for an interval meter must be substituted where:

(i) the actual meter reading fails a validation test;
(ii) there is a failure of the metering installation; or
(iii) an inspection or test of the metering installation establishes that a measurement error exists.

(c) Requirement to produce estimated metering data

Metering data for an interval meter must be estimated where the metering data cannot be obtained in the timeframe required for settlement of the market.

(d) Network Operator obligations

(i) The Network Operator may use Types 1, 2, 3, 4, 5, 6, 7 or 8 techniques in accordance with section A4.1(e), when metering data is required to be substituted.

(ii) The Network Operator may use Types 1, 2, or 3 techniques in accordance with section A4.1(e), when metering data is required to be estimated.

(iii) The Network Operator may use Type 2 except where the first actual meter reading has not been undertaken.

(iv) The Network Operator may use Type 3, except where:

(A) the first actual meter reading has not been undertaken; or

(B) 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.

(v) The Network Operator may use Types 4, 5, 6 and 7 in the circumstances described in the relevant paragraph of section A4.1(e).
(vi) The Network Operator may use Type 7 prior to the first actual meter reading being undertaken.

(vii) The Network Operator may use Type 8 where there is an error in the meter pressure and/or gas temperature.

(viii) The Network Operator must notify the User where a substituted meter reading or estimated meter reading is used.

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

(e) Substitution and Estimation Types

The techniques for substituting and estimating metering data for interval meters are set out below.

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 Network Operator must substitute or estimate the metering data using metering data from that interval metering installation.

Type 2

The Network Operator may substitute or estimate the metering data using the data from the “Nearest Equivalent Day” or “Like Day” from the same, or similar, period in the previous year. The “Nearest Equivalent Day” or “Like Day” is determined from the table below.

<table>
<thead>
<tr>
<th>Day</th>
<th>“Nearest Equivalent Day” or “Like Day” (in order of availability)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Monday** Monday*</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Tuesday<strong>Wednesday</strong> Tuesday* Wednesday*</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Wednesday** Tuesday** Thursday** Wednesday* Thursday* Tuesday*</td>
</tr>
<tr>
<td>Thursday</td>
<td>Thursday** Wednesday** Tuesday** Thursday* Wednesday* Tuesday*</td>
</tr>
<tr>
<td>Friday</td>
<td>Friday** Friday*</td>
</tr>
<tr>
<td>Saturday</td>
<td>Saturday** Saturday*</td>
</tr>
<tr>
<td>Sunday</td>
<td>Sunday** Sunday*</td>
</tr>
</tbody>
</table>

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 preferred day that is not a public holiday.

** Occurring in the same week as the day in the previous year.
* Occurring in the week preceding that in which the substitution or estimation day occurs in the previous year.
Type 3

The Network Operator 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.

<table>
<thead>
<tr>
<th>Day</th>
<th>“Nearest Equivalent Day” or “Like Day” (in order of availability)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Monday**</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Tuesday** Wednesday** Thursday**</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Wednesday** Tuesday* Thursday** Tuesday**</td>
</tr>
<tr>
<td>Thursday</td>
<td>Thursday** Wednesday* Tuesday* Wednesday** Tuesday**</td>
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<tr>
<td>Friday</td>
<td>Friday**</td>
</tr>
<tr>
<td>Saturday</td>
<td>Saturday**</td>
</tr>
<tr>
<td>Sunday</td>
<td>Sunday**</td>
</tr>
</tbody>
</table>

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 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 substitution or estimation day occurs.
* Occurring in the same week as the substitution or estimation day.

Type 4

Previously used substituted metering data can be changed, prior to the actual meter reading, where the User 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.

Type 5

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

Type 6

The User and the Network Operator 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. The specifics of this Type may involve a globally applied method or a site-specific method.

Type 7

Prior to the first actual meter reading, the metering data may be substituted using a method agreed between the User and the Network Operator.

Type 8

Where a 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.
A4.2 Validation, Substitution and Estimation – WWT Basic Meters

(a) Requirement to validate meter readings

Actual meter readings must be validated. The validation rules applied to the metering data from a basic meter are:

(i) meter reading value is numeric and ≥ 0;
(ii) meter reading value is ≥ previous meter reading value;
(iii) meter reading value passes high/low test;
(iv) meter reading date > previous meter reading date and time;
(v) null checks;
(vi) dial capacity and decimal point check; and
(vii) metering data is consistent with the correct meter type for the delivery point.

