RETAIL MARKET PROCEDURES (NSW AND ACT)

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VERSION CONTROL

Version	Effective Date	Procedures Affected	Authority
1.0	1 July 2009	First Issue	Authorised under the NGL and NGR provisions effective 1 July 2009.
2.0	*STTM* Commencement Date	Amendments made in accordance with the following Procedure changes: • IN044/09 *STTM* Procedure Changes (approved on 8 February 2010) • IN023/09 CI-RAB cash settlement process (approved on 4 May 2010) • IN027/09 Creation of *Delivery point* Transactions (approved on 12 July 2010)	Authorised under the NGL and NGR provisions effective on *STTM* commencement date.
3.0	1 October 2010	Amendments made in accordance with the following Procedure change: • IN048/09 Dispensing with Daylight Savings Time in all non NSW-Wilton *network sections*.	Authorised under the NGL and NGR provisions effective 1 October 2010.
4.0	18 January 2010	Amendments made in accordance with the following Procedure changes: • IN014/10 – *Cumulative imbalance* (CI)/*Reconciliation account* Balance (RAB) Cash Settlement Process Minor Amendments; • IN028/09 – Data Provision for Non-Short Term Trading Market *Network sections*; • IN050/09 Data Reports; and • IN049/09 Amendments to Change of *User* processes for *daily metered delivery points*.	Authorised under the NGL and NGR provisions effective 18 January 2010.
5.0	4 February 2011	Amendments made in accordance with the following Procedure changes: • IN006/10– Negative *STTM distribution system allocation* Caused by Negative CLP Allocation	Authorised under the NGL and NGR provisions effective 4 February 2011.
6.0	16 June 2011	Amendments made in accordance with the following Procedure changes: • IN046/10 Amendments to COU on move-in processes	Authorised under the NGL and NGR provisions effective 16 June 2011.
7.0	26 September 2011	Amendments made in accordance with the following Procedure changes: IN015/11 – Inclusion of postcodes in the "discovery address"	Authorised under the NGL and NGR provisions effective 26 September 2011
8.0	28 March 2012	Amendments made in accordance with the following Procedure changes: IN001/12 – Delivery of DPI full listings	Authorised under the NGL and NGR provisions effective 28 March 2012

Version	Effective Date	Procedures Affected	Authority
9.0	NECF commencement date	Amendments made in accordance with the following Procedure changes: IN038/10 Note – these take effect in ACT only.	Authorised under the NGL and NGR provisions effective on NECF commencement date.
10.0	3 September 2012	Amendments made in accordance with the following Procedure changes: IN012/12 – Market Communications IN020/12 – Consolidation of version 8 and version 9 of Retail Market Procedures IN021/12 – Changes to the Interface Control Document	Authorised under the NGL and NGR provisions effective on 3 September 2012.
11.0	25 March 2013	Amendments made in accordance with the following Procedure changes: IN016/11 – Inclusion of Next Scheduled *Read* Date in DPI Full Listings IN034/12 – Relaxation of DSA Delivery Requirements	Authorised under the NGL and NGR provisions effective on 25 March 2013.
11.1	1 July 2013	Amendments made in accordance with the Procedure changes: IN038/10 Ministerial Amendments (as made by the SA Minister upon NERL commencement in the adoptive jurisdiction)	Authorised under the NGL and NGR provisions effective on NECF commencement date.
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13.0	1 July 2014	Amendments made in accordance with the following Procedure changes: IN003/14 (approved 6/06/14) IN008/14 (approved 6/06/14)	Authorised under the NGL and NGR provisions effective 1 July 2014.
14.0	3 November 2014	Amendments made in accordance with the following Procedure changes: IN028/13 (approved 13/10/14) IN011/14 (approved 13/10/14)	Authorised under the NGL and NGR provisions effective 3 November 2014.
14.1	19 April 2016	Amendments made in accordance with the Procedure change IN032/15 – NARGP Transitional Provisions consultation	Authorised under the NGL and NGR provisions effective 19 Apr 2016.
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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16.0	16 November 2016	Amendments made in accordance with the following Procedure changes IN031/11 – (Fast track process for release of address enumerations) (approved 14/10/16)	Authorised under the NGL and NGR provisions effective 16 November 2016.
17.0	5 April 2017	Amendments made in accordance with the following Procedure changes: IN001/16 – NSW-ACT RMP changes for Shoalhaven contestability IN033/16 – NSW-ACT RMP Forecasting Development and Reporting IN038/16 – NSW-ACT Report Timing	Authorised under the NGL and NGR provisions effective 5 April 2017
18.0	31 July 2017	Amendments made to clause 1.2. Add the definition NERL	Authorised under the NGL and NGR provisions effective 31 July 2017
19.0	28 September 2018	Amendments made to 3.6.5, 6.2.1 and 6.7.1 in accordance with Procedure change IN001/18.	Authorised under the NGL and NGR provisions effective 28 September 2018
20.0	14 December 2018	Amendments made to A2.2 and A3.3 in accordance with Procedure change IN007/18	Authorised under the NGL and NGR provisions effective 14 December 2018
21.0	28 June 2019	Add chapter 12B in accordance with Procedure change IN009/18	Authorised under the NGL and NGR provisions effective 28 June 2019
22.0	8 August 2019	Amendments made to 1.2.1 (Definitions) in accordance with Procedure change IN0010/18.	Authorised under the NGL and NGR provisions effective 8 August 2019.
23.0	1 October 2019	Amendments made to 1.2.1, 3.6.6, 7.2.1 8.11.9 and A2.3 in accordance with Procedure change IN002/16. Amendments made to 8.6.4 and 8.11.1 in accordance with Procedure change IN009/19.	Authorised under the NGL and NGR provisions effective 6am AEST 1 October 2019.
24.0	10 February 2020	Amendment made in accordance with the following Procedure change for alignment with other jurisdictional retail gas market procedures where appropriate: IN006/17. Update clause 1.1.2.	Authorised under the NGL and NGR provisions effective 10 February 2020.
25.0	30 October 2020	Amendments made to clause 1.2.1 (Definitions), Attachment 2 (clause A2.3), in accordance with Procedure change IN001/20.	Authorised under the NGL and NGR provisions effective 30 October 2020

