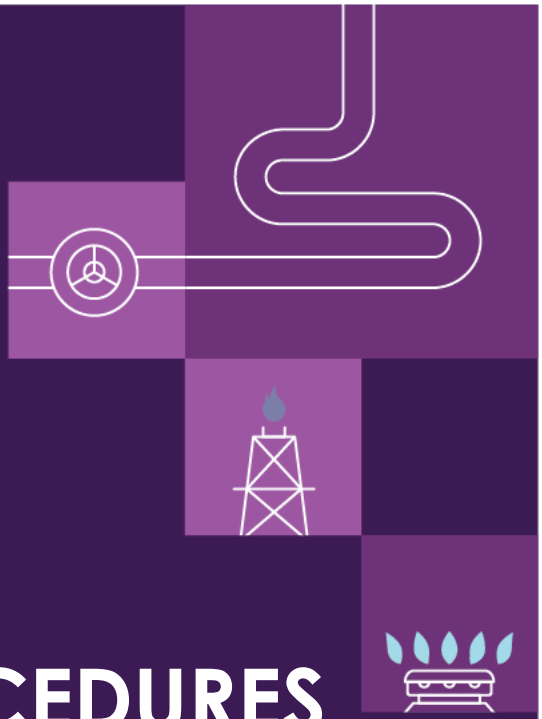

RETAIL MARKET PROCEDURES (SOUTH AUSTRALIA)

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VERSION RELEASE HISTORY

Version	Effective Date	Procedures affected	Authority
1.0	1 October 2009	First Issue	Authorised under the NGL and NGR provisions effective 1 July 2009.
2.0	4 June 2010	Amendments made in accordance with the following Procedure changes: • IN029/09 (approved 8/02/10) • IN034/09 (approved 19/03/10) • IN047/09 (approved 19/03/10 • IN001/10 (approved 6/05/10)	Authorised under the NGL and NGR provisions effective on STTM commencement date.
3.0	19 May 2011	Amendments made in accordance with the following Procedure changes: • IN007/10 (approved 18/03/11) • IN015/10 (approved 18/03/11) • IN032/10 (approved 30/03/11)	Authorised under the NGL and NGR provisions effective 19 May 2011.
4.0	NERL Commencement 1 February 2013	Amendments made in accordance with the following Procedure changes: • IN039/10 (approved 06/01/12) • IN006/12 (approved 25/05/12) • IN008/12 (approved 25/05/12)	Authorised under the NGL and NGR provisions effective on NECF Commencement date.
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6.0	1 January 2014	Amendments made in accordance with the following Procedure changes • IN026/12 (approved 9/07/13) • IN004/12 (approved 6/12/13) • IN012/13 (approved 6/12/13)	Authorised under the NGL and NGR provisions effective 1 January 2014.
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8.0	14 September 2015	Amendments made in accordance with the following Procedure change • IN012/11 (approved 10/03/15)	Authorised under the NGL and NGR provisions effective 14/9/2015.
9.0	2 November 2016	Amendments made in accordance with the following Procedure change • IN003/16 (approved 11/10/16)	Authorised under the NGL and NGR provisions effective 02/11/2016.
10.0	16 November 2016	Amendment made in accordance with the following Procedure change: • IN031/11 (approved 14/10/16)	Authorised under the NGL and NGR provisions effective 16 November 2016.

Version	Effective Date	Procedures affected	Authority
11.0	31 July 2017	Amendments made to clause 2 (Definitions) clause 14C (Additional FRC Hub Outage), clause 74A (Complete MIRN Listing), clause 408 MIRN Database and MSD Database Update in accordance with the following Procedure change IN027/14, IN008/15, IN016/15. Amendments were also made to clauses 14C, 20, 28, 32, 33, 47, 51, 65, 66, 67, 69, 74A, 75, 82, 83, 107,111, 116, 117, 119,124, 125, 129, 163, 217A, 351, 405, 406, 407, 409, 410, 411, 412, 413, 414	Authorised under the NGL and NGR provisions effective 31 July 2017.
12.0	29 June 2018	Amendments made in accordance with the following Procedure change IN011/17 (approved 25/05/2018)	Authorised under the NGL and NGR provisions effective 29 June 2018
13.0	3 September 2018	Amendments made in accordance with the following Procedure change IN007/17 (approved 01/08/2018)	Authorised under the NGL and NGR provisions effective 3 September 2018
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15.0	8 August 2019	Amendments made in accordance with the following Procedure changes • IN012/17 (approved 3/07/19) • IN010/18 (approved 11/07/19)	Authorised under the NGL and NGR provisions effective 8 August 2019
16.0	1 October 2019	Amendments made in accordance with the following Procedure changes • IN002/16 (approved 1/03/19)	Authorised under the NGL and NGR provisions effective 6am AEST 1 October 2019.
17.0	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 (approved 10 February 2020.)	Authorised under the NGL and NGR provisions effective 10 February 2020.

Version	Effective Date	Procedures affected	Authority
18.0	30 April 2021	Amendments made in accordance with the following Procedure changes • clauses 8.6.2(b) Pipeline Injections 8.6.3 Total Corrected Injections, 8.6.4 User interval-metered withdrawals and 8.6.5(a) Net system load - IN016-20 • Add new sub clause 4.3 – IN007/17 • Minor clarifications to clause 1.3.3 – IN005/20 • Added reference to gas day in clause 7.2 – IN007/19 • IN010/15 - removal of the word 'calendar' before day as it causes confusion about the definition of 'day' which is currently undefined. See 5.2.1, 5.2.2, 7.1, 7.2.8, 8.4.2, • IN003/21 – Minor clarification to clause 1.2.1 definition of MIRN, MIRN Discovery Request. Also added a new sub clause to 1.2.2 Interpretation All the above is part of IN004-17	Authorised under the NGL and NGR provisions effective 30 April 2021.
19.0	10 October 2022	Amendments made in accordance with the following Procedure changes • IN002/21 Earliest transfer day change for South Australia (approved 8/09/22). • IN001-21/IN010/22 Minor changes to the east coast gas Technical Protocols (approved 16/09/22).	Authorised under the NGL and NGR provisions effective 10 October 2022.
19.1	1 November 2022	Amendment made in accordance with the following Procedure change: • IN013/22 SA market - new Farm Tap sub-network (62 - Pallamana)	Authorised under the NGL and NGR provisions effective 1 November 2022.
20.0	31 March 2023	Amendment made in accordance with the IN008/19 COR Amend RMPs to have alternate timeline (Package 1 Procedure consultation, including IN011/22 (Compliance resolution. Remove clause 3.3.2(d) that required AEMO to provide a report to all participants, shippers and transmission pipeline operators).	Authorised under the NGL and NGR provisions effective 31 March 2023.

CONTENTS

CHAPTER 1. GENERAL

1.1. Application

These Retail Market Procedures (SA) (**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 South Australia. Participation in that retail gas market is governed by rule 135AB(3) of the National Gas Rules.

1.2. Definitions and Interpretation

1.2.1. Definitions

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

actual heating degree day or HDD_A	The value calculated under clause 8.6.15(a)
actual meter reading	The figures or other information shown on a *meter* or instrument as actually *read*. An *actual meter reading* includes a *deemed meter reading*.
actual UAFG	The value calculated under clause 8.6.15(a).
address based identifiers	In relation to the address standard specified in the *AEMO* Specification Pack, 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.
AEMO	Has the meaning given in the *Law.*
AEMO Specification Pack	The protocol which governs the manner and form in which information is to be provided, *notices* given, *notice*s or documents delivered and requests made as contemplated by these Procedures.
AEMO standing data	In relation to a *delivery point*, means the information set out in clause 2.3.1(b) for the *delivery point*.
AER	Has the meaning given in the *Law.*
	(a)
allocation instruction	A *notice* from a *User* to *AEMO* under clause 8.3.2 specifying how the *User's gas injections* into a *sub-network* are to be allocated between the *shippers injecting gas* into the *sub-network* on the *User's* behalf for a *gas day*.
allocation instruction percentage	The amount calculated under clause 8.4.6.
allowable period	The period of 102 days after the lodgement of a *transfer request* under clause 6.1.4.
applicable access arrangement	Has the meaning given in the *Law*.
approved estimation methodology	A methodology for the estimation of *metering data* provided for in the *Gas Metering Code*, as applicable to the relevant *meter type*.

approved substitution methodology	A methodology for the substitution of *metering data* provided for in the *Gas Metering Code*, as applicable to the relevant *meter type*.
approved validation methodology	A methodology for the validation of *metering data* provided for in the *Gas Metering Code*, as applicable to the relevant *meter type*.
as-retrieved	Means data as retrieved from field equipment by *telemetry* without any examination of the data to determine the validity or completeness of the data or whether there are any obvious errors or omissions in the data.
average temperature	The value calculated under Appendix C.2(a) .
basic meter	A *meter* which is not an *interval meter*. **Note**: This includes all meters which are not *read* at least daily by means of telemetry, even if they record gas flow and other data over daily or shorter intervals.
basic-metered	In relation to a *delivery point*, means that *gas* deliveries at the *delivery point* are measured by a *basic meter* or *basic meter*s.
business day	A day other than a Saturday, Sunday or public holiday in the State of South Australia.
cancel	In relation to a *transaction*, means terminate the *transaction* before completion.
checksum	In relation to a *MIRN*, a single digit used to validate the correct entry of a *MIRN* in a database entry field.
complete Customer listing	A listing created and administered by a *User* that comprises a number of data attributes as defined in the *AEMO Specification Pack* for every *MIRN* that is recorded in the *User's* Customer Information System (CIS) for which they are the *current User*.
complete MIRN listing	A listing created and administered by a *Network Operator* in the format specified in the *AEMO Specification Pack* that comprises the *MIRN*, *discovery address* and *meter number* of every *MIRN* that is recorded in the *metering database* of that *Network Operator*.
consumed energy	The total energy quantity of *gas* delivered at a *delivery point* (in megajoules) during a *metering period*, calculated by the *Network Operator* by applying the applicable *heating value* to the *corrected volume*.
corrected volume or V_{CR}	The volume of *gas* measured by a *meter* (subject to validation, substitution or estimation where applicable in accordance with these Procedures), corrected to metric standard conditions. For *basic meters* V_{CR} is calculated using the following formula: V_{CR} = index reading x pressure correction factor.
current User	In relation to a *delivery point,* means the *user* who is assigned to the *delivery point* in *AEMO's metering database* and is financially responsible for the *delivery point*.
Customer	The 'customer' as defined in section 5 of the *NERL* in relation to *gas* delivered at a *delivery point* for particular premises.
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.

deemed meter reading	Has the meaning given in clause 3.1.3.
de-energisation	Has the meaning given in Part 1 of the *NERL*.
de-energisation request	A request from a *User* to a *Network Operator* under clause 4.2.1(b) requesting de-energisation of a specified *delivery point.*.
default RoLR	Has the meaning given in Part 6 of the *NERL*.
delisting request	A request under clause 8.1.3(b)(ii) by a *shipper* to *AEMO* to remove the *shipper*'s listing from a *shipper register* in respect of a *User* and a *sub-network* from a specified effective date.
delivery point	A point on a *Network Operator's GDS* at which *gas* is withdrawn from the *GDS* and delivered to the *Customer* for particular premises.
deregistered	In relation to a *MIRN*, the *delivery point* has been permanently removed and the *MIRN* removed from operational use in the *Network Operator's metering database*. **Note:** An action to permanently remove a *delivery point* can include the removal of the *meter* and the service pipe.
deregistration request	A request from a *User* to a *Network Operator* under clause 4.4.1(b) requesting the *Network Operator* to permanently remove a specified *delivery point.*.
designated RoLR	Has the meaning given in Part 6 of the *NERL*.
de-energisation withdrawal notice	A *notice* from a *User* to a *Network Operator* under clause 4.2.3 withdrawing an *open de-energisation request* for a *delivery point* specified in the *de-energisation withdrawal notice*.
discovery address	In relation to a *delivery point*, means 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 *AEMO Specification Pack*.
distributed actual basic-metered withdrawal or *DABW*	For a *basic-metered delivery point*, is determined under clause 8.6.10.
earlier allocation instruction	The *allocation instruction* that applied at the start of a *gas day*, being either an *allocation instruction* for the *gas day* or an allocation made by *AEMO* under clause 8.3.5(b) for the *gas day*.
EDD	The effective degree day value E calculated for a given *gas day* under Appendix C.1.
EMD sub-network	Any *sub-network* in South Australia other than: (a) a *farm tap sub-network*; (b) an *uncovered sub-network*; or (c) a *sub-network* that is connected to a single *transmission pipeline*.
energisation	Has the meaning given in Part 1 of the *NERL*.
energisation request	A request from a *User* to a *Network Operator* under clause 4.2.7(b) requesting *re-energisation* of a specified *delivery point.*

energy inflow	Means the energy value injected into the *GDS* by the *transmission pipeline operator.*
error correction notice	A *notice* to *AEMO* under clause 9.1.1(f) regarding a correction to the *AEMO standing data* for a *delivery point* as a result of an incorrect: (a) *transfer request*; (b) notification of a new *basic meter*; or (c) notification that the *delivery point* has been permanently removed under clause 4.4.2(b)(iv).
error correction objection	A *notice* from a *Participant* to *AEMO* under clause 9.1.4 objecting to an *error correction transaction* lodged in respect of an incorrect *transfer*, for a *delivery point* specified in the *notice*.
error correction objection resolution period	Means (as applicable): (a) if an *error correction objection* is not lodged, the period ending when the time allowed for lodging an *error correction objection* under clause 9.1.4(a) expires; or (b) if an *error correction objection* is lodged, the period ending when the time allowed for lodging an *error correction objection withdrawal notice* under clause 9.1.6(a) expires.
error correction objection withdrawal notice	A *notice* from a *Participant* to *AEMO* under clause 9.1.6 withdrawing an *open error correction objection* for a *delivery point* specified in the *notice*.
error correction transaction	The *transaction* initiated by lodgement of an *error correction notice*.
error correction withdrawal notice	A *notice* from a *current User* to *AEMO* under clause 9.1.9 withdrawing an *open error correction notice* lodged in respect of an incorrect *transfer*, for a *delivery point* specified in the *notice*.
estimated basic-metered withdrawal	For a *basic-metered delivery point*, the amount calculated under clause 8.6.8.
estimated meter reading	An estimate of an *actual meter reading* made under clause 3.5.3 in accordance with an *approved estimation methodology* or a *Customer-own read*. Except in clause 3.5.4, it does not include an *estimated meter reading* designated to be a *substituted meter reading*.
EUAFG	An estimate of unaccounted for *gas* under clause 8.6.14.
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*.
farm tap sub-network	A *delivery point* which is connected to only one *transmission pipeline* and is not connected by a *GDS* or part of a *GDS* to any other *delivery point*, which a *Network Operator* identifies under clause 1.6 as a *sub-network* for contractual and operational purposes.
flow profile control	In relation to a *gate point* means a control system designed to control the *gate point* flow rate such that the *gate point* discharge pressure is limited to the maximum allowable operating pressure of the *sub-network*.

flow ratio control	In relation to a *gate point* means a control system designed to control the *gate point* flow rate such that: (a) within normal equipment tolerances, the *gate point* flow rate is maintained at a pre-determined ratio to the flow rate of all other *gate points* connected to the *sub-network*; and (b) the *gate point* discharge pressure is limited to the maximum allowable operating pressure of the *sub-network*.
flow signal	Has the meaning given in clause 8.5.1(b).
forecast basic-metered withdrawals or *UFBW*	In relation to a *User*, means the forecast withdrawals for the *User's basic-metered delivery points* in a *sub-network* for a *gas day*, in megajoules, calculated by *AEMO* under clause 8.4.4(a)(i).
forecast EDD	The value calculated under Appendix C.4(a) .
forecast heating degree day or HDD_F	The value calculated under Appendix C.4(b) .
forecast interval-metered withdrawals or UFIW	In relation to a *User*, means the forecast withdrawals for the *User's interval-metered delivery points* in a *sub-network* for a *gas day*, in megajoules, provided to *AEMO* by the *User* under 8.4.3 clause.
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 *transaction*s on the *FRC HUB*.
FUAFG	The *Network Operator*'s forecast of unaccounted for *gas* under clause 8.4.1.
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 National Gas Rules.
gas emergency	A disruption to normal *gas* supply to a *sub-network* that commences either: (a) when the Minister with administrative responsibility for the Gas Act 1997 (SA) issues directions requiring a Participant to curtail the supply of gas to one or more customers within the *sub-network*; or (b) when *AEMO* receives written notice from at least one *shipper* that a force majeure event is likely to cause, or has caused, a shortfall in deliveries for *shippers* at a *gate point* for the *sub-network*, and *AEMO* is satisfied that the shortfall in deliveries for all *shippers* at the *gate point* is likely to exceed 10% of the sum of all *Users*' required withdrawals for the *sub-network*. In paragraph (b), a 'force majeure event', in relation to any person, means any act beyond the reasonable control of that person which prevents, hinders or delays that person from or in the performance of any its obligations under any agreement, but excludes any acts

	resulting from any action or omission or default of that person or an agent of that person.
Gas Metering Code	The Gas Metering Code issued by the Essential Services Commission of South Australia.
gas zone	A part of a *GDS* identified under clause 1.6 as a *gas zone* for contractual and operational purposes. **Note:** In most instances, each *sub-network* will be a single *gas zone*.
gas zone code	The code assigned to each *gas zone* within a *GDS* under clause 1.6.
gate point	For a *sub-network* means a point (which may be the same location as a *physical gate point*), which is designated as a *gate point* under clause 8.1.4 for the *sub-network*. **Note:** A gate point is also sometimes called a "*delivery point*" or a "notional gate point" by transmission pipeline operators, and a "receipt point" by *Network Operator*s. The gate point is usually adjacent to an associated "gate station" and it is the sum of all "physical gate points" from a transmission pipeline on a *sub-network*.
gate point metering data	Has the meaning given in clause 3.3.2(a)(i).
GDS	In relation to a *Network Operator*, the gas distribution system or network described in its *applicable access arrangement*.
GST	Has the meaning given in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).
haulage contract	A contract between a *Network Operator* and a *User* for the transportation of *gas* through the *Network Operator*'s *GDS* and, for the purposes of clause 6.3.1(a), also means that: (a) any condition precedent to the contract has been satisfied or waived; and (b) no notice to validly terminate the contract has been issued by a party to the contract to the other party.
HDD zone	A designated area comprising one or more *gas zones* within which all MIRNs are assigned the same *heating degree day* value. Each *HDD zone* is defined in Appendix B and is either a *positive HDD zone* or a *negative HDD zone*.
heating degree day	The *heating degree day* (HDD) is a measure of coldness which is directly related to *gas* demand. It is a composition of the *EDD* elements used to measure coldness incorporating the effect of temperature, wind and sunshine.
heating value	As determined by the Technical Regulator (as established under the Electricity Act 1996 (SA) and the *Gas Act 1997* (SA)) and notified to *Participant*s from time to time. **Note:** heating value is also known as "higher heating value", "gross heating value" and "superior heating value".
heating value data	The *heating value* for a *gas zone* for a *gas day* that is calculated under clause 3.10.1.
historical gas day i	Has the meaning given in clause 8.6.1(c).
historical metering data	The *metering data* for every *delivery point* in a *Network Operator*'s *GDS* retained in accordance with Chapter 2.