(b) Requirement to produce substituted metering data

Metering data for a basic meter must be substituted where:

(i) the actual meter reading fails a validation test;
(ii) there is a failure of the metering installation; or
(iii) an inspection or test of the metering installation establishes that a measurement error exists.

(c) Requirement to produce estimated metering data

Metering data for a basic meter must be estimated where the metering data cannot be obtained in the timeframe required for settlement of the market.

(d) Network Operator obligations

(i) The Network Operator may use Types 1, 2, 3, 4, 5 or 6 techniques in accordance with section A4.2(e), when metering data is required to be substituted.
(ii) The Network Operator may use Types 1, 2, or 3 techniques in accordance with section A4.2(e), when metering data is required to be estimated.
(iii) The Network Operator may use Type 6 where there is an error in the meter pressure and/or gas temperature.
(iv) The Network Operator must notify the User where a substituted meter reading or estimated meter reading is used.
(v) The Network Operator must ensure that for all Types, a substituted meter reading or estimated meter reading is based on an actual meter reading, and is not based on metering data that has previously been estimated or substituted.

(e) Substitution and Estimation Types

The techniques for substituting and estimating metering data for basic meters are set out below.

Type 1

Substitution or estimation

= Average daily consumption from the same, or similar, reading period last year * number of days required to be substituted or estimated.

Type 2

1 The definition of a basic meter includes a hot water meter.
Substitution or estimation

= Average daily consumption previous reading 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, reading period last year is not available.

Type 3
Substitution or estimation

= Average daily consumption for the 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 neither the consumption from the same, or similar, reading period last year nor the consumption from the previous reading period are available.

Type 4
The User and the Network Operator 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. The specifics of this Type may involve a globally applied method or a site-specific method.

Type 5
Previously used substituted metering data can be changed, prior to the actual meter reading, where the User 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.

Type 6
Where a 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.

A4.3 WWT Gas Zone Codes

This section shows the application to the WWT network sections of the gas zone coding structure under the Retail Market Procedures for South Australia.
### Application of SA coding structure to WW&T network sections:

<table>
<thead>
<tr>
<th>Network</th>
<th>HUB Participant ID</th>
<th>A</th>
<th>B</th>
<th>CC</th>
<th>D</th>
<th>ABCCE as example</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGNL SA (formerly Envestra)</td>
<td>ENVSA</td>
<td>2</td>
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<td>8</td>
<td>90,91,92,93,94,95,96, 97,98</td>
<td>6,7,8</td>
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<table>
<thead>
<tr>
<th>Network Section / Network ID</th>
<th>Participant</th>
<th>Receipt Point ID</th>
<th>Sub Network</th>
<th>Hub Participant ID</th>
<th>A</th>
<th>B</th>
<th>CC</th>
<th>D</th>
<th>Gas Zones</th>
<th>Gate Points</th>
<th>Transmission Zone</th>
<th>Heating Value Zone</th>
</tr>
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<tbody>
<tr>
<td>NSWCOOMA</td>
<td>COUNTRY</td>
<td>DUKECOOMA</td>
<td>Cooma</td>
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</table>

**EXISTING WW&T**

<table>
<thead>
<tr>
<th>Transmission Zone</th>
<th>Heating Value Zone</th>
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<tbody>
<tr>
<td>ABCCD as example</td>
<td>ABCCE as example</td>
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</tbody>
</table>
ABCCD and ABCCE, where:

A
2 = Envestra
8 = AGNL NSW
9 = APA CRP NSW

B
Envestra in SA:
1 = Envestra SA GDS
2 = Envestra Mildura GDS
AGNL in NSW:
8 = AGNL NSW GDS
APA in NSW:
9 = APA CRP Tamworth GDS

CC
AGNL in NSW (i.e. where A = 8) CC equals as follows:

D
For AGNL NSW, D =
6 = Young - Moomba to Sydney Pipeline (MSP)
7 = Cooma - Eastern Gas Pipeline (EGP)
8 = Walla - Victorian Prescribed Transmission System (PTS)

E
For APA NSW, D =
9 = Tamworth - Central Ranges Pipeline (CRP)

V = Victorian Prescribed Transmission System (PTS)
APA in NSW:

C = Central Ranges Pipeline (CRP)
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