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26.0	30 April 2021	Amendments made to: • Add new clause 6.2.1 (e) – IN002/18 • Clause 1.2.1 add new definition re-energise and add clause 4.2A (Re-energisation of Network Delivery Points) – IN009/17 • Delete clause 12A – IN005/19 • Clause 1.3.3 add further clarity addition to the aseXML schema enumerated address based identifiers process. – IN005/20 • Replace time reference with hours from gas day for the following clauses: 7.2.1, 8.11.1, 8.11.2, 8.11.3, 8.11.4, 8.11.6, 8.11.7, 8.11.7, 8.12.1, 8.12.3 – 1N004/19 • IN010/15 - removal of the word 'calendar' before day as it causes confusion about the definition of 'day' which is currently undefined. See 1.2.1, 5.2.1, 5.2.2, 7.2.6, 8.8.6, 8.9.13,8.9.17, A2.2, A3.3 • IN003/21 – Delete redundant transition provisions 12B. For clause 1.2.1 - deleted the definition MIRN Discovery Response. Amended Pressure Correction Factor definition. Also added new sub clause in 1.2.2. Interpretations All the above is part of IN004-17.	Authorised under the NGL and NGR provisions effective 30 April 2020
27.0		IN001/21 -	

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

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;

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(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 1.2.2 (c) (Time interpretation);

(ii) Chapter 9 (Error Corrections);

(iii) Chapter 6 (Transfer), other than clauses 6.2.2(a) and 6.2.2(c);

(iv) clause 4.2.4 (De-energisation by user basic meter only); and

(v) clause 4.4.1 (c) (Permanently removing delivery points)

(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) There is no sub clause 1.1.2 (e) (i);

(ii) clause 3.10.2 (a) and (b) apply as if all references to the publication of data were to the provision of that data to *AEMO*; and

(iii) clause 8.6.14 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 6.2.2 (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

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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* (not including a *Customer-own read* (*Actual*);

Commented [DM1]: Given the IN001/21 initiative pertains to just JGN network sections, added this provision so that COR "A" does not apply to the WWT network sections.

(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.

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actual meter reading	The figures or other information shown on a *meter* or instrument as actually *read*. For the purpose of these Procedures, a *Customer-own read (Actual)* is taken to be *actual meter reading*.
address based identifiers	In relation to the address standard specified in the *Gas Interface Protocol*, the attributes that make up the *address based identifiers* are street type, street suffix, flat or unit type, floor or level type and postal delivery type.
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.

Commented [DM2]: Jemena Gas Networks (JGN) drafting in the GMI was to insert the following note:
[Note: in some circumstances a *Customer-own read* may be treated as an *actual meter reading*. Refer to the definition of *Customer-own read* for more information

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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:

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	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 *NERL* 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).