historical AEMO standing data	In relation to a *delivery point*, means the *AEMO standing data* for the *delivery point* retained by *AEMO* under Chapter 2.
historical AEMO standing data request	A notice in accordance with the *AEMO Specification Pack* from a *User* or a *Network Operator* to *AEMO* requesting *historical AEMO standing data* for a *delivery point* specified in the request.
historical UAFG day	Has the meaning given in clause 8.6.15.
H_{sun}	Has the meaning given in clause 8.1.6(c)(iii).
incoming User	A *User* or prospective *User* who wishes to withdraw *gas* at a *delivery point* where another *User* is the *current User*.
index reading	The numerical reading of a *meter* index, which represents uncorrected volume, as observed by the *meter* reader when physically undertaking a *meter reading*.
index type	An indicator showing whether a *meter* reads in metric or imperial units.
injecting	The process of delivering *gas* out of a *transmission pipeline*, through a *gate point* and into a *sub-network*. **Note:** This process will usually be termed "delivery" by the transmission pipeline operator, and "receipt" by the *Network Operator*.
insolvency official	Has the meaning given in Part 6 of the *NERL*.
instantaneous flow rate	Has the meaning given in clause 8.5.1.
interval meter	A *meter* which: (a) is *read* by means of telemetry; and (b) aggregates the flow of gas across time, and records that flow for each hour.
interval-meter demand profile	Is provided under clause 8.4.3(a) and comprises 24 numbers which sum to 1 and are the *User's* estimate, for each hour in the *gas day*, of the proportion of its *forecast interval-metered withdrawals* which will be withdrawn during the hour.
interval-metered	In relation to a *delivery point*, means that *gas* deliveries at the *delivery point* are measured by an *interval meter*.
last date of modification	For a *delivery point*, means the date the last update to any item of *AEMO standing data* became effective in *AEMO's metering database*.
Law	The National Gas Law as set out in the schedule to *the National Gas (South Australia) Act 2008* (SA).
like day substitution methodology	Has the meaning given in section A.1 of Appendix A.
listing request	A request by a *shipper* to *AEMO* to list it in the *shipper register* in respect of a *User* and a *sub-network* from a specified effective date.
local area retailer	A *Retailer* nominated as a local area retailer under the *NERL*.
market responsive flow control	In relation to a *gate point* means a control system designed to control the *gate point* flow rate such that: (a) within normal equipment tolerances, flow follows the *pipeline profiled forecast* for that *gate point* published by *AEMO*; and

	(b) the *gate point* discharge pressure is limited to the maximum allowable operating pressure of the *sub-network*.
market responsive flow control pipeline	A *transmission pipeline* for which it is intended that the injections of *gas* on a day follow a pipeline *profile* forecast provided by a third party.
meter	The device used to directly measure the mass or volume of *gas* passing through it and includes the associated equipment attached to the device to filter, control or regulate that flow of *gas*.
meter number	A unique identification number allocated to a *meter*.
meter reading	An *actual meter reading*, a *deemed meter reading*, an *estimated meter reading* or a *substituted meter reading*, as applicable. A reference to a *meter reading* in respect of a particular date or period is to the reading that has most recently been included in the *Network Operator's metering database* for that date or period.
meter reading route	A route specified in a *meter reading schedule*.
meter reading schedule	A schedule provided by a *Network Operator* to a *User* under clause 3.1.1(a).
meter reading type	One of the four types of *meter reading*.
meter standing data	In relation to a *delivery point*, means the information set out in clause 2.2(c) for the *delivery point*.
meter type	Whether a *meter* is a *basic meter* or an *interval meter*.
metering data	The information provided by a *Network Operator* to a *current User* under clause 3.7.1, to an *incoming User* under clause 3.7.2 and to *AEMO* under clause 3.7.3 for the applicable *meter type*.
metering database	A database maintained by a *Network Operator* or *AEMO* that includes the information required by the applicable provisions of Chapter 2.
metering period	In relation to a *meter reading*, means the period between the current *meter reading* and the previous *meter reading*. **Example:** For an *interval meter* the *metering period* is usually 1 *gas day*, and for a *basic meter* usually approximately 1 month or approximately 3 months.
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*. The *MIRN* includes the *checksum*.
MIRN discovery request	A request from a *User* or *AEMO* to a *Network Operator* under clause 5.1.1 requesting the *Network Operator* to provide the *MIRN standing data* for a *delivery point*.
MIRN standing data	In relation to a *delivery point*, means the information set out in clause 2.2(b) for the *delivery point*.
MIRN status	In relation to a *MIRN*, one of the following describing the status of the *delivery point*: *registered*, *energised*, *de-energised* or *deregistered.*

monthly interval-meter load percentage or *MILP*	Has the meaning given in clause 8.2.3.
move in	A type of *transfer* that occurs when: (a) a *Customer* commences occupation of premises; and (b) there is an associated change of *User* for the *delivery point* which supplies *gas* to the premises.
multi-shipper allocation agreement	Has the meaning given in clause 8.9.1.
multi-shipper allocation report	Has the meaning given in clause 8.9.1.
negative HDD zone	Has the meaning given in Appendix B.
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 South Australia.
net system load	Has the meaning given in clause 8.6.5.
Network Operator	An entity (also commonly referred to as a distributor) that participates in the retail gas market of South Australia in the registrable capacity of a "*Network Operator*" under the *Rules* and has *registered* with *AEMO* under the *Rules* in that capacity.
new connection	Has the meaning given in Part 12A of the *Rules*.
nomination estimation methodology	Has the meaning given in Appendix A.
non-temperature-sensitive base load	The average daily energy consumption that is unaffected by temperature for a *basic-metered delivery point* as advised by the *Network Operator* from time to time under clause 8.4.2.
normalisation factor	For a *basic-metered delivery point*, the value calculated under clause 8.6.7.
NSL	*net system load*.
open	In relation to a *transaction* or a notice, the *transaction* or notice has been lodged with *AEMO* or a *Network Operator* (as applicable), but has not been *cancelled* or completed.
Participant	A person who participates in the retail gas market of South Australia in a registrable capacity under the *Rules*.
pending	Means: (a) in relation to an *open transfer request* – that *AEMO* has permitted the requested *transfer* under clause 6.5.1 or 6.6(b), as the case may be, and is waiting for the *Network Operator* to provide a *validated actual meter reading*; and (b) in relation to an open *error correction transaction* – that *AEMO* has permitted an *error correction notice* in respect of an incorrect *transfer* under clause 9.1.11(a).
physical gate point	A point defined as such in the *applicable access arrangement* for a *transmission pipeline*, being a point at which *gas* is withdrawn from the *transmission pipeline* for injection into the *GDS*.

physical gate point metering data	For a *physical gate point* means any two of the three data set out under clause 3.3.1.
pipeline corrected injections	Has the meaning given in clause 8.6.2(b).
pipeline injections	Has the meaning given in clause 8.6.2(a).
pipeline profiled forecast	The forecast determined by *AEMO* under clause 8.4.7.
positive HDD zone	Has the meaning given in in Appendix B.
pressure control	In relation to a *gate point* means a control system designed to control the *gate point* flow rate such that the *gate point* outlet pressure is maintained within normal equipment tolerances of a set pressure.
pressure correction factor	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.
previous User	A *User*, who was recorded in *AEMO's metering database* as the *current User*, immediately prior to the present *current User*.
process time	The time and date a notice lodged with *AEMO* was processed by *AEMO*.
profile	A *profile* determined by *AEMO* under clause 8.4.9.
proposed transfer date	In relation to a *transfer request*, means the day nominated in that *transfer request* as the day with effect from which the *User* who delivers the *transfer request* to *AEMO* is to be registered in *AEMO's metering database* as the *current User* for the supply point to which the *transfer request* relates (for a *move in*, this would generally be the date the *Customer* is moving into the premises), subject to clause 6.2.3(a)(vii).
proxy ground temperature or T_{gnd}	The value calculated under Appendix C.2(c) .
publish	The posting of information on the *AEMO* website, or any other means specified in the *AEMO Specification Pack* 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.
reading day number	A number recorded in a *Network Operator*'s *meter reading schedule* to denote which days during the calendar year a *meter* will be *read* by a *Network Operator*, and the *meter reading* frequency.
re-energised	In relation to a *delivery point* that has been *de-energised*, where action has been taken to allow *gas* to be supplied at that *delivery point*.
Register of Weather Related Information	An industry reference document that specifies, for South Australia: (a) for a given *HDD Zone*, which weather station data must be used; and

	(b) coefficients for *heating degree day* calculations. **Note:** See Appendix B for the requirement to maintain this register and notify changes.
registered	In relation to a *MIRN*, a service inlet (a connection from the main to the *meter* inlet) has been installed at the *delivery point*.
related shipper	In relation to a *User* for a *sub-network*, means a *shipper* that, from time to time, injects *gas* into the *sub-network* on behalf of the *User*.
removal request	A notice by a *transmission pipeline operator* to *AEMO* requesting *AEMO* to remove the *shipper* from the *shipper register*.
Retailer	A 'retailer' within the meaning of the *Law* that participates in the retail gas market of South Australia in the registrable capacity of a 'user' under the *Rules*, and has registered with *AEMO* under the *Rules* in that capacity.
revised allocation instruction	An instruction from a *User* that: (a) specifies how the *User's* gas injections into a *sub-network* are to be allocated between *shippers* injecting gas into the *sub-network* on the *User's* behalf for a *gas day*; and (b) is provided by a *User* in substitution for: (i) an *allocation instruction* for the *gas day*; or (ii) an allocation made by *AEMO* under clause 8.3.5(b) for the *gas day*.
revised estimate of unaccounted for gas	The amount calculated under clause 8.6.5(b)(ii).
revised User's unaccounted for gas	The amount calculated under clause 8.6.5.
RoLR event	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 meter reading	A *meter reading* of a *delivery point* that is scheduled to occur under the *Network Operator*'s *meter reading schedule*.
Self Contracting User	An entity that participates in the retail gas market of South Australia in the registrable capacity of a 'self contracting user' under the *Rules*, and has registered with *AEMO* under the *Rules* in that registrable capacity.
service order in flight report	A listing created and administered by a *Network Operator* that comprises a number of data attributes as defined in the *AEMO Specification Pack* of every *MIRN* for which a *failed Retailer* has initiated a service order and the *Network Operator* has yet to complete the request.
settlement period	Has the meaning given in clause 8.6.1(c).
shipper	A person that has a *gas* transportation agreement with a *transmission pipeline operator* for the delivery of *gas* at a *gate point* to a *User*.
shipper profiled forecast	The forecast produced under clause 8.4.6.
shipper register	The register of *shippers* established under clause 8.1.3.

shipper's deemed injection	The amount calculated under clause 8.7.
site access information	In relation to a *meter*, information and safety instructions that are relevant to locating and *reading* that *meter*.
special meter reading	A *meter reading* undertaken other than under a *meter reading schedule*.
street/suburb combination	In relation to a *MIRN discovery request*, the *discovery address* excluding the street number or its equivalent.
STTM sub-network	The Adelaide Metro *sub-network* (code 2101).
sub-network	Either: (a) a part of a *GDS* which a *Network Operator* identifies under clause 1.6 as a *sub-network* for contractual and operational purposes; or (b) a *farm tap sub-network*.
sub-network (basic-meter) profiled forecast	The amount calculated under clause 8.4.5(a)(i).
sub-network (interval-meter) profiled forecast	The amount calculated under clause 8.4.5(a)(ii).
sub-network profiled forecast	The amount calculated under clause 8.4.5(b).
substituted meter reading	A reading that is substituted under these Procedures for an *actual meter reading* in accordance with an *approved substitution methodology*.
telemetry	The communication equipment used for transmission of data collected from *meter*s to a *Network Operator*'s central data management system and typically encompasses modems, telecom landline (which may be dedicated or part of the PSTN network) or radio transceivers (which may be in the form of a dedicated radio network, GSM, GPRS or satellite telephony).
temperature sensitivity heating rate	The rate at which the energy consumption for a *delivery point* varies with change in the *heating degree day* value as advised by the *Network Operator* from time to time under clause 8.4.2 .
T_{max}	Has the meaning given in clause 8.1.6(c)(i).
T_{min}	Has the meaning given in clause 8.1.6(c)(ii).
total corrected injections	For a *sub-network*, the amount calculated under clause 8.6.3.
total sun hours	The value calculated under Appendix C.2(b) .
transaction	The process initiated by the lodgement of a notice with *AEMO* under these Procedures, which if completed, will result in an amendment to the *AEMO standing data*.
transfer	The transfer under these Procedures of the responsibility for *gas* delivery to a *delivery point* from the *current User* to an *incoming User*. **Note:** For the purposes of these Procedures a transfer is effected by recording the incoming *User* as the current *User* in *AEMO's metering database*. From a customer's perspective, the effect of such a transfer will be to transfer the customer from the current *User* to the incoming *User*. In South Australia, delivery is equivalent to the supply and sale

transfer confirmation	A notice from *AEMO* under clause 6.8.2(a) or (b) that the *transfer* of the *delivery point* specified in the notice has occurred.
transfer day	The *gas day* commencing at the *transfer time*.
transfer objection	A notice from a *Network Operator* to *AEMO* under clause 6.3.1.
transfer objection resolution period	Either: (a) if a *transfer objection* has been lodged, the period ending when the time allowed for lodging a *transfer objection withdrawal notice* under clause 6.3.3(a) expires; or (b) if a *transfer objection* has not been lodged, the period ending when the time allowed for lodging a *transfer objection* under clause 6.3.1(a) expires.
transfer objection withdrawal notice	A notice from a *Participant* to *AEMO* under clause 6.3.3 withdrawing an *open transfer objection* for a *delivery point* specified in the notice.
transfer request	In relation to a *delivery point*, a request by an *incoming User* to *AEMO* under clause 6.1.4 to register that *User* in the *AEMO metering database* as the *current User* or that *delivery point*.
transfer time	The start of the *gas day*: (a) during which an *actual meter reading* for a *basic-metered delivery point* for which a transfer is *pending*, was undertaken; or (b) that an incoming *User* has specified as the *proposed transfer date* for an *interval-metered delivery point*.
transfer withdrawal notice	A notice from an *incoming User* to *AEMO* under clause 6.4.1(c) withdrawing an *open transfer request* for a *delivery point* specified in the notice.
transmission contract	A contract between a *transmission pipeline operator* and *shipper* for the transmission of *gas* through a *transmission pipeline*.
transmission pipeline	A pipeline that is classified in accordance with this *Law* or the Rules as a *transmission pipeline* and includes any extension to, or expansion of the capacity of, such a pipeline when it is a covered pipeline that, by operation of an *applicable access arrangement* or under this *Law*, is to be treated as part of the pipeline.
transmission pipeline operator	In relation to a *GDS*, means the operator of a *transmission pipeline* which is interconnected with the *GDS*.
UAUAFG	Has the meaning given in clause 8.6.12
uncovered sub-network	A *sub-network* which is not: (a) a “covered pipeline” as defined in the *Law*; or (b) subject to any other third party access regime under a law or under an instrument having effect under a law.
User	A *Retailer* or a *Self Contracting User*.
User’s (basic-meter) profiled forecast	The amount calculated under clause 8.4.4(a)(ii).

User's basic-metered withdrawals	Has the meaning given in clause 8.6.15.
User's daily forecast	The amount calculated under clause 8.4.4(c).
User's estimated basic-metered withdrawals or *UEBW*	The amount calculated under clause 8.6.9.
User's estimated total withdrawals	For a *User* for a *sub-network* for a *gas day*, the amount calculated under clause 8.6.13.
User's gas injections	Has the meaning as given in clause 8.3.1.
User's (interval-meter) profiled forecast	The amount calculated under clause 8.4.4(a)(iv).
User's interval-metered withdrawals or *UIW*	The amount calculated under clause 8.6.4.
User's profiled forecast	The amount calculated under clause 8.4.4.
User's required withdrawals	For a *User* for a *gas day* the sum of: (a) UDBW; (b) UIW; and (c) UAUAFG.
UUAFG	Has the meaning given in clause 8.6.14(b).
validated	In relation to a *meter reading*, *validated* in accordance with an *approved validation methodology*.
volumetric inflow	The volume data associated with that energy value that the *transmission pipeline operator* provides under clause 3.4.1.

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 *NERL* or the *Rules*, the *Law*, the *NERL* or the *Rules* (as the case may be) will prevail to the extent of the inconsistency.

(c) References to time are references to Australian Eastern Standard Time, other than references to a business day or a specified time on a business day, which refer to local time in South Australia.

(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 or acted reasonably, 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* or a *transmission pipeline operator* are required to calculate values under these Procedures, such calculations must not apply truncation to any value. Derived values will not have an implied accuracy greater than any of the input variables

to the calculation. Thus for a value derived from the product of two variables, one with two decimal place precision and one with three decimal place precision, the product will initially be set to three decimal places to allow for rounding to a final precision of two decimal places. Rounding will only be applied to the final value derived in the calculation process. The rounding method will be as described in the examples below:

ROUND 2.14 to one decimal place - equals 2.1

ROUND 2.15 to one decimal place - equals 2.2

ROUND 2.159 to one decimal place - equals 2.2

ROUND 2.149 to two decimal places - equals 2.15

ROUND -1.475 to two decimal places equals -1.48

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

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

Example 3 Energy Calculation:
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

(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. Specification Pack and FRC Hub

1.3.1. Publication of Specification Pack

AEMO must publish the *AEMO Specification Pack*, as amended from time to time.

1.3.2. Effect

AEMO and each *Participant* must comply with, and is bound by, the *AEMO Specification Pack* 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 *AEMO Specification Pack* may provide for *AEMO* to communicate some information or notices by posting them on an electronic market information system or bulletin board.

1.3.3. Amendment

(a) Except otherwise specified in clause 1.3.3(b), the *AEMO Specification Pack* may only be amended by *AEMO* undertaking one of the following consultative processes:

(i) the ordinary process for making Procedures under rule 135EE of the *Rules*; or

(ii) the expedited process for making Procedures under rule 135EF of the *Rules*.

(b) If a *Retailer* or *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 *Network Operator* has received a notice as set out in clause 1.3.3(b)(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 by *AEMO* prior to using the *FRC HUB* for *transaction*s specified in the *AEMO Specification Pack*.

(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 Operator*s with the proposed change to the *FRC HUB Operational Terms and Conditions*; and

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

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

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

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

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

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

(g) Where a *Retailer* or *Network Operator* continues to use the *FRC HUB* in breach of the *FRC HUB Operational Terms and Conditions* after a notice of a breach under clause 1.3.4(f) 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 Operator*s 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.

1.3.6. There is no clause 1.3.6

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 provide for the use and disclosure of confidential information.

1.5. Market Audit

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

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

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

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

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

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

(iii) integrity of the *AEMO metering database*;

(iv) profiling and allocation processes and systems; and

(v) retail billing and information systems.

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

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

(g) *AEMO* must publish the report on its website and make it available to *Participants* on request.

1.6. Sub-networks, gas zones, gate points and HDD zones

(a) *AEMO* must maintain a list of:

(i) *sub-networks*, including each *gas zone* and each *gate point* within a *sub-network*, with identifying codes in the form required by the *AEMO Specification Pack*; and

(ii) the *HDD zone* for each *gas zone*, determined in accordance with Appendix B.

(b) A *Network Operator* may propose to establish a new *sub-network* within its *GDS* that is not already listed, and must notify *AEMO* of the proposed new *sub-network*, any *gas zones* and *gate points* within the proposed *sub-network* and the *HDD zone*, at least 20 *business days* before the *Network Operator* proposes the *sub-network* will become operational.

(c) Upon receipt of notification under paragraph (b), *AEMO* must verify the establishment of the new *sub-network*, and, if satisfied with its verification, must make available to each *Participant*, *transmission pipeline operator* and *shipper* an updated list of *sub-networks* that includes the new *sub-network* and any new *gas zones* or *gate points*, their respective identifying codes and the *HDD zone* for each new *gas zone*.