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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. For the purpose of these Procedures, except for a *Customer-own read (Actual)*, a~~A~~ *Customer-own read* is taken to be an *estimated meter reading*.
Customer-own read (Actual)	A *Customer-own read* that satisfies *Customer-own read verification requirements*. For the purpose of these Procedures, a *Customer-own read (Actual)* is taken to be an *actual meter reading*.
Customer-own read verification requirements	Those requirements for *Customer–own reads (Actual)* contained in Attachment 5.
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 *NERL*.
default RoLR	Has the meaning given in Part 6 of the *NERL* (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 *NERL*.
Disconnected	See definition of *de-energised*.

Commented [DM3]: This is one of the clauses that JGN mentions as one of the clause that they propose to deviate from the NSW/ACT RMP – (See JGN letter to AER which is Attachment D of the GMI for further details).
JGN mentioned that the second sentence in the RMP definition of 'customer own read' will not apply.

JGN drafting in the GMI was to insert the following as the end of the existing sentence:
except in the case where a *Customer* submits to the *Network Operator* a *read* of a *meter* which meets the conditions approved by the *Network Operator*, in which case it shall be taken to be an *actual meter reading*

Commented [DM4]: Adding this definition adds the clarity that may have been missing in the initial drafting. The result here is there is now two definition of a COR one being an actual and the other an actual.

Commented [DM5]: Adding this definition adds the further transparency on what a COR "A" is. This transparency may have been missing in the initial drafting. To be consistence with the other type of reads (Estimated see Attachment 2, Substituted Attachment 3 etc..) the specific requirements have been added as attachment 5.

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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* *that is not a Customer-own read (Actual)*.
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

Commented [DM6]: This is one of the clauses that JGN mentions as one of the clause that they propose to deviate from the NSW/ACT RMP –(See JGN letter to AER which is Attachment D of the GMI for further details). JGN mentioned that the reference to 'customer own read' will not apply.

JGN drafting in the GMI was to insert the following note:
[Note: In some circumstances a *Customer-own read* may be treated as an *actual meter reading*. Refer to the definition of *Customer-own read* for more information.]

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	(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 *NERL*.
failed retailer	Has the meaning given in Part 6 of the *NERL*.
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 starting at the same time as a *standard gas day* as defined in Part 26 of the *Rules*.

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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 1×10^9 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. HVs 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.

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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*.

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miscellaneous reconciliation amount	For a *User*, a quantity of *gas* calculated under clause 8.9.10.
MJ	One megajoule which equals 1 x 10^6 joules.
monthly RAB reduction target	Has the meaning given in clause 8.9.13(a).
NERL	The National Energy Retail Law as set out in the schedule to the *National Energy Retail Law (South Australia) Act 2011* (SA), as applied as a law of New South Wales or the Australian Capital Territory (as applicable), under the *National Energy Retail Law (Adoption) Act 2012* (NSW) or the *National Energy Retail Law (ACT) Act 2014* (ACT) respectively.
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* or, 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.

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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)	(Note: referred to as the volume correction factor (VCF) for some *networks*.) The value applied to reflect the difference in volume of *gas* at the pressure at which its volume is measured, and the volume of that *gas* at standard metric conditions. (a)
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

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	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 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).
re-energise	Has the meaning given in Part 1 of the *NERL*.
reference reading	The *validated meter reading* obtained on end date of a *reading period* (see clause 3.6.2).
Register of Weather Related Information	An industry reference document that specifies which weather station data must be used for the purposes of these Procedures.
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	An enity that participates in the retail gas market of New South Wales and the Australian Capital Territory in the registrable capacity of a 'retailer' under the *Rules*, and has registered with *AEMO* under the *Rules* in that capacity.

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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 *NERL*.
RoLR notice	Has the meaning given in Part 6 of the *NERL*.
RoLR transfer date	Has the same meaning as "transfer date" in Part 6 of the *NERL*.
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 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 by the *Network Operator* 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*

Commented [DM7]: Added the word "Network Operator" for clarity so that it doesn't allow for the Customer to provide a Special Read.

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	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 x 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

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	(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.
total non-daily metered withdrawals	For a *User* in a *network section* for a *gas day*, the amount calculated under clause 8.11.13(d).
total reconciliation amount	The sum calculated under clause 8.9.12(a) or revised under clause 8.9.17.
transfer error correction request	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*.
transfer error correction request notification	A notification that *AEMO* has received a *transfer error correction request*, issued by *AEMO* under clause 11.2.
transfer error correction withdrawal notice	In relation to a *transfer error correction request*, a notice delivered to *AEMO* under clause 11.5.1.
transfer request	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*.
transfer request notification	A notification that *AEMO* has received a *transfer request*, issued by *AEMO* under clause 6.3.
transfer withdrawal notice	In relation to a *transfer request*, a notice delivered to *AEMO* under clause 6.6.1.
transferable cumulative imbalance	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*.
transferable reconciliation account balance	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.

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transmission pipeline operator	The party to an *operational balancing arrangement* that is not a *Network Operator*.
transportation agreement	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*.
User	A *Retailer* or a *Self Contracting User*.
validated meter reading	A *meter reading* that has been validated in accordance with an *approved validation methodology*.
weekly calculation day	Each Friday in a month, or where the last day of that month is a Thursday, that Thursday.
withdrawal quantity	Has the meaning given in clause 8.9.16.

1.2.2 Interpretation

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

(a) Terms defined in the *Law*, the *NERL* 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*, the *NERL* or the *Rules* (as applicable).

(b) If a provision of these Procedures is inconsistent with a provision of the *Law*, the *Rules* or the *NERL*, the *Law*, *Rules* or *NERL* (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

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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:
PCF of 1.0989
HV of 38.55
Vol 345 cubic feet (100s)
345*2.832*1.0989*38.55 = 41389.94982
Rounded to 41390

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

Energy = (Meter index difference) x Multiplier (converts meter index to litres) x 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
(Resulting volume flow = 11110)
Master gas consumption = 57544 MJ
Master water consumption = 126190 litres

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Common factor = 57544 / 126190 = 0.4560107 rounded to 0.456011
Energy (MJ) = 1111 x 10 x 0.456011 = 5066.28 rounded to 5066 MJ

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

Energy = Meter index difference x PCF x HV
Where:
Meter index difference = difference between current and previous *index reading*
PCF = *pressure correction factor* x Water conversion factor
Water conversion factor = Master gas consumption (M^3) divided by Master/Total sub-hot water consumption (litres)
HV = *heating value*

Example:

Master gas consumption = 2547 M^3
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.

(i) Unless expressly stated otherwise in the Procedure, the version of the Procedure that applies to a *gas day* is the version of the Procedure that was in effect at the start of the *gas day*.

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.

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1.3.3 Amendment

Except otherwise specified in clause 1.3.3(c), 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*.

(c) If a *Retailer* or a *Network Operator* or *AEMO* becomes aware of an addition needed to the aseXML schema enumerated *address based identifiers*, as soon as practicable after becoming aware of the change the relevant *Retailer* or *Network Operator* or *AEMO* must:

(i) ensure that the AseXML Standards Working Group (ASWG) is advised of this new *address based identifier* for addition to the aseXML schema enumerated *address based identifiers* using the rapid change process as set out in the ASWG Change Management Process as published on the AEMO website; and

(ii) where there has been an update to the aseXML schema enumerated *address based identifiers*, *AEMO* must provide a notice via the *FRC HUB* broadcast email distribution list that an addition to the list has been implemented; and

(iii) where a *Retailer* or a *Network Operator* has received a notice as set out in clause 1.3.3(c)(ii), it must use reasonable endeavours to implement the updated enumerations file within 10 *business days* but no later than 35 *business days* after the date of the notice.

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*.

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(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.

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(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.

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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;

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(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*, validated *Customer-own read (Actual)*, 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*; and.

(E) if the *meter reading* is a *Customer-own read (Actual)*, the information used to verify the *meter reading* that meets the *Customer-own read verification requirements*.

(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;

Commented [DM8]: Added the new type of meter reading being a Customer-own read (Actual)

Commented [DM9]: This new "E" places an obligation on the Network Operator to in its metering database Customer own read (Actual) information.

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(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

AEMO must create, maintain and administer a *metering data*base containing information for each *delivery point*.

AEMO must ensure that the *AEMO metering data*base 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*;

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(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.

AEMO must ensure that the *AEMO metering data*base 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.

Data must be stored in the *metering database* for seven years in accessible format.

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.

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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) Subject to clause 3.1.1(f), ~~A~~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*.

~~(e)~~(f) A *Network Operator* is not required to *read a meter* at a *delivery point* in accordance with clause 3.1.1(d) if the *Network Operator* has received, or arranged to receive a *Customer-own read (Actual)* for that *meter* in accordance with that *scheduled read date* or as otherwise agreed with the *Retailer* who is the *FRO* for that *delivery point*.

Commented [DM10]: Adding the conditional clause 3.1.1 (f) provide the transparency that may have been missing in the initial in that Network Operator does not need to read the meter.

Commented [DM11]: Adding this clause provide the transparency that may have been missing in the initial in that Network Operator does not need to read the meter as set out in 3.1.1 (d).

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*.

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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 the start of each *gas 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):

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(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 reading*s 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

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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

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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:

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(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*, except where the *Network Operator* has been provided with a *Customer-own read (Actual)*, 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) Except where the *Network Operator* has been provided with a *Customer-own read (Actual)* by the *Customer*, ~~W~~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*

Commented [DM12]: This is one of the clauses that JGN mentions as one of the clause that they would not comply with the RMPs–for further details See JGN letter to AER which is Attachment D of the GMI for further details).