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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 GDS*, 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 *GDS.* 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 *incoming User* in accordance with the *AEMO Specification Pack*.

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

(g) A *MIRN* with a *MIRN status* of *deregistered* (other than as a result of an error that is later corrected under Chapter 9) must not subsequently be re-assigned to another *delivery point*, or used in conjunction with any other *MIRN status* at the same *delivery point*.

2.2. Network Operator Metering Database

(a) Each *Network Operator* must create, maintain and administer a *metering database* that includes the information specified in paragraphs (b) to (d) in respect of each *delivery point* located in the *Network Operator's GDS*.

(b) The *MIRN standing data* to be included in the *Network Operator's metering database* must include at least the following:

(i) the *MIRN*;

(ii) the *delivery point's discovery address* and any other site address information specified in the *AEMO Specification Pack*;

(iii) the *meter number*;

(iv) for a *basic meter*, the *reading day number*;

(v) the *gas zone* in which the *delivery point* is located;

(vi) the distribution tariff to which the that *delivery point* is assigned; and

(vii) the *MIRN status*.

(c) The *meter standing data* to be included in the *Network Operator's metering database* must include at least the following:

(i) the *MIRN*;

(ii) the *pressure correction factor*;

(iii) the *meter number* and *meter type*;

(iv) the *index type*;

(v) for a *basic meter*, the number of dials;

(vi) for a *basic meter*, the *reading day number*;

(vii) *site access information*;

(d) The *Network Operator's metering database* must include at least the *metering data* to be collected or calculated under Chapter 3.

(e) Except as otherwise provided in Chapter 3 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* is included in its *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 contents

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

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

(i) *MIRN*;

(ii) *MIRN status*

(iii) date on which the *delivery point* was first *energised*;

(iv) *current User*;

(v) *default RoLR*;

(vi) *Network Operator*;

(vii) *gas zone*;

(viii) whether the *delivery point* has an *interval meter* or a *basic meter*;

(ix) *non-temperature-sensitive base load*;

(x) *temperature sensitivity heating rate*;

(xi) the *last date of modification*;

(xii) the last person to initiate a modification to *AEMO's metering database* for the *MIRN*;

(the items in sub-paragraphs (i) to (xii) comprise the *AEMO standing data*)

(xiii) *energy data* provided to *AEMO* pursuant to Chapter 3; and

(xiv) *transfer* data provided to *AEMO* pursuant to Chapter 6.

(c) The *AEMO metering database* must contain all data determined by *AEMO* for the purposes of Chapter 8.

2.3.2. Use of data from Network Operator

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 Access Requirements

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

(b) Data must be retained in the *metering database* while that data remains current and for at least 7 years after it ceases to be current, or such longer period as may be required under an applicable law or code.

(c) During that period the relevant data must be held:

(i) in a readily accessible format until at least 2 years after it ceases to be current; and

(ii) after that time, in a format accessible by *AEMO* or the *Network Operator* (as applicable) within 5 *business days*.

(d) Unless otherwise provided in these Procedures or required or permitted by law, the only persons entitled to request and receive *metering data* from a *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 *current User* for that *delivery point*;

(ii) the *Network Operator* whose pipeline is connected to the *meter* at that *delivery point*; and

(iii) *AEMO* and its authorised agents.

CHAPTER 3. METERING

3.1. Meter Reading – Basic Meters

3.1.1. Meter reading schedules

(a) By 31 August each year, a *Network Operator* must provide to each *Retailer* who is a *current User* for a *delivery point* in the *Network Operator's GDS* a schedule setting out the date on which the *Network Operator* proposes to read all its *meters* during the 12 months commencing on the following 1 January.

(b) The *meter reading schedule* must provide for all such *meters* to be *read* at intervals of approximately one month (where the *meters* are on a monthly reading cycle) or three months (where the *meters* are on a quarterly reading cycle) (with the first reading to be undertaken approximately one month or three months (as the case may be) after the last reading undertaken prior to that date).

(c) A *Retailer* may at any time request a *Network Operator* to change a date in a *meter reading schedule* for a *delivery point* in that *Network Operator's GDS* in respect of which the *Retailer* is the *current User*. However, the *Network Operator* is not required to make the requested change.

(d) A *Network Operator* must notify the Retailer who is the *current User* for a *delivery point* in the *Network Operator*'s GDS of any changes the *Network Operator* proposes to make to a date in a meter reading schedule for the meter relating to that *delivery point*, as far as practicable at least three months prior to that change being made and the *Network Operator* must consult with that Retailer prior to making that change.

(e) A *Network Operator* must use its reasonable endeavours to *read meters* in accordance with the applicable *meter reading schedule* or as otherwise agreed with the *current User* for the *delivery point* to which the relevant *meters* relate.

(f) If, in respect to a particular day, a *Network Operator* is unable to *read* the *meters* comprising a discrete route in accordance with a *meter reading schedule*, the *Network Operator* must use its reasonable endeavours to notify that failure to each *Retailer* who is a *current User* for a *delivery point* to which such a *meter* relates by 5.00 pm on the second *business day* after the day on which it was unable to *read* the *meter*.

3.1.2. Special meter readings

(a) A *User* may request the *Network Operator* to undertake a *special meter reading* of a *basic meter*, on a *business day* specified in the request which is at least 2 *business days* after the day on which the *Network Operator* receives the request.

(b) The *Network Operator* must undertake a *special meter reading* requested under paragraph (a), and obtain the *metering data*, on the *business day* specified in the request, (which must be at least 2 *business days* after the day on which the *Network Operator* receives the request), and must:

  (i) provide the *metering data* to the *User* under paragraph (c); or

  (ii) if the *Network Operator* was unable to undertake a *special meter reading* — inform the *current User* of this fact and provide the reason why *metering data* could not be obtained.

(c) If the request under paragraph (a) is made by:

  (i) the *current User* — then the *Network Operator* must, in accordance with the timing in clause 3.6.1, provide the *User* with the *metering data* under clause 3.7.1; and

  (ii) any other *User* — then (subject to clauses 4.1(e) and 6.8.2(c)(ii)(B)) the *Network Operator* must not provide the *User* with the *metering data* for the *delivery point* received as a result of undertaking the *special meter reading*.

3.1.3. Deemed meter readings

(a) If an *actual meter reading* for a *basic-metered delivery point* was undertaken no more than 10 days before the date of *move in*, then (subject to paragraph (b)) on the date of *move in*:

(i) the *Network Operator* must determine a "*deemed meter reading*" which is a *meter reading* deemed to have occurred on the day of the *move in*; and

(ii) provide the metering data from the deemed meter reading to *AEMO*.

(b) The *deemed meter reading* is the most recent *index reading* from a *validated actual meter reading* which occurred no more than 10 days before the *move in*.

3.1.4. Customer-own reads

If, following the failure by a *Network Operator* to read a meter, or for any other reason consistent with applicable laws, 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* or at a time and frequency agreed by the parties.

(b) to the *Network Operator*, the *Network Operator* must process the *Customer-own read* in accordance with clauses 3.4 to 3.7.

3.2. Meter Reading – Interval Meters

For each *interval meter*, the *Network Operator* must obtain the *metering data* for a *gas day* daily after the end of the *gas day*.

3.3. Gate Point Metering Data

3.3.1. Transmission pipeline operators to provide physical gate point metering data

(a) Subject to paragraph (d), for each *physical gate point* for each *gas day*, the *transmission pipeline operator* must provide to the *Network Operator* as soon as reasonably practicable after the end of the *gas day*, but in any event, no later than 2.5 hours after the end of the *gas day*, for the *gas day* and each hour in the *gas day*, at least two of the following:

(i) energy inflow; and

(ii) daily flow weighted average *heating value*; and

Note: The data for each hour in the *gas day* provided under clause 3.3.1(a)(ii) will be the daily flow weighted average *heating value*.

(iii) volumetric inflow.

(b) Before providing the data under paragraph (a), the *transmission pipeline operator* must ensure that the data does not contain any obvious errors or omissions.

(c) If a *transmission pipeline operator*'s *physical gate point metering data* is amended at any time after the data is provided under paragraph (a) (including if the data is refined or verified), the *transmission pipeline operator* must provide the amended *physical gate point metering data* to the *Network Operator* as soon as reasonably practicable.

(d) A *transmission pipeline operator* is not required to provide the *physical gate point metering data* for a *physical gate point* if:

(i) less than 10 TJ of *gas* was injected at the *physical gate point* in the immediately preceding 12 month period; and

(ii) as at 28 July 2004 there was insufficient *telemetry* installed at the *physical gate point* to permit the *physical gate point metering data* to be remotely accessed on a daily basis.

3.3.2. Network Operator to provide gate point metering data

(a) Subject to paragraph (f), the *Network Operator* must:

(i) subject to paragraph (d), aggregate the *physical gate point metering data* provided under clause 3.3.1(a), for each of the relevant *gas day*s and for each hour in each of the relevant *gas day*s, in each case across all *physical gate point*s associated with the *sub-network* (the aggregated hourly and daily data being the "*gate point metering data*"); and

(ii) provide to *AEMO* as soon as reasonably practicable after receiving the *physical gate point metering data* from the *transmission pipeline operator* under clause 3.3.1(a), but in any event, no later than 3.5 hours after the end of the *gas day* the *gate point metering data*.

(b) If the *Network Operator* receives amended *physical gate point metering data* under clause 3.3.1(c) at any time (including if the data is refined or verified), the *Network Operator* must as soon as reasonably practicable:

(i) aggregate the amended *physical gate point metering data* for each of the *gas day*s for which amended *physical gate point metering data* was provided in accordance with paragraph (a)(i); and

(ii) provide to *AEMO* the amended *gate point metering data* determined under paragraph (b)(i).

(c) If for any reason (including the operation of clause 3.3.1(d)) the *Network Operator* does not receive the *physical gate point metering data* within the time specified in clause 3.3.1(a), then the *Network Operator* must:

(i) determine a reasonable estimate of the *gate point metering data*, for the *gas day* and each hour in the *gas day*, for each *gate point*;

(ii) mark the estimated *gate point metering data* as an estimate; and

(iii) provide the estimate to *AEMO* within 3.5 hours after the end of the *gas day*.

Note: If after complying with its obligations to provide *metering data* under this clause the *Network Operator* becomes aware of a manifest error in the data provided, the *Network Operator* may notify *AEMO.*

(d) There is no clause 3.3.2 (d).

(e) If the *Network Operator* receives *physical gate point metering data* aggregated across a period of more than one *gas day*, then the *Network Operator* must apportion the *physical gate point metering data* across each *gas day* in the period for which the *physical gate point metering data* was provided.

(f) Paragraph (a) does not apply in respect of the *gate point metering data* for:

(i) a *farm tap sub-network*; or

(ii) an *uncovered sub-network*.

3.4. Validation of Meter Readings

A *Network Operator* must *validate* a *meter reading* for the purposes of these Procedures in accordance with an *approved validation methodology*, before providing *metering data* to a *User* or *AEMO*.

3.5. Calculation of Metering Data

3.5.1. Consumed energy

A *Network Operator* must calculate the *consumed energy* for a *metering period* in accordance with clauses 3.5.2 to 3.5.4, before providing *metering data* to a *User* or *AEMO*.

3.5.2. Actual meter readings

A *Network Operator* must use an *actual meter reading* to calculate *consumed energy* if:

(a) the *Network Operator* has obtained an *actual meter reading* for the *delivery point* since the previous *meter reading* of the *delivery point*; and

(b) the *Network Operator* is able to *validate* the *actual meter reading*; and

(c) the *Network Operator* does not otherwise reasonably suspect an error in the *actual meter reading*, the *heating value* or other associated data.

3.5.3. Estimated meter readings

(a) A *Network Operator* must calculate an *estimated meter reading* in accordance with an *approved estimation methodology* if any one or more of the following applies in relation to a *scheduled meter reading*:

(i) the *Network Operator* has not obtained an *actual meter reading* for the *delivery point* since the previous *meter reading* of the *delivery point*; or

(ii) the *Network Operator* is unable to validate an *actual meter reading*; or

(iii) the *Network Operator* otherwise suspects an error in the *actual meter reading*, the *heating value* or other associated data.

(b) If the *Network Operator* calculates the *consumed energy* for a *delivery point* based on an *estimated meter reading*, then:

(i) the *Network Operator*, acting reasonably, may replace the *estimated meter reading* with:

(A) a *substituted meter reading*;

(B) a *Customer-own read*; or

(C) if the *Network Operator* reasonably determines that it has grounds for calculating a more accurate *estimated meter reading* — the further *estimated meter reading*; and

(ii) for the purposes of paragraph (b)(i)(A), the *Network Operator* must consider any reasonable request from a *current User* for an *estimated meter reading* to be changed.

3.5.4. Substituted meter readings

(a) A *Network Operator* must only undertake a substituted meter reading in the circumstances specified in the *Gas Metering Code* and accordance with an *approved substitution methodology*.

(b) If these Procedures require the use or provision of an *actual meter reading*, then a *substituted meter reading* may be used or provided instead.

(c) If the *Network Operator* has designated a *substituted meter reading* for a *delivery point*, then the *Network Operator* must repair or replace the *meter*, or one or more of its components (as appropriate) at the *delivery point* under clause 4.1, and following that repair or replacement:

(i) for a *basic meter*, obtain the *actual meter reading* then provide the *reading date* and *index reading* for the *delivery point* to the *User* and *AEMO* by 5.00 pm on the fifth *business day* after the day on which the repair or replacement occurred; or

(ii) for an *interval meter*, provide the *actual meter reading* for the *delivery point* to the User and *AEMO* by 5.00 pm on the fifth *business day* after the day on which the repair or replacement occurred.

(d) Clauses 3.5.3(b)(i)(A) and 3.5.3(b)(i)(C) apply in respect of the *estimated meter reading* which was designated to be the *substituted meter reading*.

Note: The *Network Operator* may provide a further *estimated meter reading* upon which the *substituted meter reading* is based, if requested by the *User* or based upon more accurate information.

3.6. Timing for provision of metering data

3.6.1. Basic and interval meters

(a) Subject to paragraph (b), a *Network Operator* must provide:

(i) to the *User* and *AEMO* (as the case may be) the *metering data* for a *basic-metered delivery point* – by 5.00pm on the *business day* after the *Network Operator* receives the *meter reading* (under clause 3.1.1 or as a result of a *special meter reading* under clause 3.1.2); and

(ii) to the *User* and *AEMO* (as the case may be) the *metering data* for an *interval-metered delivery point* – within 3.5 hours after the end of the *gas day* to which the *meter reading* relates.

(b) If the *Network Operator* is not reasonably satisfied with its *validation* of the *meter reading* by the time specified in paragraph (a)(i), then:

(i) it must by the time specified in paragraph (a)(i) provide the data for those *MIRN*s that passed *validation*; and

(ii) it is permitted one further *business day* to *validate* the *meter reading* for the remaining *MIRN*s and provide *metering data* determined on the basis of an *actual meter reading*, an *estimated meter reading* or a *substituted meter reading* (as applicable).

(c) If a *Network Operator* determines that it is not reasonably able to obtain *a meter reading* for even a single *delivery point* on a *meter reading route*, the *Network Operator* must notify each affected *User* of:

(i) the failure to obtain a *meter reading*;

(ii) the affected *MIRN*s; and

(iii) the likely ability to provide *metering data* for the *MIRN*s on the *meter reading route*.

(d) A notification under paragraph (c) must be given as soon as the *Network Operator* makes the determination and in any event before the end of the next *business day* after the determination is made.

3.7. Content of metering data

3.7.1. Metering data for current Users – basic and interval meters

(a) For each occasion on which these Procedures require a *Network Operator* to provide a *current User* with *metering data* for a *basic-metered delivery point*, (except where the *User* has become the *current User* as a result of a *transfer* taking effect under clause 6.8.2 it must provide at least the following:

(i) *MIRN*;

(ii) meter type;

(iii) date of the previous *meter reading*;

(iv) date of current *meter reading*;

Note: For a *move in*, this may be the date on which the *deemed meter reading* is deemed to have occurred by clause 3.1.3.

(v) index reading of the previous meter reading;

(vi) current index reading;

(vii) pressure correction factor;

(viii) meter reading type;

(ix) heating value used to calculate the consumed energy;

(x) consumed energy; and

(xi) next scheduled meter reading date.

(b) For each occasion on which these Procedures require a *Network Operator* to provide a *current User* with *metering data* for an *interval-metered delivery point*, it must provide at least the following:

(i) MIRN;

(ii) meter type;

(iii) date of current *meter reading*;

(iv) meter reading type;

(v) the *heating value* used for the *gas day* to calculate the *consumed energy*;

(vi) for each hour in the *gas day*, the *consumed energy*; and

(vii) the consumed energy.

3.7.2. Metering data for new connections – basic meters

For a *new connection* of a *basic-metered delivery point* under clause 4.1, the *Network Operator* must provide the *User* with at least the following *metering data*:

(a) *MIRN*;

(b) meter type;

(c) date of current *meter reading*;

Note: This may be the date on which the *deemed meter reading* is deemed to have occurred by clause 3.1.3.

(d) current *index reading*;

(e) *pressure correction factor*; and

(f) next scheduled meter reading date.

3.7.3. Metering data for AEMO – basic and interval meters

For each occasion on which these Procedures require a *Network Operator* to provide *AEMO* with *metering data*, it must provide at least the following (as applicable):

(a) the *MIRN*;

(b) date of the previous *meter reading*;

Note: For an *interval meter*, the date of the previous *meter reading* will be the previous *gas day*.

(c) date of current *meter reading*;

(d) meter reading type;

(e) for a *basic-metered delivery point* – the consumed energy; and

(f) for an interval-metered *delivery point*:

(i) for each hour in the *gas day*, the *consumed energy*; and

(ii) the consumed energy.

3.8. AEMO Validation of Metering Data

3.8.1. Requirements for valid provision of metering data to AEMO

Provision of *metering data* to *AEMO* under clause 3.6.1 is valid only if:

(a) the *delivery point* exists within *AEMO's metering database*;

(b) it is provided by the *Network Operator* for the *GDS* in which the *delivery point* is located;

(c) the *consumed energy* is a positive number;

(d) the start and end dates of the *metering period* are valid calendar dates;

(e) the start date of the *metering period* occurs before the end date of the *metering period*;

(f) the start date of the *metering period* is one of the following:

(i) the same date as the date of end of the previous *metering period* for which *AEMO* received *metering data*;

(ii) if there was no previous *metering period*, the same date as the *MIRN* became *energised* as recorded in *AEMO's metering database*;

(iii) the same date as the start date of the previous *metering period* for which *AEMO* received *metering data* and, if clause 3.8.2 applies, the end date of the current *metering period* is the same as the end date of the previous *metering period*; or

(iv) the same date as the start date of the previous *metering period* for which *AEMO* received *metering data*, and the end date of the current *metering period* is later than the end date of the previous *metering period*;

Note: For the purposes of this clause the start and end dates of a *metering period* are the dates upon which a *meter reading* is taken (bearing in mind that the *meter reading* is deemed to have occurred at the start of the *gas day*).

Example: If a *meter reading* is taken at 11.00 am on 5 February and then another *meter reading* is taken at 1600 hours on 8 March and another at 9.00 am on 12 April, then:

- the start date of the first *metering period* is 5 February and the end date is 8 March (the *metering data* for this *metering period* includes *gas* consumed on the 7 March *gas day* but not on the 8 March *gas day*); and
- the start date of the second *metering period* is 8 March and the end date is 12 April (the *metering data* includes *gas* consumed on the 11 April *gas day* but not on the 12 April *gas day*).

(g) the *metering period* is 425 or less days old; and

(h) the *metering period* does not cover any period of time during which the *MIRN* was *deregistered*.