This revising drafting is necessary so that RMP align with the process.

Commented [DM13]: JGN drafting in the GMI was to insert the following after the "provided a *Customer Own-read*" : that is an *estimated meter reading*

Adding this statement adds the further transparency in the COR that is not a COR "A" will be treated as a estimate. See definition of Customer-own read.

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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

* 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.

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(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.

(j) Where the *Network Operator* has been provided with a *Customer-own read (Actual)* by the *Customer* that 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*;

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

(iv) a flag indicating that the *reading* was a *Customer-own read (Actual)*,

by 5.00 pm on the next *business day* after the day on which the *Customer-own read (Actual)* 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 (Actual)* for a *hot water meter* was received by the *Network Operator*.

Commented [DM14]: Adding this provision clarifies what happens if a COR "A" is valid.

(k) Where the *Network Operator* has been provided with a *Customer-own read (Actual)* by the *Customer* that 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 *Customer-own read (Actual)* not being a *validated meter reading*,

by 5.00 pm on the 2nd *business day* after the day on which the *Customer-own read (Actual)* was provided or by 5.00 pm on the 5th *business day* after the day on which a *Customer-own read (Actual)* for a *hot water meter* was received by the *Network Operator*.

Commented [DM15]: Adding this provision clarifies what happens if a COR "A" is not valid.

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*).

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(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*,

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* or a *Customer-own read (Actual)*,

Commented [DM16]: Adding this provision as either COR type is applicable.

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*.

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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*

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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 data*base (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*.

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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

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(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.

(d) 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*, the previously registered *FRO* will cease to be entitled to receive energy data under clause 3.6.5(a) in respect of any period after the effective date of the relevant registration from the later of:

(i) the end of the *business day* on which the *registration notice* was received by the *Network Operator*; and

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(ii) if the *registration notice* was received after 5.00 pm on a *business day*, 9.00 am on the next *business day*.

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 9.00 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

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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:

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(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).

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(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.

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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 data*base;

(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 data*base,

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*);

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(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*,

by 5.00 pm on the 5th *business day* after the day on which the *meter* is *read*.

(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.

4.2A Re-energisation of Network Delivery Points

If a *Network Operator re-energises* a *delivery point* which has previously been *de-energised* or *disconnected* and is located in the *network* of that *Network Operator*, the *Network Operator* must use its reasonable endeavours to notify the *FRO* for that *delivery point*, as well as *AEMO*, of the date of the *re-energisation* of that *delivery point* by 5.00 pm on the fifth *business day* following the day on which the *delivery point* is *re-energised*.

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*.

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(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 data*base 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 data*base 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 data*base 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 data*base 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 meter*s 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*.

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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 clause 5.2.3 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 clause 5.2.3 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 clause 5.2.3.

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

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(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 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 *AEMO* or a *Retailer* or a *Network Operator* becomes aware of a change to the details of a *discovery address*:

(i) *AEMO* or 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.

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 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*

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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 data*base 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 data*base 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.

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(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*.

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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 (b)); and

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(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*.

(e) A *Self contracting user* may request *AEMO* to:

(i) lodge a *transfer request* on its behalf in order for the *Self contracting user* to transfer to itself; and

(ii) accept notices that are required to be in aseXML format under these Procedures on behalf of the *Self contracting user* in relation to the *transfer request* referred to in sub-paragraph (i).

(f) Upon receiving a request under paragraph (e), *AEMO* must lodge a *transfer request* and accept notices in aseXML format on behalf of a *Self contracting user* on such terms and conditions as *AEMO* determines.

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.

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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 5th *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*.

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(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 20th *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 21st *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

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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

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(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, 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:

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(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:

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(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

(c) the relevant *Network Operator*.

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

* 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*).

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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:

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(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

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(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

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

(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);

(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).

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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 the start of the *gas day* that commences 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 the start of the *gas day* that commences 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

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the *Network Operator* for the *delivery point* by the start of the *gas day* that commences 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 the start of the *gas day* that commences 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 the start of the *gas day* that commences 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:

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(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 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 *NERL*.

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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

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(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 *FRO*s 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:

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(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

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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*

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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 amount*s 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*; and

(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

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(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*.

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(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.

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(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)

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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*

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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 30 minutes after the standard nomination cut-off time as defined in rule 678 (2) of the *Rules* or the auction service cut-off time as defined in rule 678 (3) of the *Rules* 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.

[Note: In relation to the auction service nomination cut-off time, the cut-off time may have been extended as contemplated in the Rules and the Capacity Transfer and Auction Procedures]

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*

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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 8.6.4(a), 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 *shipper*s 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 day*s 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).

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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*.

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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.

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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:

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(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* may, 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).

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(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

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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.

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(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*.

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(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 imbalance*s 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

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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);

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(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

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(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 months);

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(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 imbalance*s 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.

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(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 imbalance*s under paragraphs (a) to (c) and the *correction amount*s 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 imbalance*s as set out in the methodology.

(g) *AEMO* must include the *correction amount*s in the relevant *Users*' revised *cumulative imbalance*s as soon as practicable after receiving the *correction amount*s.

(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:

NSL = TDQ – TDM – UAG - CLP

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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).

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(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).

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(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 = 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*.

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(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 x 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 x SF(A) i

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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 x 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

SF(B)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*.

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

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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:

RAi = EWi – DWLi

Where:

i = each *gas day* in the sculpting period;

RAi = *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 = ∑RA + ∑MRA

Where:

TRA = 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

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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 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

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(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* 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 *FRO*s of *delivery points* in the affected *network section*.

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(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);

(ii) the sum of each *User*'s *reconciliation adjustment amount*s and correcting amounts for each *User* in the affected *network section* for the affected *nomination day* is equal to zero; and

(iii) 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 amount*s for the relevant *nomination day* and *network section*, as adjusted by *AEMO* under this paragraph (f), is equal to zero; and

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(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:

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(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 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

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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*;

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(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*.

(g) 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 amounts* for the applicant and each recipient for the relevant *nomination day* under clause 8.9.12; and

(h) 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:

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(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

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(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.

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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 3 hours after the start of the *gas day* + 1:

(i) the total quantity of *gas* injected (in *MJ*) at all *network receipt point*s 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 5 hours after the start of the *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*.

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(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).

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(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 no later than 5 hours after the start of the *gas day* +1, *AEMO* must calculate the *net section load* for each *network section* for the *gas day* in accordance with the following formula:

NSL = TDQ – TDM – UAG – CLP

If NSL < 0 then set NSL = 0

where:

NSL = *net section load* for the *gas day* (in *MJ*);

TDQ = total quantity of *gas* injected (in *MJ*) at all *network receipt point*s within the *network section* for the *gas day*;

TDM = total quantity of *gas* withdrawn (in *MJ*) from all *daily metered delivery points* within the *network section* for the *gas day*;

UAG = unaccounted for *gas* (in *MJ*) for the *network section* for the *gas day* as calculated under clause 8.11.1(b)(i); and

CLP = 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 3.6.6to 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.

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8.11.3 Total of Daily Withdrawals

By no later than 5 hours after the start of the *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 no later than 5 hours after the start of the *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 = 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 no later than 5 hours after the start of the *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 x AF

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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 no later than 5 hours after the start of the *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 no later than 5 hours after the start of the *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

AEMO must calculate, *STTM distribution system allocation* in accordance with rule 422 of the *Rules*.

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:

DWL(A)i = AQ x SF(A) i

where:

i = each *gas day* in the sculpting period;

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

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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 load*s 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:

DWL(B)i = AQ x SF(B)i

where:

i = each *gas day* in the sculpting period;

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:

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(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 recalculations 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:

$$TAA = NSL - \Sigma TNMW$$

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where:

TAA = the *total adjustment amount*;

NSL = the *net section load* calculated under paragraph (a); and

ΣTNMW = 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 * AP

where:

AA = the *User*'s *adjustment amount*;

TAA = the *total adjustment amount* calculated under paragraph (f) and

AP = 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 1st 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 6th *business day* after the end of a month; and

(ii) the 15th *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*.

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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 no later than 5 hours after the start of the *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) [Deleted]

(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) [Deleted]

(v) energy values for those active *non-daily metered delivery points*; and

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(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 no later than 5 hours after the start of the *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.

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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) [Deleted]

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*.

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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.

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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*

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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

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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.

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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

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(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

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(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*.

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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.

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(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.

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CHAPTER 12A. THERE IS NO CHAPTER 12A.

12A.1 There is no clause 12A.1

12A.2 There is no clause 12A.2

12A.3 There is no clause 12A.3

12A.4 There is no clause 12A.4

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CHAPTER 12B. THERE IS NO CHAPTER 12B

12B.1 These is no clause 12B.1

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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.