3.8.2. Replacement of metering data in AEMO registry according to meter reading types

If *AEMO* receives *metering data* under clause 3.7.3 for a *delivery point* more than once for the same *metering period*, *AEMO* must replace the *metering data* in *AEMO's metering database* if it receives *metering data* for a previous *metering period* that contains a better quality value for *consumed energy*, determined in accordance with the following:

(a) an *estimated meter reading* may be replaced by any other *meter reading*; and

(b) an *actual meter reading* may be replaced by another *actual meter reading* or a substituted meter reading; and

(c) a substituted meter reading may be replaced by another substituted meter reading.

3.8.3. If metering data is not valid

Upon receipt of *metering data* under clause 3.6.1 which is not valid, *AEMO* must reject the *metering data* and notify the *Network Operator* that lodged the *metering data*, specifying the reason why the *metering data* is not valid.

Note: A *Network Operator* must re-send the *metering data* to *AEMO* to comply with its obligations under clause 3.6.1.

3.8.4. If metering data is valid

Upon receipt of *metering data* under clause 3.6.1 that is valid, *AEMO* must accept the *metering data* and notify the *Network Operator* that the *metering data* has been accepted.

3.9. Historical Metering Data

(a) Subject to paragraph (b), a *User* may request a *Network Operator* to provide it with *historical metering data* for one or more of the *User's delivery points* for a period specified in the request.

(b) By lodging a request under paragraph (a), the *User* represents to the *Network Operator* that either:

  (i) the requested data relates only to a period for which the *User* was the *current User*; or

  (ii) the *User* has the *Customer's explicit informed consent* to receive the requested *historical metering data*.

(c) The *User* is taken to make the representation in paragraph (b) at the time of lodging the request and on each day that a request for *historical metering data* is *open*.

(d) Upon receipt of a reasonable request under paragraph (a), and unless the request is withdrawn earlier, the *Network Operator* must provide the requested *historical metering data* to the *User* that lodged the request within 5 *business days*.

(e) For the purposes of paragraph (d), reasonableness is to be judged having regard to the aggregate impact on the *Network Operator* of all of the *User's* requests from time to time under this clause.

3.10. Heating Value Data

3.10.1. Heating value data calculations

Each *Network Operator* must calculate the daily average flow-weighted *heating value* for each *gas zone* in its *sub-network*.

3.10.2. Access to heating value data

(a) For each *gas day*, for each *gas zone* in a *Network Operator*'s *sub-network*, the *Network Operator* must make available to all *Participants* the daily flow weighted average *heating value data* used for billing purposes for *delivery points* in the *gas zone*.

(b) The data under paragraph (a) must be made available by noon on the next *business day* in electronic form that can be remotely accessed for downloading by a *Participant*.

(c) Data under paragraph (a) must remain accessible under paragraph (b) for at least 12 months after the *gas day*.

(d) *Heating value data* for a *gas zone* is not commercially sensitive or confidential information.

3.11. Data Change

3.11.1. Request for Verification

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

3.11.2. Network Operator to Verify Information

(a) The *Network Operator* must, as soon as reasonably practicable, verify the information specified by a *current User* under clause 3.6.1 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 *current User* 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 *current User* by 5.00 pm on the next *business day* after the day on which the verification is concluded; and

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

CHAPTER 4. METER MANAGEMENT

4.1. Basic Meter Installation

(a) If a *User* requests a *Network Operator* to install a new *basic meter* for a *delivery point* in that *Network Operator's GDS*, 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 *read* 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:

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

(ii) 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 reading*s 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 *AEMO Specification Pack*, to the *User* for that *delivery point*; and

(iii) provide to *AEMO* all the relevant details 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 Meters

4.2.1. De-energisation by Network Operator

(a) A *Network Operator*:

(i) may *de-energise* a *delivery point* when required to, or if not prevented, by law or a contract other than these Procedures; and

(ii) must (subject to law) *de-energise* a *delivery point* if required to under clause 4.2.2; and

(iii) must (subject to law), in response to a deemed request under clause 6.2.2(b), if a *transfer request* has been *cancelled* by *AEMO* after the *Network Operator re-energised* a *delivery point* under clause 4.2.7(a)(iii), *de-energise* that *delivery point* within 2 *business days* after the *Network Operator* receives notification from *AEMO* under either clause 6.4.2(b) or 6.7(b) that the *transfer* has been *cancelled*.

(b) The *current User* for a *delivery point* may at any time lodge a *de-energisation request* with the *Network Operator* for the *GDS* in which the *delivery point* is located.

(c) If a *de-energisation request* was not lodged on a *business day*, then the *Network Operator* must respond to the *de-energisation request* no later than on the next *business day* as if the *de-energisation request* was lodged on that *business day*.

(d) Upon receipt of a *de-energisation request* which is not valid, subject to paragraph (c), the *Network Operator* must reject the *de-energisation request* and notify the *Participant* that lodged the *de-energisation request*, specifying the reason why the *de-energisation request* is not valid.

(e) Upon receipt of a valid *de-energisation request*, subject to paragraph (c), a *Network Operator* must accept the *de-energisation request* and notify the *User* that the *de-energisation request* has been accepted.

4.2.2. Response to valid de-energisation request

(a) Subject to clause 4.2.3, a *Network Operator* must (subject to law), within 2 *business days* after receiving a valid *de-energisation request*, *de-energise* and undertake an *actual meter reading* of the *meter* at the *delivery point*.

(b) Within 2 *business days* of *de-energising* a *delivery point* under clause 4.2.1(a) or paragraph (a), the *Network Operator* must:

(i) calculate the *consumed energy* for the *delivery point* using the information obtained under paragraph (a); and

(ii) change the *MIRN status* in its *metering database* to *de-energised*; and

(iii) notify the *User* that the *MIRN* is *de-energised* and provide the *User* with the *metering data* under clause 3.6.1, for the *meter reading* undertaken in accordance with paragraph (a) and

(iv) provide to *AEMO* all the relevant details required for the purposes of updating the *AEMO metering database*; and

(v) provide *AEMO* with the *metering data* under clause 3.6.1, for the *meter reading* undertaken in accordance with paragraph (a).

4.2.3. De-energisation withdrawal notice

(a) The *current User* for a *delivery point* specified in a *de-energisation request* may, at any time prior to the *Network Operator de-energising* that *delivery point*, lodge a *de-energisation withdrawal notice* with the *Network Operator*.

(b) A *de-energisation withdrawal notice* is valid only if it corresponds to an open *de-energisation request* previously lodged with the *Network Operator*.

(c) If a *de-energisation withdrawal notice* was not lodged on a *business day*, then the *Network Operator* must respond to the *de-energisation withdrawal notice* no later than on the next *business day* as if the *de-energisation withdrawal notice* was lodged on that *business day*.

(d) Upon receipt of a *de-energisation withdrawal notice* which is not valid, subject to paragraph (c), the *Network Operator* must reject the *de-energisation withdrawal notice* and notify the *Participant* that lodged the *de-energisation withdrawal notice*, specifying the reason why the *de-energisation withdrawal notice* is not valid.

(e) Upon receipt of a valid *de-energisation withdrawal notice*, subject to paragraph (c), the *Network Operator* must use reasonable endeavours to stop the *de-energisation* and notify the *User* whether or not the *delivery point* has been *de-energised*.

Note: It may not be practicable to stop a *de-energisation* if the *Network Operator*'s operator is already out in the field.

4.2.4. De-energisation by User (basic meters only)

(a) This clause 4.2.4 applies only to *basic-metered delivery points*, and only to the extent that a *User* is permitted by law or a contract other than these Procedures to do something described in this clause 4.2.4.

(b) If the *User* undertakes a *de-energisation* at a *delivery point*, it must at the same time undertake an *actual meter reading* of the *meter* at the *delivery point*.

(c) Within 1 *business day* after *de-energising* a *delivery point* under paragraph (b), the *User* must notify the *Network Operator* that the *delivery point* is *de-energised*, which notice must specify at least the following information:

(i) the *MIRN*; and

(ii) the date of current *meter reading*; and

(iii) the current *index reading*.

(d) By providing a notice to a *Network Operator* under paragraph (c), the person providing the notice represents to the *Network Operator* and all other *Participant*s that:

(i) the person is the *current User*; and

(ii) the *de-energisation* occurred; and

(iii) the notice is provided within the time limit specified in paragraph (c); and

(iv) the person was authorised by law or a contract other than these Procedures to undertake the *de-energisation*; and

(v) the data provided in the notice is accurate.

(e) After receiving a notice under paragraph (c), the *Network Operator* must within 1 *business day*:

(i) calculate the *consumed energy* for the *delivery point* using the information obtained under paragraph (c); and

(ii) change the *delivery point's MIRN status* to *de-energised*; and

(iii) notify the *User* that the *MIRN* is *de-energised*, and provide the *User* with the *metering data* under clause 3.6.1, for the *meter reading* undertaken in accordance with clause 4.2.4(b); and

(iv) provide to *AEMO* all the relevant details required for the purposes of updating the *AEMO metering database*; and

(v) provide *AEMO* with the *metering data* under clause 3.6.1, for the *meter reading* undertaken in accordance with paragraph (b).

(f) If a *User* other than the *current User* undertakes a *de-energisation* at a *delivery point*, as soon as the *Network Operator* becomes aware of this fact, it must as soon as practicable (and at the *User's* expense) *re-energise* the *delivery point* or procure its *re-energisation*.

4.2.5. If AEMO does not receive valid metering data

(a) If *AEMO* does not receive valid *metering data* in accordance with clause 4.2.2(b)(v) or 4.2.4(e)(v) (as applicable) within 2 *business days* of receiving the details under clause 4.2.2(b)(iv) or 4.2.4(e)(iv) respectively, *AEMO* must notify the *Network Operator* of this fact.

(b) If *AEMO* does not receive valid *metering data* within a further 5 *business days* after notifying the *Network Operator* under paragraph (a), *AEMO* must *cancel* the *AEMO metering database* update and notify the *Network Operator* of the reason for the *cancellation*.

Note: A *Network Operator* wishing to reinitiate a *de-energisation* that has been *cancelled* must lodge a new *transaction*.

4.2.6. If valid metering data received

(a) Subject to paragraph (b), upon receipt of valid relevant details and valid *metering data* in accordance with clause 4.2.2(b)(v) or 4.2.4(e)(v) (as applicable) for a *delivery point*, *AEMO* must update the *AEMO metering database* by changing the *MIRN status* to *de-*

energised and notify the *User* and the *Network Operator* of the updated *AEMO standing data* for the *delivery point*.

(b) Before updating the *AEMO metering database* under paragraph (a), if:

(i) *AEMO* has received valid *metering data* under clause 4.2.8(b)(v) relating to *energising* the same *delivery point*; and

(ii) the date of *re-energisation* is the same date as the date of *de-energisation*,

then, upon receiving valid *metering data* in accordance with clause 4.2.2(b)(v) or 4.2.4(e)(v) (as applicable), *AEMO* must *cancel* the *AEMO metering database* update and notify the *Network Operator* of the reason for the *cancellation*.

4.2.7. Re-energising delivery points

(a) A *Network Operator*:

(i) may *re-energise* a *delivery point* when required to, or if not prevented, by law or a contract other than these Procedures; and

(ii) must (subject to law) *re-energise* a *delivery point* if required to under clause 4.2.8; and

(iii) must (subject to law), in response to a deemed request under clause 6.2.2(a), if a *transfer* has been marked as *pending* by *AEMO* under clause 6.6 for a *de-energised delivery point*, *re-energise* the *delivery point* either:

(A) on the *proposed transfer date* nominated in the *transfer request* for the *delivery point*, if the *Network Operator* receives notification under clause 6.6(b)(iv) that the *transfer* has been marked as *pending* at least 2 *business days* before *proposed transfer date* ; or

(B) otherwise, within 2 *business days* after the *Network Operator* receives notification under clause 6.6(b)(iv) that the *transfer* has been marked as *pending*.

(b) The *current User* for a *delivery point* with a *MIRN status* of *de-energised* may at any time lodge an *energisation request* with the *Network Operator* for the *GDS* in which that *delivery point* is located.

(c) If an *energisation request* was not lodged on a *business day*, then the *Network Operator* must respond to the *energisation request* no later than on the next *business day* as if the *energisation request* was lodged on that *business day*.

(d) Upon receipt of an *energisation request* which is not valid, subject to paragraph (c), the *Network Operator* must reject the *energisation request* and notify the *Participant* that lodged the *energisation request, specifying* the reason why the *energisation request* is not valid.

(e) Upon receipt of a valid *energisation request*, subject to paragraph (c), a *Network Operator* must accept the *energisation request*, and notify the *User* that the *energisation request* has been accepted.

4.2.8. Response to valid *energisation request*

(a) A *Network Operator* must (subject to law), within 2 *business days* after receiving a valid *energisation request, re-energise* the *delivery point* and undertake an *actual meter reading* of the *meter* at the *delivery point*.

Note: A *Network Operator*'s obligation to re-energise a *delivery point* after receiving a valid request from a *User* to do so, is also set out in section 3.1 of the Gas Distribution Code issued by the Essential Services Commission of South Australia.

(b) Within 2 *business days* of *re-energising* a *delivery point* under clause 4.2.7(a) or paragraph (a), the *Network Operator* must:

(i) calculate the *consumed energy* for the *delivery point* using the information obtained under paragraph (a);

(ii) change the *MIRN status* in its *metering database* to *energised*;

(iii) notify the *User* that the *MIRN* is *energised* and provide the *User* with the *metering data* under clause 3.6.1 for the *meter reading* undertaken in accordance with paragraph (a);

(iv) provide to *AEMO* all the relevant details required for the purposes of updating the *AEMO metering database*; and

(v) provide *AEMO* with the *metering data* under clause 3.6.1 for the *meter reading* undertaken in accordance with paragraph (a).

4.2.9. If AEMO does not receive valid metering data

(a) If *AEMO* does not receive valid *metering data* in accordance with clause 4.2.8(b)(v) within 2 *business days* of receiving valid details under clause 4.2.8(b)(iv), *AEMO* must notify the *Network Operator* of this fact.

(b) If *AEMO* does not receive valid *metering data* within a further 5 *business days* after notifying the *Network Operator* under paragraph (a), *AEMO* must *cancel* the *AEMO metering database* update and notify the *Network Operator* of the reason for the *cancellation*.

Note: A *Network Operator* wishing to reinstate an *energisation* that has been *cancelled* must lodge a new *transaction*.

4.2.10. If valid metering data received

(a) Subject to paragraph (b), upon receipt of valid relevant details and valid *metering data* in accordance with clause 4.2.8(b)(iv) and 4.2.8(b)(v) for a *delivery point*, *AEMO* must update the *AEMO metering database* by changing the *MIRN status* to *energised* and notify the *User* and the *Network Operator* of the updated *AEMO standing data* for the *delivery point.*

(b) Before updating the *AEMO metering database* under paragraph (a), if:

(i) *AEMO* has received valid *metering data* under clause 4.2.2(b)(v) or 4.2.4(e)(v) relating to *de-energising* same *delivery point* and

(ii) the date of *de-energisation* is the same date as the date of *re-energisation*,

then, upon receiving valid *metering data* in accordance with clause 4.2.8(b)(v), *AEMO* must *cancel* the *AEMO metering database* update and notify the *Network Operator* of the reason for the *cancellation*.

4.3. Meter Upgrades or Downgrades

(a) If a *current User* requests a *Network Operator* to upgrade a basic *meter* at a *delivery point* to an *interval meter*, the *Network Operator* must upgrade that *meter* (and any associated data retrieval infrastructure) within 20 *business days* after the day on which the request was delivered to the *Network Operator*, or as agreed with the *User*, but taking into account:

(i) access to the *meter* being sufficient to install the *interval meter* (the *Network Operator* must inform the *User* of any access difficulties); and

(ii) other site constraints, including confined spaces, being resolved.

(b) After installing an *interval meter* at a *delivery point*, a *Network Operator* must:

(i) provide to *AEMO* all the relevant details relating to the *interval meter* 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* was upgraded; and

(ii) 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*.

(c) There is no clause (c).

(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* 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* was downgraded; and

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

4.4. Deregistration of Delivery Points

4.4.1. Permanently removing delivery points

(a) A *Network Operator*:

(i) may permanently remove a *delivery point* when required to, or if not prevented, by law or a contract other than these Procedures; and

(ii) must (subject to law) permanently remove a *delivery point* if required to under this clause 4.4.1.

(b) Subject to clause 4.4.1(c), a *current User* may at any time lodge a *deregistration request* with the *Network Operator*.

(c) A *current User* must not lodge a *deregistration request* more than 20 *business days* before the date on which the *User* requires the *delivery point* to be permanently removed.

4.4.2. Response to valid deregistration request

(a) Upon receipt of a valid *deregistration request*, subject to clause 4.4.1, a *Network Operator* must (subject to law):

(i) accept the *deregistration request*; and

(ii) notify the *User* that the *deregistration request* has been accepted; and

(iii) permanently remove the *delivery point* and, if there is a *meter* installed at the *delivery point*, at the same time undertake a *meter reading* of, and obtain the *metering data* for, the *delivery point*, on the later of:

(A) the date requested by the *User* in the *deregistration request*; or

(B) 5 *business days* after receiving the *deregistration request*.

Note: The reason that there may not be a *meter* installed at the *delivery point* is that it may previously have been removed in the course of a de-energisation.

(b) As soon as practicable after a *delivery point* has been permanently removed under 4.4.1(a) or clause 4.4.2(a)(iii), and in any event within 5 *business days*, the *Network Operator* must:

(i) calculate the *consumed energy* for the *delivery point* using the information obtained under clause 4.4.2(a)(iii); and

(ii) change the *MIRN status* to *deregistered*; and

(iii) notify the *current User* that the *delivery point* has been permanently removed; and

(iv) provide to *AEMO* all the relevant details required for the purposes of updating the *AEMO metering database*; and

(v) provide *AEMO* and the *current User* with the *metering data* under clause 3.6.1 from, as applicable:

(A) the *meter reading* undertaken under clause 4.4.2(a)(iii); or

(B) if there was no *meter* installed at the *delivery point*, the *meter reading* undertaken under clause 4.2.2(a) when the *meter* was removed unless that *meter reading* was previously provided; or

(C) if there was no *meter reading* previously provided or available, then provide a final *meter reading.*

4.4.3. Deregistering MIRNs

Upon receipt of valid relevant details and *metering data* in accordance with clause 4.4.2(b)(iv) and 4.4.2(b)(v) for a *delivery point*, *AEMO* must:

(a) update the *AEMO metering database* by changing the *MIRN status* to *deregistered*;

(b) *cancel* all *open transactions* in respect of the *delivery point* and notify affected parties to each *cancelled transaction*; and

(c) notify the *User* and the *Network Operator* of the updated *AEMO standing data* for the *delivery point.*

CHAPTER 5. MIRN DISCOVERY PROCESSES

5.1. MIRN Discovery Request

5.1.1. Request

Subject to clause 5.1.2(a), any *Retailer* or *AEMO* may deliver a *MIRN discovery request* in relation to a *delivery point* to a *Network Operator*. A *MIRN discovery request* 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 *Retailer* must not deliver a *MIRN discovery request* in relation to a *delivery point* to a *Network Operator* unless the *Retailer* has received the *explicit informed consent* of the *Customer* to the provision by the *Network Operator* to that *Retailer* of the information referred to in a *MIRN discovery response* in respect of that *delivery point*.

(b) A *Retailer* 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 *Retailer* has received the *explicit informed consent* of the *Customer* to the provision by the *Network Operator* to that *Retailer* of the information referred to in a *MIRN discovery response* in respect of that *delivery point*.