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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 a 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:

Consumed energy = (BL x P) + (TSF x ΣEDD)

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
- ΣEDD 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 = SE / PSE

Where:

- BL is the *base load*;

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- 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:

$$TSF = \max \{0, (LE - (BL \times PLE)) / \Sigma EDD (LE)\}$$

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
- ΣEDD (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:

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	NSW metropolitan	NSW Non-metropolitan
Residential	R1	R2
Business	B1	B2
	ACT metropolitan	
Residential	R1	
Business	B1	

(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*.

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(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 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:

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- Its start and end dates exactly or closely matches Dp_start and Dp_end to within 10 r 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 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 *meter*ed units (MUraw) and number of billing days (Dprev).

(ii) Convert MUraw to standard *meter*ed 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.

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(v) Adjust Lest to reflect seasonality (higher gas usage in cold months, lower in warm months):

(A) Multiply Lest by 0.70 if the last bill was read in Aug/Sep/Oct.

(B) Divide Lest by 1.25 if the last bill was in Jun/Jul/Nov/Dec.

(C) Multiply Lest by 1.40 if the month of the estimate-to is Aug/Sep/Oct.

(D) Multiply Lest by 1.30 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 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_est = min (Average litres of sub-*meters* with *validated meter readings*,

Average "residual" litres of sub-*meters* without *validated meter readings*)

Li_est = min ((∑Lj_validated / Nvalidated), ((LHW_master - ∑ Lj_validated) / Nest))

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 *meter*ed 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*.

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- 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 = Average litres of sub-*meters* with validated *readings*

= ∑Lj_validated / Nvalidated.

(ii) Calculate Ri_est the *estimated 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 estimated *consumed energy*.

(iv) Populate MJi_est and Ri_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.

(a1) *AEMO* must maintain and publish a *Register of Weather Related Information used to measure weather data*.

(a2) At least 10 *business days* prior to making any amendments to the list of weather observation stations described in the *Register of Weather Related Information*, *AEMO* must inform the Gas Retail Consultative Forum (GRCF) of the change.

(b) Calculation for NSW

(i) The effective degree day (EDD) for NSW is calculated as follows:

EDD = DD (temperature effect)

+ 0.0092 x DD x average wind (wind chill factor)

- 0.0628 x sunshine hours (warming effect of sunshine)

+ 5.0805 x Cos ((2π(day-198)) / 365) (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);

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- sunshine hours is described in paragraph (iv);
- Cos is cosine and is described in paragraph (v); and.
- day is the day number of a 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:

DD = 21.0578 – T if T < 21.0578

0 if T ≥ 21.0578

Where:

- DD is degree day;
- T is the average of 8 three-hourly temperature readings (in degrees Celsius) from 3.00am (day-1) to midnight (day+0) inclusive, at the weather station(s) specified for this purpose in the *Register of Weather Related Information*. ;

Note: The *gas day* is defined as 6:00am day-1 to 6:00am AEST day+0 so the effective degree day formula implies a 3 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 wind (measured in knots) from 3:00 am (day-1) to midnight inclusive (day+0) at the weather observations station(s) for the purpose in the *Register of Weather Related Information*. The average wind is represented by the following formula:

Average wind = 1.000 x average wind

(iv) Sunshine hours is the number of hours of sunshine above a standard intensity for the same duration of time between 3:00am (day-1) to midnight inclusive (day+0), at the weather observation stations(s) specified for the purpose in the *Register of Weather Related Information*.

(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

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(i) The effective degree day (EDD) for ACT is calculated as follows:

EDD = DD (temperature effect)

+ 0.0163 x DD x average wind (wind chill factor)

- 0.1326 x sunshine hours (warming effect of sunshine)

+ 3.1277 x Cos ((2π(day-195)) / 365) (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 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:

DD = 14.6057 – T if T < 14.6057

0 if T ≥ 14.6057

Where:

- DD is degree day;
- T is the average of 8 three-hourly temperature readings (in degrees Celsius) from 3:00am (day -1) to midnight (day +0) inclusive, at the weather observation station(s) specified for this purpose in the *Register of Weather Related Information*;

Note: The *gas day* is defined as 6:00am day-0 to 6:00am AEST day+0 so the effective degree day formula implies a 3 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 wind (measured in knots) from 3:00am (day-1) to midnight inclusive (day+0), at the weather observation station(s) specified for the purpose in the *Register of Weather Related Information*. The average wind is represented by the following formula:

Average wind = 1.000 x average wind

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(iv) Sunshine hours is the number of hours of sunshine above a standard intensity for the same duration of time between 3:00am (day-1) to midnight (day+0) inclusive, at the weather observation station(s) specified for this purpose in the *Register of Weather Related Information*.

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

Where there is no physical sensor to obtain sunshine hour values, these are derived from meter and synoptic data based on cloud cover at the specified weather stations (s).

This is achieved through the following calculation:

@hrlyssm = @psm * @percentsun * 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, @hrlyssm = 18 (60 * 30 * 0.01)

@hrlyssm is then converted to hours by dividing by 60

Therefore sunshine hours for that hour = 0.3 (18/60)

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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:

Consumed energy = (BL x P) + (TSF x ΣEDD)

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
- ΣEDD 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 = 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.

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(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:

$$TSF = \max\{0, (LE - (BL \times PLE)) / \Sigma EDD (LE)\}$$

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
- ΣEDD (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:

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	NSW metropolitan	NSW Non-metropolitan
Residential	R1	R2
Business	B1	B2
	ACT metropolitan	
Residential	R1	
Business	B1	

(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

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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 days of *validated meter reading* history with the same *Customer*, calculate MJest 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 days on either side of Dp_start and Dp_end.

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- The number of billing days Dcpyp in the corresponding past year period must be within plus or minus 10 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 Dcpyp.

(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 0.70 if the last bill was read in Aug/Sep/Oct.

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(B) Divide Lest by 1.25 if the last bill was in Jun/Jul/Nov/Dec.

(C) Multiply Lest by 1.40 if the month of the estimate-to is Aug/Sep/Oct.

(D) Multiply Lest by 1.30 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 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 (Average litres of sub-*meters* with *validated meter readings*,

Average "residual" litres of sub-*meters* without *validated meter readings*)

Li_est = min ((∑Lj_validated / Nvalidated), ((LHW_master - ∑ Lj_validated) / Nest))

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 *meter*ed 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

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Li_est = Average litres of sub-*meters* with validated *readings*

= ∑Lj_validated / 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.

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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.

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(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.

Day	"Nearest Equivalent Day" or "Like Day" (in order of availability)
Monday	Monday** Monday*
Tuesday	Tuesday**Wednesday** Tuesday* Wednesday*
Wednesday	Wednesday** Tuesday** Thursday** Wednesday* Thursday* Tuesday*
Thursday	Thursday** Wednesday** Tuesday** Thursday* Wednesday* Tuesday*
Friday	Friday** Friday*

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Saturday	Saturday** Saturday*
Sunday	Sunday** Sunday*

Substitution or estimates for 'Like Day' to be as detailed above, unless:

- No readings are available on the first listed day, then the next listed preferred day is to be used.
- The day was a public holiday, in which case the most recent Sunday is to be used.
- The day was not a public holiday and the 'Like Day' is a public holiday, in which case the 'Like Day' to be used must be the most recent 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.

Day	"Nearest Equivalent Day" or "Like Day" (in order of availability)
Monday	Monday**
Tuesday	Tuesday** Wednesday** Thursday**
Wednesday	Wednesday** Tuesday* Thursday** Tuesday**
Thursday	Thursday** Wednesday* Tuesday* Wednesday** Tuesday**
Friday	Friday**
Saturday	Saturday**
Sunday	Sunday**

Substitution or estimates for 'Like Day' to be as detailed above, unless:

- No readings are available on the first listed day, then the next listed preferred day is to be used.
- The day was a public holiday, in which case the most recent Sunday is to be used.
- The day was not a public holiday 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.

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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[1]

(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

[1] The definition of a *basic meter* includes a *hot water meter*.

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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

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

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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.

There is no Section A4.3

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ATTACHMENT 5 CUSTOMER-OWN READ VERIFICATION REQUIREMENTS

A5.1 Criteria

The *Network Operator* must apply the following criteria when determining whether a *Customer-own read* is a *Customer-own read (Actual):*

(a) The *customer* has electronically submitted, directly to the *Network Operator*, details of the *meter number*, the *read* undertaken by the *customer* for the *non-daily metered delivery point* to which *the meter* relates and a current photograph of the *meter* showing the *meter* index and *meter number*.

(b) Submission of the information specified in paragraph (a) occurs during the applicable *read* window, being no earlier than 4 *business days* before the *scheduled read date*, and no later than 2 *business days* after the *scheduled read date*.

A5.2 Validation

A Customer-own read (Actual) (as determined by application of the requirements in A5.1) must be validated by the *Network Operator* in accordance with the *approved validation methodology*. In doing so, should any checks conducted as part of this procedure not be satisfied, the *Network Operator* may review the *read* undertaken by the *customer*, *meter reading* history and the current photograph in A5.1 A (a) in order to validate the *read* undertaken by the *customer* (for example, by checking whether the *read* undertaken by the *customer* and the current photograph of the *meter* showing the *meter* index are the consistent).

For this purpose, any photographs submitted as supporting information must be of sufficient quality so that the applicable *meter number* and the *meter* index are clearly legible.

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