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

5.2. Network Operator Response

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 *Retailer* and *AEMO*, a listing (which complies with

paragraph (b)) of every *street/suburb combination* that is recorded in the *discovery request* 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. Danny road, mcgowan Street);

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

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

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

(i) the *Retailer* must use its reasonable endeavours to provide the changed details to the *Network Operator* in whose *GDS* 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 *User* who is the *current User* for the *delivery point* for that *discovery address*, as soon as practicable after becoming aware of the change.

(e) The relevant *Network Operator* must:

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

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

5.2.2. Complete MIRN Listing

(a) Each *Network Operator* must use its best endeavours to update, format and deliver a new *complete MIRN listing*, which is to be made available to *AEMO* by 5pm on the fifth *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*/*MIRN* details of the *Customer*.

(d) The *Retailer* must ensure that the *Customer* has provided *explicit informed consent* to access and use the *complete MIRN listing* to confirm the relevant *discovery address*/*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 information specified in the *AEMO Specification Pack* in respect of the *delivery point* to which that *discovery address* or *MIRN* relates (such information being identified by reference to that *discovery address* or *MIRN*).

(b) If 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), the *MIRN, meter number* and *discovery address* for 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 to a *MIRN*, contained in the *metering database* of the relevant *Network Operator*, the *Network Operator* must use its reasonable endeavours to notify the *Retailer* or *AEMO* (as the case may be) of that fact.

5.3. Assistance in searching

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

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

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

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

CHAPTER 6. CUSTOMER TRANSFER PROCESS

6.1. Introduction

6.1.1. General

(a) This Chapter deals with the *transfer* of *Customer*s from one *User* (*current User*) to another *User* (*incoming User*). In legal terms this is achieved by *transfer*ring *gas* deliveries at a *delivery point* from the *current User* to the *incoming User*.

(b) In parallel to the *transfer* process under these Procedures, the *incoming User* needs to negotiate with the *Network Operator* either to agree suitable amendments to its *haulage contract* to reflect the addition of a *delivery point*, or to agree a *haulage contract*. These matters are dealt with under the Access Arrangement. The *incoming User* may need to deal with other matters as well, such as licensing.

6.1.2. Transfer errors

(a) If, due to a *transfer* error or otherwise, the wrong *User* is recorded in *AEMO's metering database* as the *current User*, then *AEMO* and the affected *Users* must cooperate to correct this error by either:

(i) a *User* lodging an *error correction notice* under clause 9.1.1(b); or

(ii) a *User* lodging a new *transfer request* in respect of the *delivery point* and entering into an agreement under clause 6.1.2(b), but to avoid doubt the correcting *transfer* must have only prospective effect.

(b) Subject to *Participant*s' obligations under clause 9.1.1 to lodge an *error correction notice* in respect of an incorrect *transfer request*, *Participant*s may enter into agreements if they cannot meet the requirements under clause 9.1.2 to lodge a valid *error correction notice*, to address or correct *transfer*s which should have occurred but did not, or which occurred but should not have, or were otherwise in error.

Note: The purpose of clause 6.1.2(b) is to permit "off-market" correcting *transaction*s. For example, if the *transfer day* is in error.

6.1.3. Explicit informed consent

(a) Before lodging a *transfer request* with *AEMO* in respect of a *delivery point*, an *incoming User* must obtain the *explicit informed consent* of the *Customer* to the requested *transfer*.

Note: This consent may include consent for the purposes of clause 6.2.2(a).

(b) By lodging a *transfer request* with *AEMO*, the *incoming User* represents to *AEMO* that the *incoming User* has complied with paragraph (a).

(c) The *incoming User* is taken to make the representation in paragraph (b) at the time of lodging the request and on each day that the *transfer request* is *open*.

(d) This clause does not apply where the *incoming User* is a *Self Contracting User*.

6.1.4. Incoming User may lodge a transfer request

(a) Subject to clause 6.1.3 and paragraphs (b) and (c), an *incoming User* may lodge a *transfer request* with *AEMO* on any day.

(b) An *incoming User* may lodge a *transfer request* for a prospective *transfer* date where an applicable cooling-off period is yet to expire, provided that the *transfer request* will only complete after the cooling off period has expired.

(c) An *incoming User* that is a *Self Contracting User* may only lodge a *transfer request* in respect of a *delivery point* at which it, or its related body corporate to whom it sells *gas*, is the *Customer*.

(d) By lodging a *transfer request* with *AEMO*, the *Self Contracting User* represents to *AEMO* that the *Customer* for the *delivery point* to which the *transfer request* relates is:

(i) the *Self Contracting User* itself; or

(ii) its related body corporate to whom that *Self Contracting User* sells *gas* at the *delivery point*.

6.2. The Transfer Request

6.2.1. Transfer request

(a) A *transfer request* must specify at least the following information:

(i) the *MIRN*;

(ii) the *proposed transfer date*; and

Note: Unless a *special meter reading* is requested, the *transfer* of a *basic-metered delivery point* will take effect at the time of the next *scheduled meter reading* which occurs on, after or, for a *transfer* that is not a *move in transfer,* up to four *business days* before the *proposed transfer date*, provided a *validated actual meter reading* is generated at that time.

Note: Under clause 6.2.3(a)(i), a *proposed transfer date* must be no earlier than 5 *business days* after the date on which the *transfer request* is lodged (except where it is for a *move in*) and within the *allowable period*.

Note: For a *move in*, the *transfer* will take effect on the *move in* date or if there is no *deemed meter reading* or a *special meter reading* cannot be obtained on the *move in* date, it will take effect at the time a *special meter reading* is obtained under clause 6.5.2.

(iii) whether the requested *transfer* is a *move in*.

(b) By lodging a *transfer request* that is specified to be a *move in*, an *incoming User* represents to *AEMO* that the *transfer request* relates to a *move in*.

(c) An *incoming User* is taken to make the representation in paragraph (b) at the time of lodging the *transfer request* for a *move in* and on each day that the request is *open*.

(d) 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).

(e) Upon receiving a request under paragraph (d), *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. Transfer request deemed to be a request for certain purposes

By lodging a *transfer request*, the *incoming User* is deemed to have requested the *Network Operator*, as part of the *transfer* process:

(a) if a *basic-metered delivery point* is de-energised — to re-energise it; and

(b) if the *transfer request* is *cancelled* after a *re-energisation* has occurred under clause 4.2.7(a)(iii)— to *de-energise* it again; and

(c) if the *transfer request* is for a *move in* at a *basic-metered delivery point* — to undertake a *special meter reading* under clause 6.5.2(a).

6.2.3. Requirements for transfer request

(a) A *transfer request* is valid only if:

(i) the *delivery point* exists within *AEMO's metering database*;

(ii) the *MIRN status* is *energised* or *de-energised*;

(iii) there is not, in relation to the *delivery point*, an *open transfer request*;

(iv) there is not, in relation to the *delivery point*, an *open error correction transaction*;

(v) the *incoming User* is registered as a *User* and has a contract with a *shipper* for the haulage of *gas* to that *delivery point*;

(vi) if it is for a *move in* — the *delivery point* is *basic-metered*; and

(vii) the *proposed transfer date* is within the *allowable period* and occurs:

(A) if the *transfer request* is not for a *move in* — no earlier than 5 *business days* after the date on which the *transfer request* is lodged; and

(B) if the *transfer request* is for a *move in* — no earlier than the date on which the *transfer request* is lodged.

(b) Upon receipt of a *transfer request* which is not valid, *AEMO* must reject the *transfer request* and notify the *incoming User* that the *transfer request* has been rejected, specifying the reason why the *transfer request* is not valid.

6.2.4. Response to valid transfer request

(a) Upon receipt of a valid *transfer request*, *AEMO* must accept the *transfer request* and:

(i) notify the *incoming User* that the *transfer request* has been accepted, specifying at least the following details:

(A) the unique identifier assigned by *AEMO* to the *transfer request*; and

(B) the process time of the *transfer request*;

(ii) notify the *Network Operator* that the *transfer request* has been accepted, specifying at least the following details:

(A) the *MIRN*; and

(B) the *incoming User*; and

(C) the *proposed transfer date;* and

(D) whether the *transfer request* is for a *move in*; and

(E) the process time of the *transfer request*; and

(F) the unique identifier assigned by *AEMO* to the *transfer request*;

(iii) notify the *current User* that the *transfer request* has been accepted, specifying at least the following details:

(A) the *MIRN*; and

(B) the *proposed transfer date*; and

(C) whether the *transfer request* is for a *move in*; and

(D) the process time of the *transfer request*; and

(E) the unique identifier assigned by *AEMO* to the *transfer request*; and

(iv) if the *transfer request* is not for a *move in*, suspend the *transfer request* until lapse of the *transfer objection resolution period*.

(b) In normal circumstances *AEMO* will not notify the *current User* of the identity of an *incoming User*, however *AEMO* may do so where it judges, in its absolute discretion, that it is necessary to do so for the purpose of resolving any issue or dispute.

(c) *AEMO* may also, in its absolute discretion, for the purpose of resolving any issue or dispute in relation to the *transfer request*, provide the *incoming User* with any information *AEMO* receives in writing from the *current User* in relation to the *transfer request*.

(d) For the purposes of paragraph (c), *AEMO* must provide the *incoming User* with the information *AEMO* receives, in the same format as *AEMO* received the information from the *current User*, provided that it is a format contemplated by these Procedures or the *AEMO Specification Pack*.

6.3. Objection to Transfer (Other than a Move In)

Note: The next step for a *transfer* that is a *move in* appears at clause 6.4.1.

6.3.1. Network Operator may object to transfer other than a move in

(a) Before the expiry of 2 *business days* after the *process time* notified under clause 6.2.4(a)(iii), if the *transfer request* is not for a *move in*, a *Network Operator* may lodge a *transfer objection* with *AEMO* on the ground that the *incoming User* has not entered into a *haulage contract* in respect of the *delivery point* and its *meter* with the *Network Operator*.

(b) A *transfer objection* under paragraph (a) must correspond to an *open transfer request*.

(c) Upon receipt of a *transfer objection* which is not valid, *AEMO* must reject the *transfer objection* and notify the *Participant* that lodged the *transfer objection*, specifying the reason why the *transfer objection* is not valid.

6.3.2. Response to valid transfer objection

Upon receipt of a valid *transfer objection*, *AEMO* must accept the *transfer objection* and notify the *incoming User* and the *Participant* that lodged the *transfer objection* that the *transfer objection* has been accepted, specifying at least:

(a) details of the *transfer request* to which the *transfer objection* relates; and

(b) the process time of the *transfer objection*.

6.3.3. Withdrawal of transfer objection

(a) Before the expiry of 3 *business days* after the *process time* notified under clause 6.3.2, a *Participant* that lodged a *transfer objection* may lodge a *transfer objection withdrawal notice* with *AEMO*.

(b) A *transfer objection withdrawal notice* lodged by a *Participant* must correspond to the *open transfer objection* previously lodged by that *Participant*.

(c) Upon receipt of a *transfer objection withdrawal notice* which is not valid, *AEMO* must reject the *transfer objection withdrawal notice* and notify the *Participant* that lodged the *transfer objection withdrawal notice*, specifying the reason why the *transfer objection withdrawal notice* is not valid.

6.3.4. Response to valid transfer objection withdrawal notice

Upon receipt of a *valid transfer objection withdrawal notice, AEMO* must accept the *transfer objection withdrawal notice* and:

(a) *cancel* the *transfer objection*; and

(b) notify the *incoming User* and the *Participant* that lodged the *transfer objection withdrawal notice*, specifying the details of the *transfer objection* to which the *transfer objection withdrawal notice* relates.

6.3.5. If transfer objection not withdrawn

If *AEMO*

(a) receives a valid *transfer objection*; and

(b) does not receive a valid *transfer objection withdrawal notice* within the time period specified under clause 6.3.3(a),

then *AEMO* must:

(c) before the start of the next *business day*, *cancel* the *transfer request*; and

(d) notify the *incoming User*, the *current User* and the *Network Operator* that the *transfer request* has been *cancelled*.

Note: An *incoming User* wishing to reinitiate a *transfer request* that has been *cancelled* must lodge a new *transfer request*.

6.4. Withdrawal of Transfer Request

6.4.1. Incoming User may withdraw transfer request

(a) An *incoming User* may withdraw a *transfer request* for a *basic-metered delivery point* at any time before *AEMO* issues a *transfer confirmation* by lodging a *transfer withdrawal notice* with *AEMO*.

(b) An *incoming User* may withdraw a *transfer request* for an *interval-metered delivery point* at any time up to two *business days* before the *proposed transfer date* specified in the *transfer request* by lodging *a transfer withdrawal notice* with *AEMO*.

(c) A *transfer withdrawal notice* must correspond to an *open transfer request* previously lodged by the *incoming User*.

(d) Upon receipt of a *transfer withdrawal notice* which is not valid, *AEMO* must reject the *transfer withdrawal notice* and notify the *Participant* that lodged the *transfer withdrawal notice*, specifying the reason why the *transfer withdrawal notice* is not valid.

6.4.2. Response to valid transfer withdrawal notice

Upon receipt of a valid *transfer withdrawal notice*, *AEMO* must accept the *transfer withdrawal notice* and:

(a) *cancel* the *transfer request*; and

(b) notify the *current User*, the *incoming User* and the *Network Operator*.

6.5. Move Ins Pending

6.5.1. Marking a move in as pending

If *AEMO* receives a valid *transfer request* for a *move in*, *AEMO* must:

(a) mark the *move in* as *pending*; and

(b) notify the *incoming User*, the *current User* and the Network Operator that the *move in* is pending.

6.5.2. Network Operator may be required to undertake special meter reading for a move in

(a) If a *transfer request* is for a *move in* and:

(i) the *Network Operator* reasonably determines that there is no prospect of determining a *deemed meter reading* under clause 3.1.3, for the *proposed transfer date*; and

Note: The *Network Operator* may make this determination if it determines that there is unlikely to be a *validated scheduled meter reading* or *special meter reading* in the 10 days before the *move in*.

(ii) no *scheduled meter reading* is scheduled for the *proposed transfer date*; and

(iii) no *special meter reading* has been requested (at least 2 *business days* prior to the *proposed transfer date*) by the *User*, for the *proposed transfer date*,

then the *Network Operator* must undertake a *special meter reading*:

(iv) on the *proposed transfer date*; or

(v) if the *proposed transfer date* is less than 2 *business days* after *AEMO* gives notice under clause 6.5.1(b) that the *transfer* is *pending* — within 2 *business days* after receipt of the notice.

(b) If a *transfer request* is for a *move in* and either:

(i) a *scheduled meter reading* is scheduled for, or not more than 10 days before, the *proposed transfer date*; or

(ii) a *special meter reading* has been requested (at least 2 *business days* prior to the *proposed transfer date*) for, or not more than 10 days before, the *proposed transfer date* by either the *current User* or the *incoming User*; or

(iii) the *Network Operator* is required to undertake a *special meter reading* under paragraph (a)(iv) or (a)(v);

and the *Network Operator* fails to obtain a *meter reading* under at least one of sub-paragraphs (i), (ii) or (iii), then the *Network Operator* must notify the *incoming User* of the failure by the end of the next *business day*.

(c) If, within 3 *business days* after notifying the *incoming User* under paragraph (b), the *Network Operator* receives a request from the *incoming User* to undertake a *special meter reading* for the *delivery point* the subject of the *transfer request*, the *Network Operator* must undertake a *special meter reading* as soon as practicable.

(d) If *AEMO* does not receive an *actual meter reading* or a *substituted meter reading* within 7 *days* of the *proposed transfer date*, then *AEMO* must:

(i) *cancel* the *transfer request*; and

(ii) notify the *incoming User*, the *current User* and the *Network Operator* that the *transfer request* has been *cancelled*.

6.6. Other Transfers Pending

(a) This clause 6.6 applies if *AEMO* receives a valid *transfer request* that is not for a *move in*.

(b) If *AEMO*:

(i) does not receive a valid *transfer objection*; or

(ii) receives a valid transfer objection and also a valid transfer objection withdrawal notice,

then *AEMO* must upon the lapse of the *transfer objection resolution period*:

(iii) mark the *transfer request* as *pending*; and

(iv) notify the *incoming User*, the *current User* and the *Network Operator* that the *transfer request* is *pending*.

6.7. Actual Meter Reading for Transfer of Basic-Metered Delivery Points

(a) If a *transfer request* for a *basic-metered delivery point* is *pending* and *AEMO* receives *metering data* under clause 3.6.1 based on an *estimated meter reading*, *AEMO* must within 24 hours notify the *incoming User* and *current User* that the *transfer* cannot take place until *AEMO* receives *metering data* based on a *validated actual meter reading* for the *delivery point*.

Note: The *Network Operator* may provide *AEMO* with *metering data* for an *actual meter reading* for the *delivery point* at any time. However, if that *meter reading* is taken after the *allowable period* has elapsed, *AEMO* will have already *cancelled* the *transfer request*.

(b) If a *transfer request* for a *basic-metered delivery point* is pending and *AEMO* does not receive metering data based on an *actual meter reading* for the *delivery point* within the *allowable period*, then within 24 hours of the lapse of the *allowable period AEMO* must:

(i) *cancel* the *transfer request*; and

(ii) notify the *incoming User*, the *current User* and the *Network Operator* that the *transfer request* is *cancelled*.

Note: An *incoming User* wishing to reinitiate a *transfer request* that has been *cancelled* must lodge a new *transfer request*.

6.8. Transfer Takes Effect

6.8.1. Requirements for a transfer confirmation

A *transfer confirmation* must specify at least the following information:

(a) the *MIRN*;

(b) the *transfer day*;

(c) in the notice to the *Network Operator* and the *current User* for that *delivery point*, the identity of the *incoming User*; and

(d) in the notice to the *incoming User* who delivered the *transfer request* to *AEMO* for that *delivery point*, the identity of the *current User*.

6.8.2. The transfer

(a) If a *transfer* is *pending* for a *basic-metered delivery point* and *AEMO* receives *metering data* based on an *actual meter reading* for the *delivery point*:

(i) within the *allowable period*; and

(ii) which would result in the *transfer day* being on, or, for a *transfer* that is not a *move in transfer*, up to four *business days* before the *proposed transfer date*,

then the *transfer* takes effect as from the *transfer time*, and *AEMO* must give a *transfer confirmation* to the *incoming User*, the *Network Operator* and the *current User* by:

(iii) if *AEMO* received the *metering data* before 5.00 pm on a day — before the start of the next *gas day*; and

(iv) otherwise — before the start of the second *gas day* after receipt of the *metering data*.

Note: The *transfer day* is the *gas day* upon which the *actual meter reading* is obtained. The *incoming User* is responsible for all transportation and haulage charges to and all *gas* withdrawals from the *delivery point* from the beginning of the *transfer day*.

Note: Upon accepting *metering data* under this clause, *AEMO* must update its *metering database*.

(b) If a *transfer* is pending for an *interval-metered delivery point*, then the *transfer* takes effect as from the *transfer time*, and *AEMO* must give a *transfer confirmation* to the *incoming User*, the *Network Operator* and the *current User* after the transfer time.

(c) Upon receipt of a *transfer confirmation*, the *Network Operator* must:

(i) with effect from the *transfer time*, record the *incoming User* in the *metering database* as the entity which is withdrawing *gas* at the *delivery point*; and

(ii) within 24 hours provide to the *incoming User*:

(A) the *MIRN standing data* and the *meter standing data*; and

(B) for a *basic-metered delivery point* only, the *index reading* from the *metering data AEMO* received for the *delivery point* under clause 3.6.1, as referred to in paragraph (a).

CHAPTER 7. RETAILER OF LAST RESORT

7.1. Customer Details Database

(a) *AEMO* must create, maintain and administer a database to store *Customer* details provided to *AEMO* under this clause.

(b) Each *User* must update, format and deliver a new *complete Customer listing* to *AEMO* by the end of the tenth *business day* after the end of the month.

(c) By the twelfth *business day* after the end of the month, *AEMO* must:

(i) validate that:

(A) all mandatory fields as defined in the *complete Customer listing* are populated;

(B) for each *MIRN*, the *current User* identified in the *complete Customer listing* corresponds to the *current User* identified in *AEMO's metering database* as at the extraction date;

(ii) store the *complete Customer listing* in a secure database and archive previous versions of the *complete Customer listing*;

(iii) where a *complete Customer listing* fails validation, notify the relevant *User* of the failure.

7.2. RoLR Event

7.2.1. Cancellation and acceleration of Customer transfers

Where a *RoLR event* has occurred, *AEMO* must, in relation to a *transfer request* that is lodged or *pending*:

(a) where *failed Retailer* is the *incoming User*, *cancel* the *transfer request* and deliver a notice of the withdrawal of the *transfer request* to the *current User*, the *incoming User* and the *Network Operator* for the *delivery point* to which the *transfer request* relates by the start of the *gas day* that commences on the *RoLR transfer date*;

(b) where the *failed Retailer* is the *current User* for the *delivery point* subject to the *transfer request*, and the *transfer request* is not a move in, accelerate the *transfer request* and deliver a *transfer confirmation* to the *incoming User*, the *User* and the *Network Operator* for the *delivery point* to which the *transfer request* relates before the start of the *gas day* that commences on the RoLR transfer date;

(c) where the *failed Retailer* is the *current User* for the *delivery point* subject to the *transfer request*, and the *transfer request* is a move in:

(i) if the *transfer day* is ten days or less after the *RoLR transfer date*, accelerate the *transfer request* and deliver a *transfer confirmation* to the *incoming User*, the User and the *Network Operator* for the *delivery point* to which the *transfer request* relates by the start of the *gas day* that commences on the *RoLR transfer date*; or

(ii) if the *transfer day* is more than ten days after the *RoLR transfer date*, allow the *transfer request* to be processed as normal and include the *MIRN* relating to that *transfer request* in *AEMO's metering database* update process described in clause 7.2.2.

7.2.2. AEMO metering database update

Before the *RoLR transfer date*, for each *MIRN* for which the *failed Retailer* is recorded as the *current User* and to which clause 7.2.1 does not apply, *AEMO* must amend its *metering database* by recording the *designated RoLR* as the *current User*.

7.2.3. Network Operator metering database update

The *Network Operator* must:

(a) for each *MIRN* for which the *failed Retailer* is recorded as the *current User* and to which clause 7.2.1 does not apply, amend its *metering database* by recording the *designated RoLR* as the *current User*; and

(b) provide *AEMO* with a report of the details of each *MIRN* that has been updated in the *metering database*.

7.2.4. Data exchange

Before the *RoLR transfer date*, *AEMO* must provide to:

(a) each *designated RoLR* a file containing *Customer* details using the most recently received *complete Customer listing* for the *MIRN*s for which they have become the *current User*, in accordance with the *AEMO Specification Pack*; and

(b) the *Network Operator* a file containing details of the *MIRN*s where, in accordance with clause 7.2.2, *AEMO* has updated *AEMO's metering database* with the *designated RoLR* as the *current User*, in accordance with the *AEMO Specification Pack*.

7.2.5. 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 *MIRN*s for which that *designated RoLR* will become the *current User*, in accordance with the *AEMO Specification Pack*.

7.2.6. Meter Reading and Account Creation

(a) Where the *failed Retailer* is not the *local area retailer* for a *MIRN* included in a file provided by *AEMO* under clause 7.2.4(b), the *Network Operator* must:

(i) calculate an *estimated meter reading* for the *RoLR transfer date* and provide it to *AEMO* as an actual where the *MIRN* refers to a *basic meter*;

(ii) calculate an estimated meter reading for the RoLR transfer date and provide it to the failed Retailer where the MIRN refers to a basic meter;

(iii) calculate the *consumed energy* for the *RoLR transfer date* and provide it to *AEMO* as an actual where the *MIRN* refers to a *basic meter*;

(iv) calculate the *consumed energy* for the *RoLR transfer date* and provide it to the *failed Retailer* where the *MIRN* refers to a *basic meter*; and

(v) provide the *designated RoLR* with the data required under clause 6.8.2(c)(ii),

and that information is to be provided in accordance with the *AEMO Specification Pack* as soon as practicable but no later than 4 days after the day on which the *RoLR transfer date* ends.

(b) Where the *failed Retailer* is the *local area retailer* for a *MIRN* included in a file provided by *AEMO* under clause 7.2.4(b), the *Network Operator* must:

(i) calculate an *estimated meter reading* for the *RoLR transfer date* and provide it to *AEMO* as an actual where the *MIRN* refers to a *basic meter*;

(ii) calculate an *estimated meter reading* for the *RoLR transfer date* and provide it to the *failed Retailer* where the *MIRN* refers to a *basic meter*;

(iii) calculate the *consumed energy* for the *RoLR transfer date* and provide to *AEMO* as an actual where the *MIRN* refers to a basic *meter*;

(iv) calculate the *consumed energy* for the *RoLR transfer date* and provide it to the *failed Retailer* where the *MIRN* refers to a basic *meter*;

(v) provide the *designated RoLR* with the data required under clause 6.8.2(c)(ii),

and that information is to be provided in accordance with the *AEMO Specification Pack* as soon as practicable, but no later than 8 days after the day on which the *RoLR transfer date* ends.

7.2.7. Updates to Estimated Meter Reading

(a) The *Network Operator* must provide any updates to estimated data provided under clause 7.2.6 to *AEMO*, the *failed Retailer* and the *designated RoLR*.

(b) The updates must be provided as soon as it is practical to do so, but in any event no later than the 425th *gas day* after the end of the month in which the *RoLR transfer date* occurs.

7.2.8. Service Order Processes

(a) Where a *Network Operator* has not yet completed service orders that were initiated prior to the *RoLR transfer date* by a *failed Retailer* who is not a *local area retailer*; the *Network Operator* in accordance with the *AEMO Specification Pack* must provide a *service order in flight report* to the *designated RoLR* by the next day.

(b) Where a *Network Operator* has not yet completed service orders that were initiated prior to *RoLR transfer date* by the *failed Retailer* who is the *local area retailer*; the *Network Operator* in accordance with the *AEMO Specification Pack* must provide a *service order in flight report* to the *designated RoLR* as soon as practicable but no later than 4 days after the *RoLR transfer date*

7.2.9. Industry reconciliation program

By the 65th *business day* after the day on which the *RoLR transfer date* ends and after consulting with affected *Users* and the *Network Operator*, *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 transfer*s that have occurred during a *RoLR event* to ensure that *Customer*s have indeed been *transfer*red to the correct Retailer of Last Resort and that the *Network Operator*, *Users*' and *AEMO*'s databases are aligned. The intention is to perform an exercise that would identify and correct any errors. This will also meet s172 of the *NERL*.

CHAPTER 8. ALLOCATION AND RECONCILIATION

8.1. Introduction

8.1.1. Overview and application

This Chapter 8 assumes that the allocation and reporting arrangements for each part the *GDS* will continue for each *sub-network* supplied by a single *transmission pipeline*. However, for the allocation, reconciliation and reporting arrangements, these Procedures distinguish between allocations for an *STTM sub-network* and the separate allocations for each remaining *sub-network* which will continue to operate under these Procedures.

8.1.2. Exempt sub-networks

(a) This Chapter does not apply in respect of:

(i) a *farm tap sub-network*; or

(ii) an *uncovered sub-network*.

(b) If a *Network Operator* of a *sub-network* identified in paragraph (a) becomes aware that:

(i) in the case of a *farm tap sub-network* — it is proposed to add one or more *delivery points* to the existing *delivery point*; and

(ii) in the case of an *uncovered sub-network*— it is proposed that the *sub-network* become a covered pipeline as defined in the *Law* or subject to any other third party access regime under a law or under an instrument having effect under a law,

the *Network Operator* must advise *AEMO* of the proposal and provide *AEMO* with information in reasonable detail regarding the proposal as soon as practicable.

8.1.3. Shipper register

(a) *AEMO* must establish a *shipper register* for the purposes of this Chapter 8:

(i) which sets out for each *User* for each *sub-network* a list of the *shipper*s that have provided a valid *listing request* to *AEMO*; and

(ii) subject to this Chapter 8, the contents of which *AEMO* must keep confidential.

(b) A *shipper* may at any time directly or through an agent provide:

(i) a request ("*listing request*") to *AEMO* to list it in the *shipper register* in respect of a *User* and a *sub-network* from a specified effective date; or

(ii) a request ("*delisting request*") to *AEMO* to remove its listing from the *shipper register* in respect of a *User* and a *sub-network* from a specified effective date.

(c) A *listing request* by a *shipper* under paragraph(b) is a statement by the *shipper* that the *shipper* agrees to be listed from time to time in the *User's allocation instruction* in respect of the *User's gas injections* into the *sub-network*, and must include a written confirmation from the *transmission pipeline operator* that the *shipper* has a *gas transmission contract* in the *transmission pipeline*.

Note: For an *STTM sub-network,* a *User* is not required to nominate a *shipper*.

(d) Upon receipt of a valid *listing request* or a *delisting request*, *AEMO* must update the *shipper register* accordingly:

(i) where the request is received from a *shipper*:

(A) where the effective date is within 2 *business days* of the date of the *listing request* or *delisting request* – as soon as practicable, and in any event before the end of the *business day* on which *AEMO* receives the *listing*

request or *delisting request*, to apply at the latest in respect of the *gas day* starting 2 *business days* later; and

(B) where the effective date is 2 *business days* from the date of the *listing request* or *delisting request* or later – to apply in respect of the first *gas day* after the effective date.

(e) If requested by a *transmission pipeline operator*, *AEMO* must as soon as practicable advise the *transmission pipeline operator* of all *shipper*s listed in the *shipper register* in respect of a *gate point* which interconnects the *transmission pipeline operator*'s *transmission pipeline* and a *sub-network*.

(f) If a shipper does not have a gas transmission contract in a transmission pipeline, the transmission pipeline operator may give a notice ("removal request") to *AEMO* requesting *AEMO* to remove the shipper from the shipper register for the transmission pipeline.

(g) By providing a removal request, the transmission pipeline operator represents to *AEMO* that the shipper named in the removal request does not have a gas transmission contract in the transmission pipeline.

(h) On receipt of a *removal request*, *AEMO* must:

(i) as soon as practicable and in any event within 12 hours, advise the *shipper* and each *User* in respect of which the *shipper* is listed in the *shipper register* that, on the *transmission pipeline operator*'s request, the *shipper* will be removed from the *shipper register* in respect of the *gate point* which interconnects the *transmission pipeline* and the *sub-network*; and

(ii) remove the *shipper* from the *shipper register* in respect of the *gate point* which interconnects the *transmission pipeline* and the *sub-network* as soon as practicable and in any event before the end of the *business day* on which *AEMO* receives the notification from the *transmission pipeline operator*, to apply at the latest in respect of the *gas day* starting 2 *business days* later.

8.1.4. Notional gate points

(a) If there is more than one physical interconnection between a given *sub-network* and a *transmission pipeline*, then for the purposes of this Chapter 8, all of those physical points of interconnection are treated as a single (notional) *gate point* between the *transmission pipeline* and the *sub-network*.

(b) If there is only one physical interconnection between a given *sub-network* and a *transmission pipeline*, then for the purposes of this Chapter 8, that physical point of interconnection is treated as the *gate point*.

8.1.5. Gate point control systems

(a) Subject to paragraphs (b) to (d), a *transmission pipeline operator* may:

(i) operate a *gate point* on any of the following *gate point* control systems:

(A) *pressure control*;

(B) *flow profile control*;

(C) *flow ratio control*;

(D) *market responsive flow control*;

(ii) change the control system it is operating for a *gate point*, provided that not later than 20 *business days* before it changes the control system it notifies *AEMO* and each *Network Operator* of the control system it proposes to operate for its *gate point* after the date on which it changes the control system; and

(iii) adopt additional control measures for the control system it is operating for a *gate point* on a temporary intra-day basis in order to maintain *transmission pipeline*

integrity or manage *transmission pipeline* operational emergencies, if the failure to change the control system would result in material damage to the *transmission pipeline* or a more extensive disruption or curtailment of *gas* supply.

(b) A *transmission pipeline operator* must not:

(i) operate a *gate point* on a *pressure control* system if any other *gate point* that delivers *gas* to the same *sub-network* as that *gate point* is operated on a *pressure control* system; or

(ii) operate a *gate point* on a control system other than a *pressure control* system if no other *gate point* that delivers *gas* to the same *sub-network* as that *gate point* is operated on a *pressure control* system.

(c) If a *transmission pipeline operator* wishes to operate a *gate point* on a control system other than a control system specified in paragraph (a)(i), it must first consult with *Participant*s and *AEMO* to develop changes to these Procedures that are consistent with the proposed form of *gate point* control system in order to ensure that the implementation of the new control system would not prevent these Procedures from operating.

(d) If a *transmission pipeline operator* wishes to change the control system for a *gate point*, it must use its reasonable endeavours to consult with all *shipper*s operating in the *sub-network* connected to the affected *gate point* at least 15 *business days* before the change takes place to take into account the possible impact of the proposed change on *Participant*s and having due regard to maintaining an *open* and competitive environment.

(e) A *transmission pipeline operator* may, for the purposes of complying with its obligations under paragraph (d), request *AEMO* to notify it of the identity of all *shipper*s operating in the *sub-network*.

(f) *AEMO* must comply with a request from a *transmission pipeline operator* under paragraph (e) within 3 *business days* of receiving the request.

8.1.6. Calculation of heating degree day

(a) In performing the calculations under this clause 8.1.6, *AEMO* must use the values set out in the *Register of Weather Related Information* for the coefficients C_1 to C_8 inclusive.

(b) Following a change in the source of weather data used, *AEMO* must:

(i) review the impact of these changes on the value of each and advise the industry reference group established by *AEMO*, such as the Gas Retail Consultative Forum or a successor group or committee of the review outcome; and

(ii) if the review determines that the coefficients are no longer suitable, recalculate the value for each coefficient using linear regression of historic weather data, and update the *Register of Weather Related Information* in accordance with Appendix B if required to reflect the recalculated coefficient values.

(c) In performing calculations under this clause 8.1.6, unless otherwise specified, *AEMO* must use the most recent available weather data prior to the time of calculation, which it must obtain from the Australian Bureau of Meteorology or another external agency, reasonably determined by *AEMO* to be a suitable supplier of weather data for each of the following weather data items:

(i) the maximum air temperature for a *HDD zone* for a *gas day*, or forecast for a *gas day*, in degrees Celsius ("T_{max}");

(ii) the minimum air temperature for a *HDD zone* for a *gas day*, or forecast for a *gas day*, in degrees Celsius ("T_{min}"); and

(iii) the hours of sun forecast for a *HDD zone* for a *gas day* ("H_{sun}").

(d) For each *gas day* D for each *HDD zone*, *AEMO* must, in accordance with the applicable provisions of paragraph (e):

(i) by 17 hours before the end of *gas day* D, calculate the *forecast heating degree day* for *gas day* D+1 for use in clause 8.4.4; and

(ii) by 4 hours after the end of *gas day* D, calculate the *actual heating degree day* for *gas day* D for use in clause 8.6.6.

(e) In this clause 8.1.6, for each *HDD zone* and for each *gas day* D, the relevant values of *EDD*, *average temperature*, *total sun hours*, proxy ground temperature, *actual heating degree day*, *forecast EDD* and *forecast heating degree day* are calculated in accordance with Appendix C.

8.2. User Obligations for Non-STTM Sub-networks

Clause 8.2 does not apply to an *STTM sub network*.

8.2.1. Injections to match required withdrawals

(a) For each *sub-network* for each *gas day*, a *User* must procure the injection into the *sub-network* of an amount of *gas* equal to its good faith estimate of its likely *User's required withdrawals* for the *sub-network* for the *gas day*.

(b) It is recognised that at any point in time the quantity of *gas* that the *User* has injected or procured for injection into a *sub-network* is unlikely to precisely equal the quantity of *gas* withdrawn by the *User* from the *sub-network*. However, the *User* must ensure that the quantity of *gas* that the *User* has injected or procured for injection into a *sub-network* equals the quantity of *gas* withdrawn by the *User* from the *sub-network* in accordance with this Chapter.

(c) To avoid doubt, paragraph (a) may require a *User* to procure the injection into the *sub-network* of a negative amount of *gas* on a *gas day*.

Note: Any negative injection requirement may be resolved between the *User* and its *related shipper*, between the *shipper* and the *transmission pipeline operator* or by an arrangement with another *User*.

8.2.2. Users collectively to keep sub-network pressurised

(a) Each *User* must ensure that its, and its *related shipper*s', conduct (including conduct within a *gas day*) does not:

(i) jeopardise *gas* injections into the *sub-network* in such a way that the *sub-network*'s system pressure is threatened; or

(ii) impede a *Network Operator*'s ability to ensure that the system pressure in a *sub-network* is maintained.

(b) Without limiting this clause 8.2.2, a *User* must ensure that its intra-day *gas* flows do not:

(i) jeopardise the operation of the *sub-network*; or

(ii) cause the obligation to keep the *sub-network* pressurised to fall disproportionately on other parties.

(c) A *User's* obligation under this clause to keep the *sub-network* pressurised applies to that *User* in respect of that *User's* aggregate *gas* withdrawals out of the *sub-network* on a *gas day*, as a proportion of the total *gas* withdrawals.

(d) A *User's* obligations under this clause 8.2.2 are owed:

(i) to every other *User* who injects *gas* into the *sub-network* on a *gas day*, jointly and severally; and

(ii) to the *Network Operator*.

8.2.3. User's monthly interval-meter load

(a) Within 7 *gas day*s after the end of each month, *AEMO* must notify each *User* of its "*monthly interval-meter load percentage*" (*MILP"*) for each *sub-network* for the month, calculated under clause 8.2.3(b), and *AEMO* must use the *MILP* in its calculations under clause 8.2.4 and for each *gas day* after the *gas day* on which the notice is given until *AEMO* notifies the *User* of a new *MILP* under this clause.

(b) For each *User* for each *sub-network* for each month, *AEMO* must calculate the *User's MILP* as follows:

$$MILP = \frac{\sum UIW_{m\,u}}{\sum_{All\ users} UIW_{m}} \times 100$$

$UIW_{m\,u}$	= the *interval-metered withdrawals* for *User* u for *gas day* m calculated under clause 8.6.4;
UIW_{m}	= for a *User*, the *interval-metered withdrawals* for *gas day* m calculated under clause 8.6.4; and
m	= a *gas day* m in the month.

8.2.4. User provides information to AEMO

(a) If at any time before or during a *gas day* a *User* becomes aware of a fact which could cause its *interval-metered withdrawals* for a *sub-network* for the *gas day* to depart by greater than "A"%, where "A" is a variable, from the *User's forecast interval-metered withdrawals* provided by the *User* to *AEMO* for the *gas day* under clause 8.4.3(c), then the *User* must notify *AEMO* of:

(i) the likely departure and all relevant circumstances;

(ii) a new *interval-meter demand profile* for the *gas day*; and

(iii) a new *User's forecast interval-metered withdrawals* for the *gas day*,

which notification must be made:

(iv) if possible, at least 15 hours before the start of the *gas day*; and

(v) otherwise, within 4.5 hours.

(b) The value to be used for the variable "A" in paragraph (a) is, if the *User's MILP* calculated under clause 8.2.3 is:

(i) 41% or greater, 8;

(ii) in the range from 21% to 40%, 15;

(iii) in the range from 11% to 20%, 20; and

(iv) in the range from 0% to 10%, 30.

(c) If at any time before a *gas day* a *User* becomes aware that its *related shipper*'s injections into a *sub-network* is to be adjusted under the *transmission contract*, or that a *transmission pipeline operator* does not plan to inject or repay (as applicable) *gas* in accordance with the *shipper*'s request for injections request for repayment (as applicable) under its *transmission contract* (for example due to a curtailment), in a manner which will cause a change to the amount of *gas* being injected into the *sub-network* on the *User's* behalf, the *User* must notify *AEMO* within 4.5 hours of the fact and the surrounding circumstances.

8.3. Allocation Instructions for Non-STTM Sub-networks

Clause 8.3 does not apply to an *STTM sub network*.

8.3.1. "User's gas injections" defined

In this clause 8.3, "*User's gas injections*" for a *sub-network* for a *gas day* means, as appropriate, either:

(a) before the end of the *gas day*, the *User's daily forecast* calculated under clause 8.4.4(c); or

(b) after the end of the *gas day*, the *User's estimated total withdrawals* calculated under clause 8.6.13.

8.3.2. User's allocation instruction before the gas day

(a) A *User* must give *AEMO* a valid *allocation instruction* at least 2 *business days* before the *gas day* on which the *User* first withdraws *gas* from a *sub-network*, and must have a valid *allocation instruction* in place at least 2 *business days* before each subsequent *gas day* on which it intends to withdraw *gas*.

(b) An *allocation instruction* may be expressed as a standing instruction which applies until a new valid *allocation instruction* is given.

(c) A *User* may update its *allocation instruction* by giving *AEMO* a valid *allocation instruction* not later than 18 hours before the start of the *gas day* to which, or with effect from which, the updated *allocation instruction* is to apply.

(d) An *allocation instruction* must specify for each *gas day* to which it applies how the *User's gas injections* into the *sub-network* are to be allocated between the *shipper*s *injecting gas* into the *sub-network* on the *User's* behalf, which may be by:

(i) percentages;

Example: "20% to *shipper* A and 80% to *shipper* B".

(ii) quantities, which must include an allocation of residual quantity; or

Example: "15 TJ to *shipper* A, 5 TJ to *shipper* B and the balance to *shipper* A".

(iii) by a combination of the options in sub-paragraphs (i) and (ii).

Example: "15 TJ to *shipper* A, and the balance 40% to *shipper* A and 60% to *shipper* B".

8.3.3. Revised allocation instructions

(a) Subject to paragraph (b), a *User* may give *AEMO* a *revised allocation instruction* for a specified *gas day* at any time up to 3.5 hours after the end of a *gas day* to which it applies.

(b) A *User* must not give *AEMO* a *revised allocation instruction* for a *gas day* after the start of the *gas day*:

(i) which, subject to paragraphs (c) and (d), purports to allocate a *User's gas injections* into the *sub-network* across *transmission pipelines* in different proportions to the last valid *allocation instruction* in a way which, for any *transmission pipeline*, would be reasonably expected to result in more than a "A"% difference, where "A" is a variable, between the amount of *gas* allocated to a *transmission pipeline* at the end of the *gas day* compared with what would have been allocated under the last valid *allocation instruction*; or

(ii) which purports to allocate a *User's gas injections* into the *sub-network* across *transmission pipeline*s in a manner which would be reasonably expected to result in the allocation to a *transmission pipeline* of less *gas* at the end of the *gas day* than is likely to have already been injected into the *sub-network* by *shipper*s on the *transmission pipeline* which are *injecting gas* into the *sub-network* on the *User's* behalf at the likely *process time* of the purported *revised allocation instruction* by *AEMO*.

(c) The value to be used for the variable in paragraph (b)(i) is 10.

(d) A *revised allocation instruction* provided by a *User* to *AEMO* is not subject to the limitation in paragraph (b)(i) if the *revised allocation instruction* is provided by the *User* in extraordinary circumstances, acting reasonably in an attempt to maximise its compliance with clauses 8.2.1 and 8.2.2.

Note: The objective of paragraph (d) is to ensure that paragraph (b)(i) does not prevent a *User* from taking action which is for the overall benefit of the *sub-network* as a whole in extraordinary circumstances. For example, a *User* should be able to ensure that an adequate amount of *gas* is supplied into a *sub-network* from an alternative *transmission pipeline* where the capacity of its original *transmission pipeline* for *injecting gas* into the *sub-network* is restricted because of sudden equipment failure or physical constraints within the *sub-network*.

8.3.4. Validity of allocation instruction

(a) Subject to this clause 8.3, a *User's allocation instruction* will be valid for a *gas day* if:

(i) the allocations in the *allocation instruction* are capable of being applied to allocate all the *User's gas injections* (whatever they are on the *gas day*) to a *shipper*; and

(ii) each *shipper* listed in the *allocation instruction* is listed in the *shipper register* for the *User* for the *sub-network* for the *gas day*.

(b) *AEMO* must assess each *allocation instruction* it receives from a *User*, for each *gas day* to which the *allocation instruction* is stated to apply, against the criteria in paragraph (a), as soon as practicable:

(i) after it receives the *allocation instruction*;

(ii) after the *shipper register* for the *User* for the *sub-network* is updated under clause 8.1.3(d), or after a *shipper* is removed from the *shipper register* in respect of a *gate point* for the *sub-network* under clause 8.1.3(h); and

(iii) after it has determined the *User's estimated total withdrawals* for the *gas day* under clause 8.6.13(a).

8.3.5. If allocation instruction is invalid

(a) Within 4.5 hours of determining that a *User's allocation instruction* is not valid, *AEMO* must advise the *User* that its *allocation instruction* is not valid and the reason why, in order that the *User* can, if permitted under this clause 8.3, submit a *revised allocation instruction*.

(b) If a *User* has not provided a valid *allocation instruction* to *AEMO*, then *AEMO* must use the appropriate alternative method under this paragraph (b) for allocating the *User's gas injections* across *shipper*s for the *gas day* and, within 4.5 hours of that allocation, notify the *User* which method was used and of the resulting allocation, and give a notice ("clause 8.3.5(b) notice") to each *shipper* to which *AEMO* allocated some or all of the *User's gas injections* specifying the amount of *gas* allocated to the *shipper* under this paragraph (b) and the name of the *User*. The alternative allocation methods are:

(i) if possible, *AEMO* must use the *User's* most recent *allocation instruction* for the *sub-network* that is valid for the *gas day* Determined using the *like day substitution methodology*; and

(ii) if there is no such *allocation instruction*, *AEMO* must use the *User's* most recent *allocation instruction* for the *sub-network* that is valid for the *gas day* from any previous *gas day*; and

(iii) if there is no such *allocation instruction*, *AEMO* must apportion the *User's gas injections* for the *gas day* across all of the *shipper*s listed in the *shipper register* for the *User* for the *sub-network* in equal amounts; and

(iv) if there are no *shipper*s listed in the *shipper register* for the *User* for the *sub-network*, then *AEMO* must determine the most recent *gas day* for which there was at least one *shipper* listed in the *shipper register* for the *User* for the *sub-network*, and allocate the *User's gas injections* for the *gas day* across all of the *shipper*s

listed in the *shipper register* for the *User* for the *sub-network* on that *gas day* in equal amounts.

8.3.6. User representations

(a) By providing an *allocation instruction* under this clause 8.3, a *User* represents to *AEMO* that:

(i) each of the *shipper*s set out in the *allocation instruction* agrees to, and has sufficient contractual entitlements to, inject *gas* on the *User's* behalf in accordance with the *allocation instruction* on any *gas day* to which the *allocation instruction* applies; and

(ii) the *User* is party to a *haulage contract* for the *sub-network* in respect of which the *allocation instruction* applies.

(b) A *User* is taken to make the representation in paragraph (a) at the time of providing the instruction and on the *gas day* before any *gas day* on which the *allocation instruction* will apply.

8.4. Before the Start of the Gas Day

This clause 8.4 applies to all *sub-networks* unless otherwise stated.

8.4.1. Forecast of unaccounted for gas

(a) For each *sub-network* for each *gas day*, at least 18 hours before the start of the *gas day*, the *Network Operator* must advise *AEMO* of its forecast of UAFG ("*FUAFG*"), the name of each *User* who is a supplier of UAFG for the *sub-network* and the quantity of FUAFG to be supplied by each supplier.

(b) The *Network Operator*'s forecast of UAFG under paragraph (a) must take into account historical levels of UAFG.

8.4.2. Provision of basic-metered delivery point information to AEMO

For each *basic-metered delivery point* in a *sub-network*, from time to time and at least once per year, the *Network Operator* must calculate by linear regression of *historical metering data* the:

(a) *non-temperature-sensitive base load*; and

(b) *temperature sensitivity heating rate*,

and advise *AEMO* of the data calculated under this clause.

8.4.3. Provision of interval-meter information to AEMO

(a) At all times, the *current User* for an *interval-metered delivery point* in a *sub-network* must ensure that:

(i) *AEMO* has been provided with an *interval-meter demand profile* and *forecast interval-metered withdrawals* for each of a minimum of 7 consecutive *gas days*, being sufficient for *AEMO* to determine substitute values under paragraph (c) if required; and

(ii) the *interval-meter demand profile* and *forecast interval-metered withdrawals* most recently provided to *AEMO* under paragraph (i) are a reasonable estimate of the expected profile and withdrawals at that *interval-metered delivery point* on the relevant *gas day*.

(b) The *User* for an *interval-metered delivery point* may, not later than 18 hours before the start of a *gas day*, give *AEMO* an *interval-meter demand profile* and *forecast interval-metered withdrawals* for that *delivery point* and *gas day*.

(c) If, for a *gas day* for a *sub-network*, a *User* does not provide an *interval-meter demand profile* or its *forecast interval-metered withdrawals* to *AEMO* by the time specified in paragraph(a), *AEMO* must determine, and use in its calculations under this Chapter 8, a substitute value using the *like day substitution methodology*.

8.4.4. User profiled forecasts for non *STTM sub-networks*

(a) For each *User* for each non *STTM sub-network* for each *gas day*, *AEMO* must perform the following steps:

(i) first, calculate the User's forecast *basic-metered* withdrawals ("UFBW") as follows:

$$UFBW = \sum BL + \sum \left(HR \times HDD_F \right)$$

where:

UFBW	= the *User's forecast basic-metered withdrawals* for the *sub-network* for the *gas day*;
BL	= the *non-temperature-sensitive base load* for each of the *User's basic-metered delivery points* provided to *AEMO* under clause 8.4.2 or 4.1 (e) (iii);
HR	= the *temperature sensitivity heating rate* for each of the *User's basic-metered delivery points* provided to *AEMO* under clause 8.4.2 or 4.1 (e) (iii); and
HDD_F	= the *forecast heating degree day* for the *HDD zone* for the *sub-network* for the *gas day* calculated under clause 8.1.6,

(ii) next, calculate the "User's (basic-meter) profiled forecast" as follows:

$$UBPF = DP \times \left[UFBW \right]$$

where:

UBPF	= the *User's (basic-meter) profiled forecast* for the *sub-network* for the *gas day*;
DP	= the *profile* for the *heating degree day* for the *sub-network* for the *gas day* Determined in accordance with clause 8.4.9; and
UFBW	= the *User's forecast basic-metered withdrawals* for the *sub-network* for the *gas day* calculated under sub-paragraph (i),

(iii) then, take the *User's forecast interval-metered withdrawals* for the *gas day* provided under clause 8.4.3 ("*UFIW*"); and

(iv) apply the *interval-meter demand profile* provided by the *User* under clause 8.4.3 to the *UFIW* provided under clause 8.4.3 to calculate the "*User's (interval-meter) profiled forecast*".

(b) For each *User* for each *sub-network*, *AEMO* must calculate the "*User's profiled forecast*" for the *gas day*, by summing for each hour in the *gas day* the component for the hour of the following:

$$UPF = UBPF + UIPF + UAFGPF$$

where:

UPF	= the User's profiled forecast for the *sub-network* for the *gas day*;

UBPF	= the *User's (basic-meter) profiled forecast* for the *sub-network* for the *gas day* calculated under paragraph (a)(ii);
UIPF	= the *User's (interval-meter) profiled forecast* for the *sub-network* for the *gas day* calculated under paragraph (a)(iv); and
UAFGPF	= the *User's* unaccounted for *gas profile*d forecast for the *gas day*, calculated by applying a flat 24 hour *profile* to any quantity of unaccounted for *gas* to be provided by the *User* on the *gas day* as notified under clause 8.4.1(a).

(c) For each *User* for each *sub-network* for each *gas day*, *AEMO* must calculate the "*User's daily forecast*" by summing the component for each hour of the *User's profiled forecast* for the *gas day* calculated under paragraph (b).

(d) For each *User* for each *sub-network* for each *gas day*, *AEMO* must at least 17 hours before the start of the *gas day* provide to the *User*:

(i) the UPF, UBPF, UIPF and UAFGPF referred to in paragraph (b); and

(ii) the *heating degree day* for the *HDD zone* for the *sub-network* for the *gas day* used in the calculation under paragraph (a)(i).

8.4.5. Non *STTM* sub-network profiled forecasts

(a) For each non-*STTM sub-network* for each *gas day*, *AEMO* must:

(i) first, calculate the "*sub-network* (basic-meter) profiled forecast" for the *sub-network* for the *gas day* as follows:

$$NBPF = DP \times \left[\sum UFBW\right]$$

where:

NBPF	= the *sub-network* basic-*meter profile*d forecast for the *gas day* for the *sub-network*;
DP	= the *profile* for the *heating degree day* for the *HDD zone* for the *sub-network* for the *gas day* Determined under clause 8.4.9; and
UFBW	= the *User's forecast basic-metered withdrawals* for the *sub-network* for the *gas day* calculated under clause 8.4.4(a)(i), and

(ii) then, for each hour, the component for the hour of the "*sub-network (interval-meter) profiled forecast*" is calculated by summing the component for the hour of the *User's (interval-meter) profiled forecast* calculated under clause 8.4.4(a)(iv) for each *User* in the *sub-network* for the *gas day*.

(b) For each hour, the component for the hour of the "*sub-network profiled forecast*" is calculated by summing the component for the hour of:

(i) the *sub-network (basic-meter) profiled forecast* for the *gas day* calculated under paragraph (a)(i); and

(ii) the *sub-network (interval-meter) profiled forecast* for the *gas day* calculated under paragraph (a)(ii); and

(iii) the *sub-network* unaccounted for *gas profile*d forecast for the *gas day*, calculated by applying a flat 24 hour *profile* to the forecast of unaccounted for *gas* for the *sub-network* for the *gas day* notified under clause 8.4.1(a).

(c) At least 17 hours before the start of the *gas day*, for each *sub-network AEMO* must publish to Users in the *sub-network* and their related shippers and transmission pipeline operators the *sub-network* profiled forecast.

8.4.6. Shipper profiled forecasts for non-STTM sub-networks

(a) For each *shipper* for each non-*STTM sub-network* for each *gas day*, *AEMO* must produce a "*shipper profiled forecast*" for the *gas day* by:

(i) first, for each User in the *sub-network*, calculating the "allocation instruction percentage" for each shipper named in the User's allocation instruction for the *gas day*, which:

(A) if the *User's allocation instruction* is expressed solely in terms of percentages — is the same as the percentage allocated to the *shipper* in the *allocation instruction*; and

(B) otherwise — is calculated as follows:

$$AIP = \frac{SQ}{(UDF)}$$

where:

AIP = the *User's allocation instruction percentage* for the *shipper* for the *sub-network* for the *gas day*; and

UDF = the *User's daily forecast* for the *sub-network* for the *gas day* calculated under clause 8.4.4(c);

and

(ii) next, taking each *User's profiled forecast* for the *gas day* calculated under clause 8.4.4 and, for each hour, allocating it across *shipper*s in accordance with the *User's allocation instruction percentage* for the *gas day*; and

(iii) for each *shipper*, summing for each hour all amounts allocated to the *shipper*.

(b) At least 17 hours before the start of the *gas day*, *AEMO* must provide each *shipper*'s *shipper profiled forecast* to the *shipper* and to the appropriate *transmission pipeline operator*.

8.4.7. Pipeline profiled forecasts for non-STTM sub-networks

At least 17 hours before the start of the *gas day*, for each *transmission pipeline* for each non-*STTM sub-network*, *AEMO* must calculate and provide to the *transmission pipeline operator*, the "*pipeline profiled forecast*" which is equal to the sum, for each hour, of the component for the hour of each *shipper* on the pipeline's *shipper*s *profile*d forecasts for the *gas day*.

Note: The *market responsive flow control pipeline* is unable to measure and control *gas* injections at flow rates below 400GJ per hour and *shipper*s do not know the hourly nominations of other *shipper*s on this *transmission pipeline*. As a result, a *shipper* is unable to procure the injection of less than 400GJ of *gas* in any hour. The *transmission pipeline profiled forecast* published by *AEMO* is therefore unlikely to reflect the actual *profile* of injections from the *market responsive flow control pipeline* on a day.

8.4.8. Injections from MRFC pipelines for non-STTM sub-networks

For each non STTM *sub-network* for each *gas day*, each User must procure its related shippers in the market responsive flow control pipeline to procure the market responsive flow control transmission pipeline operator to inject gas into the *sub-network* so that:

(a) the injection for each hour matches the *User's* reasonable best estimate, of the share of its likely *User's required withdrawals* for the *sub-network* applicable to that hour; and

(b) the sum of the hourly injections across the *gas day* equals the *User's* reasonable best estimate of the share of its likely *User's required withdrawals* for the *sub-network* for that *gas day* that the *User* intends to procure from that *shipper*,

provided that nothing in this clause 8.4.8 requires the *User* to procure a *related shipper* to procure the *market responsive flow control transmission pipeline operator* to inject *gas* at a flow rate less than 400GJ per hour in any hour.

Note: The *market responsive flow control pipeline* is unable to measure and control *gas* injections flow rates below 400GJ per hour and each *shipper* does not know the hourly nominations of the other *shipper*s on this *transmission pipeline*. As a result, a *shipper* is unable to procure the injection of less than 400GJ of *gas* in any hour.

Where a *User* believes that the share of its likely *User's required withdrawals* applicable to an hour is such that its *related shipper* would be required to procure the *market responsive flow control pipeline* to inject less than 400GJ of *gas* in an hour, the *User* may procure its *related shipper* to procure the *market responsive flow control pipeline* to inject the *gas* for that hour during a different hour of the *gas day*.

8.4.9. AEMO determines profiles

(a) *AEMO* may, acting reasonably, determine from time to time the *profile*s to be used for the purposes of this clause 8.4.

(b) *AEMO* must, from time to time, publish guidelines which set out:

(i) the principles on which the *profile*s are based; and

(ii) the principles which *AEMO* applies in the selection of a *profile* for a *gas day*; and

(iii) *AEMO*'s policy on the retention and management of the *profile*s in a *profile* library.

8.5. During the Gas Day

8.5.1. Pressure control pipeline to provide instantaneous flow signals

(a) In this clause 8.5.1 "*instantaneous flow rate*" at a *gate point* means a flow rate measured over the shortest period of time over which the *meter*ing equipment at the *gate point* is capable of measuring a flow rate.

(b) The *transmission pipeline operator* of a *transmission pipeline* that is operating as a *pressure control*led *transmission pipeline* for a *sub-network* with two *transmission pipeline*s connected to it, must under this clause 8.5.1, if requested by the *transmission pipeline operator* of the other *transmission pipeline*, provide to the *transmission pipeline operator* any one or more of the following data signals (each a "*flow signal*") communicating the *instantaneous flow rate*:

(i) at the gate point connecting the pressure control transmission pipeline to the *sub-network*; and

(ii) if there is more than one physical interconnection between the *pressure control transmission pipeline* and the *sub-network* — at each physical interconnection.

Note: The physical interconnection referred to in (b)(ii) is usually referred to as a "*physical gate point*", whereas the *gate point* referred to in (b)(i) and elsewhere in these Procedures is called a "notional *gate point*".

Example: If there are three *physical gate point*s comprising the *gate point*, then the *transmission pipeline operator* must, if requested, make available a maximum of 4 *flow signal*s, one for the *gate point* and one each for the 3 *physical gate point*s.

(c) A *transmission pipeline operator* complies with paragraph (b) if, acting reasonably, it provides the *flow signal*:

(i) in the form of a galvanically isolated 4-20 milliamp current loop or in such other form as the parties, acting reasonably, may agree; and

(ii) at a location which provides the other *transmission pipeline operator* with a secure location to install equipment to receive and transmit the *flow signal*, together with a power supply for the equipment and reasonable rights of access for the other *transmission pipeline operator* from time to time to operate and maintain the equipment.

(d) The *transmission pipeline operator* of a *pressure control transmission pipeline* is not obliged to provide a *flow signal* until it has reached agreement with the other *transmission pipeline operator* about the recovery of its costs of complying with this clause 8.5.1, according to the following principles:

(i) the *transmission pipeline operator* of the *pressure control transmission pipeline* is entitled to recover its reasonable costs of providing the *flow signal*, in a manner consistent with the National *Gas Law*;

(ii) there is to be no double-recovery of costs under this clause 8.5.1 and under any *applicable access arrangement* or agreement.

(e) This clause 8.5.1 does not apply in respect of a *flow signal* being provided in a form and at a location for a *sub-network* if on 10 November 2003 the *flow signal* was being provided by the *transmission pipeline operator* of the *pressure control*led *transmission pipeline* in the form and at the location for the *sub-network* to the *transmission pipeline operator* of the other *transmission pipeline* connected to the *sub-network*.

8.6. Allocation

8.6.1. Period for calculations

(a) Except where a clause states to the contrary, for each *gas day* D *AEMO* must perform each calculation it is required to perform under this clause 8.6 for each *historical gas day i* in the *settlement period*.

(b) Except where a clause states to the contrary, *AEMO* must use the value it has most recently received and recorded, or generated and recorded, in the *AEMO metering database* under these Procedures:

(i) for each input into each calculation *AEMO* is required to perform under this clause 8.6; and

(ii) for each notification that *AEMO* is required to provide to a person under this Chapter 8.

(c) In this clause 8.6:

"*settlement period*" for *gas day* D means the period of 425 *gas day*s between 426 *gas day*s before *gas day* D and one *gas day* before *gas day* D; and

"historical *gas day* i" for *gas day* D means a *gas day* in the settlement period for *gas day* D.

8.6.2. Pipeline injections

(a) For each gate point, the "pipeline injections" for each *gas day* D are:

(i) for an *STTM sub-network*, the latest version available of *pipeline injections* as provided by the *STTM* systems and for all non-STTM *sub-network*s, the *gate point* energy quantity for the *gate point* provided to *AEMO* by the *Network Operator* under clause 3.3.2; and

(ii) for instances where the *pipeline injections* for an *STTM sub-network* are not yet available from the *STTM* systems, then *pipeline injections* for the *STTM sub-network* will be based upon the *gate point* energy quantity for the *gate point* provided to *AEMO* by the *Network Operator* under clause 3.3.2.

(b) For each *gate point* for each *gas day*, *AEMO* must calculate the "*pipeline corrected injections*" for each *gas day* as follows:

$$PCI = PI$$

where:

PCI	= the pipeline corrected injections for the gate point for the *gas day*;
PI	= the latest version available of *pipeline injections* for the *gate point* under paragraph(a).

(c) For each *gate point* in the range of *gas day* D-1 to *gas day* D-425, *AEMO* must notify each *User*, the *Network Operator* and the *transmission pipeline operator* of the *pipeline corrected injections* for *gas day* D used in the calculations under paragraph (b).

8.6.3. Total corrected injections

For each *sub-network*, *AEMO* must calculate the "*total corrected injections*" for *gas day* D as follows:

$$TCI = \sum PCI$$

where:

TCI	= the total corrected injections for the *sub-network* for *gas day* D;
PCI	= the latest version available of *pipeline corrected injections* for each *gate point* for *gas day* D calculated under clause 8.6.2(b);

8.6.4. User's interval-metered withdrawals

For each *User* for each *sub-network*, *AEMO* must calculate the "*User's interval-metered withdrawals*" ("UIW") for *gas day* D as follows:

$$UIW = \sum IW$$

where:

UIW	= the User's *interval-metered withdrawals* for the *sub-network* for *gas day* D; and
IW	= the latest version available of *interval-metered* withdrawals for each of the *User's interval-metered delivery points* in the *sub-network* for *gas day* D provided to *AEMO* under clause 3.6.1(a)(ii).

8.6.5. Net system load

(a) For each *sub-network* for each *gas day* D, *AEMO* must calculate the *net system load* for each *historical gas day i* as follows:

$$NSL = TCI - \sum UIW - EUAFG$$

where:

NSL	= the *net system load* for the *sub-network* for *historical gas day* i for *gas day* D;
TCI	= the latest version available of *total corrected injections* for the *sub-network* for *historical gas day i* for *gas day* D calculated under clause 8.6.3;
UIW	= the latest version available of *interval-metered withdrawals* for *historical gas day i* for *gas day* D for each *User* in the *sub-network* calculated under clause 8.6.4; and

EUAFG	= the estimate of unaccounted for *gas* for the *sub-network* for *historical gas day i* for *gas day* D notified under clause 8.6.14(a), as applicable.

Note: The *EUAFG* may be a negative number.

(b) If *AEMO*'s calculation of *net system load* for any *historical gas day i* for *gas day* D under paragraph (a) produces a negative number or *AEMO* does not receive an estimate of unaccounted for *gas* for the *sub-network* for *gas day* D under clause 8.6.14(a), *AEMO* must:

(i) instead of calculating *net system load* as set out in paragraph (a), determine the *net system load* for the *gas day* using the *like day substitution methodology*; and

(ii) calculate a "*revised estimate of unaccounted for gas*" to use in its calculations under this paragraph (b) as follows:

$$RUAFG = TCI - \sum UIW - NSL$$

where:

RUAFG	= the *revised estimate of unaccounted for gas* for the *sub-network* for *gas day* D;
TCI	= the latest version available of *total corrected injections* for the *sub-network* for *gas day* D calculated under clause 8.6.3;
UIW	= the latest version available of *interval-metered withdrawals* for the *sub-network* for *gas day* D for each *User* in the *sub-network* calculated under clause 8.6.4; and
NSL	= the latest version available of *net system load* for the *sub-network* calculated under sub-paragraph (b)(i) for *gas day* D,

and

(iii) for each *User* notified to *AEMO* as a supplier of UAFG for the *sub-network* under clause 8.6.14(a) for the most recent *gas day* for which no *revised estimate of unaccounted for gas* was required to be calculated under this paragraph (b), calculate, and within 4.5 hours after the end of the *gas day* advise the *User* and the *Network Operator* of, the "*revised User's unaccounted for gas*" as follows:

$$RUUAFG_u = \frac{UUAFG_u}{\sum_{All\ users} UUAFG} \times RUAFG$$

where:

$RUUAFG_u$	= the *revised User's unaccounted for gas* for the *User* u for the *sub-network* for *gas day* D;
$UUAFG_u$	= *UUAFG* for the *User* u;
UUAFG	= for a *User*, the quantity of the UAFG estimated to be supplied by the *User* notified under clause 8.6.14(a) for *gas day* D; and
RUAFG	= the revised unaccounted for *gas* for the *sub-network* for *gas day* D calculated under sub-paragraph (ii).

Provided that, if:

$$\sum_{All\ users} UUAFG_u = \text{zero}$$

then *AEMO* must calculate the "*revised User's unaccounted for gas*" for each *User* using the values for $UUAFG_U$ and

$$\sum_{All\ \ users} UUAFG_u$$

from the previous *gas day* on which

$\sum_{All\ \ users} UUAFG_u$ was not equal to zero.

(c) If a value for *revised User's unaccounted for gas* is calculated under paragraph(b)(iii), that value is thereafter to be used in this Chapter 8 in place of the corresponding *User's* unaccounted for *gas* value before the revision.

(d) For each *sub-network* in the range of *gas day* D-1 to *gas day* D-425, *AEMO* must notify each *User* and the *Network Operator* of the *net system load* for *gas day* D and for each *historical gas day i* as calculated under paragraph (a).

8.6.6. Raw estimate of basic-metered withdrawals

For each *basic-metered delivery point* for each *sub-network*, *AEMO* must calculate a raw estimated *basic-metered withdrawal* for *gas day* D as follows:

(a) $$REBW = BL + \left(HR \times HDD_A\right)$$

where:

REBW	= the raw estimated *basic-metered withdrawal* for the *basic-metered delivery point* for *gas day* D;
BL	= the *non-temperature-sensitive base load* for the *basic-metered delivery point* provided to *AEMO* under clause 4.1(e) or clause 8.4.2;
HR	= the *temperature sensitivity heating rate* for the *basic-metered delivery point* provided to *AEMO* under clause 4.1(e) or clause 8.4.2; and
HDDA	= the *actual heating degree day* for the *HDD zone* for the *sub-network* for *gas day* D calculated under clause 8.1.6.

8.6.7. Normalisation factor for estimated basic-metered withdrawals

(a) For each *sub-network* for each *gas day* D, *AEMO* must calculate a "*normalisation factor*" for the *basic-metered delivery points* in the *sub-network* for each historical day i as follows:

$$NF = \frac{NSL}{\sum REBW}$$

where:

NF	= the *normalisation factor* for the *basic-metered delivery points* in the *sub-network* for *historical gas day* i for *gas day* D;
NSL	= the *net system load* for the *sub-network* for *historical gas day i* for *gas day* D calculated under clause 8.6.5; and
REBW	= the raw *estimated basic-metered withdrawal* for each *basic-metered delivery point* in the *sub-network* for *historical gas day i* for *gas day* D calculated under clause 8.6.6.

(b) For each *sub-network* in the range of *gas day* D-1 to *gas day* D-425, *AEMO* must notify each *User* and the *Network Operator* of the *normalisation factor* for each of the *basic-metered delivery points* in the *sub-network* as calculated under paragraph (a).

8.6.8. Estimated basic-metered withdrawal

(a) For each *basic-metered delivery point* for each *sub-network*, *AEMO* must calculate the "estimated *basic-metered* withdrawal" for *gas day* D as follows:

$$EBW = REBW \times NF$$

where:

EBW	= the *estimated basic-metered withdrawal* for the *basic metered delivery point* for *gas day* D;
NF	= the *normalisation factor* for *basic-metered delivery points* in the *sub-network* for *gas day* D calculated under clause 8.6.7; and
REBW	= the raw *estimated basic-metered withdrawal* for the *basic-metered delivery point* for *gas day* D calculated under clause 8.6.6.

(b) For each *basic-metered delivery point* for each *sub-network*, in the range of *gas day* D-1 to *gas day* D-425, *AEMO* must notify each User and the *Network Operator* of the estimated *basic-metered withdrawals* for each *basic-metered delivery point* as calculated under paragraph (a).

8.6.9. User's estimated basic-metered withdrawals

For each *User* for each *sub-network*, *AEMO* must calculate the "*User's estimated basic-metered withdrawals*" ("UEBW") for *gas day* D as follows:

$$UEBW = \sum EBW$$

where:

UEBW	= the User's estimated *basic-metered withdrawals* for the *sub-network* for *gas day* D; and
EBW	= the *estimated basic-metered withdrawal* for each of the *User's* basic *metered delivery points* for the *sub-network* for *gas day* D calculated under clause 8.6.8

8.6.10. Distributed actual basic-metered withdrawals

(a) For each *basic-metered delivery point* for each *gas day* D on which *AEMO* receives an *actual meter reading* ("latest read") for the *basic-metered delivery point*, *AEMO* must determine the "distributed actual *basic-metered* withdrawals" ("DABW") for each *gas day* in the *metering period* (including the *gas day* of the latest read) as follows:

(i) first, calculate the "*Net system load* Factor" ("*NSL*") for each *gas day* i as follows:

$$NSLF_i = \frac{NSL_i}{\sum NSL}$$

$NSLF_i$	= the *net system load* factor for the *sub-network* for *gas day* i;
NSL_i	= the *net system load* for the *sub-network* for *gas day* i calculated under clause 8.6.5; and
NSL	= the *net system load* for the *sub-network* for each *gas day* in the *metering period* calculated under clause 8.6.5.

(ii) then calculate the "distributed actual *basic-metered* withdrawal" ("DABW") for the *basic-metered delivery point* for *gas day* i as follows:

$$DABW_i = NSLF_i \times AQ$$

where:

$DABW_i$	= the distributed *basic-metered* withdrawal for the *basic-metered delivery point* for *gas day* i;
$NSLF_i$	= the *net system load* factor for the *sub-network* for *gas day* i; and
AQ	= energy quantity of *gas* shown by the latest *read* as being withdrawn at the *basic-metered delivery point* during the *metering period*.

(b) For each *basic-metered delivery point* for each *gas day* D on which *AEMO* calculates a *net system load* ("revised *net system load*") under clause 8.6.5 for a *historical gas day i* that is different to the *net system load* calculated for the *historical gas day i* on *gas day* D-1 under clause 8.6.5 ("original *net system load*"), *AEMO* must, in accordance with paragraph (a)(ii), recalculate the "*distributed actual basic-metered withdrawals*" ("*DABW*") for each *gas day* in the *metering period* in which the *historical gas day i* falls, using the revised *net system load* in place of the original *net system load*.

8.6.11. User's distributed basic-metered withdrawals

(a) For each *User* for each *sub-network* for each *gas day* D, *AEMO* must calculate the "*User's* distributed basic-*meter* withdrawal" ("UDBW") for each *historical gas day i* as follows:

$$UDBW = \sum DABW + \sum EBW$$

where:

UDBW	= the *User's* distributed *basic-metered* withdrawals for the *sub-network* for *gas day* D;
DABW	= the sum of *distributed actual basic-metered withdrawals* for each of the *User's* basic *metered delivery points* for which there is a *meter reading* available for the *sub-network* for *gas day* D calculated under clause 8.6.10; and
EBW	= the sum of estimated basic *meter* withdrawals for each of the *User's basic-metered delivery points* for which there is no *meter reading* available for the *sub-network* for *gas day* D calculated under clause 8.6.8.

(b) For each *User* for each *sub-network* in the range of *gas day* D-1 to *gas day* D-425, *AEMO* must notify each *User* and the *Network Operator* of the *User's* distributed *basic-metered withdrawals* for each *basic-metered delivery point* for *gas day* D as calculated under paragraph (a).

8.6.12. User's actual unaccounted for gas

(a) For each *User* for each *sub-network AEMO* must determine for each *historical gas day i* the *User's* actual unaccounted for *gas* ("UAUAFG") for *gas day* D as follows:

$$UAUAFG = \frac{UUAFG}{EUAFG} * UAFG$$

where:

UAUAFG	= *User's* actual unaccounted for *gas* for *gas day* D;
UUAFG	= the amount of UAFG supplied by the *User* for *gas day* D which was notified under clause 8.6.14;
EUAFG	= estimate of unaccounted for *gas* calculated under clause 8.6.5; and
UAFG	= actual unaccounted for *gas* calculated under clause 8.6.15 for *gas day* D.

(b) For each *User* for each *sub-network* in the range of *gas day* D-1 to *gas day* D-425, *AEMO* must notify each *User* and the *Network Operator* of the *User's* actual unaccounted for *gas* for each *historical gas day i* as calculated under paragraph (a).

8.6.13. User's estimated total withdrawals

(a) For each User for each *sub-network AEMO* must determine the User's estimated total withdrawals for *gas day* D as follows:

$$UETW = UIW + UDBW + UAUAFG$$

where:

UETW	= the *User's estimated total withdrawals* for the *sub-network* for *gas day* D;
UIW	= the *User's interval-metered withdrawals* for *gas day* D calculated under clause 8.6.4;
UDBW	= the *User's* distributed *basic-metered* withdrawals for *gas day* D calculated under clause 8.6.11; and
UAUAFG	= the *User's* actual unaccounted for *gas* for *gas day* D notified under clause 8.6.12;

(b) For each *User* for each *sub-network*, within 5 hours after the end of *gas day* D, *AEMO* must notify the *User* and the relevant *Network Operator* of the *User's estimated total withdrawals* for *gas day* D calculated under clause 8.6.13(a) and the amount of each component of the *User's estimated total withdrawals*.

(c) For each *User* for each *sub-network* for each *gas day* D, within 4 hours after the end of *gas day* D, *AEMO* must notify the *User* of the *interval-metered withdrawals* for each of the *User's interval-metered delivery points* in the *sub-network* provided to *AEMO* on each *gas day* in the period between *gas day* D and *gas day* D-6 under clause 3.6.1(a)(ii); and

(d) For each *User* for each *sub-network*, in the range of *gas day* D-1 to *gas day* D-425, *AEMO* must recalculate the *User's estimated total withdrawals* where there has been an update to the *meter* values.

8.6.14. Estimate of unaccounted for gas

(a) For each *sub-network* for each *gas day*, within 3.5 hours after the end of the *gas day*, the *Network Operator* must advise *AEMO* of its estimate of UAFG (which may later be revised under clause 8.6.5(b)) ("*EUAFG*"), the name of each *User* who is a supplier of UAFG for the *sub-network* and the quantity of the UAFG estimated to be supplied by each supplier.

(b) The amount of UAFG supplied on a *gas day* by a *User* which was notified under paragraph (a) is the *User's* UAFG ("*UUAFG*") for the *gas day*.

(c) The *Network Operator*'s estimate of UAFG under paragraph (a) must:

(i) take into account historical levels of UAFG; and

(ii) be a number that results in the *net system load* calculated by *AEMO* under clause 8.6.5(a) being zero or a positive number.

8.6.15. AEMO calculates actual UAFG

(a) For each *sub-network* for each *gas day* D, *AEMO* must calculate the *actual UAFG* for *gas day* D-1 through D-425 inclusive (each of which is a "*historical UAFG day*") as follows:

$$UAFG = \sum PI - \sum UIW - \sum UBW$$

where:

UAFG = the latest version available of *actual UAFG* for the *sub-network* for *gas day* D for the *historical UAFG day*;

PI = the latest version available of *pipeline injections* for the *gate point* provided to *AEMO* under clause 8.6.2(a);

UIW = the *User's interval-metered withdrawals* for each *User* for the *sub-network* for the *historical UAFG day* calculated under clause 8.6.4; and

UBW = the "User's *basic-metered* withdrawals" for each *User* for the *sub-network* for the *historical UAFG day* calculated as follows:

$$UBW = \sum DABW + \sum EBW$$

where:

UBW = the latest version available of *User's basic-metered* withdrawals for all of the *User's basic-metered delivery points* for the *sub-network* for the *historical UAFG day*;

DABW = the latest version available of distributed actual *basic-metered* withdrawal for each of the *User's basic-metered delivery points* in the *sub-network* for the *historical UAFG day*; and

EBW = for each of the *User's basic-metered* delivery points in the *sub-network* for which a distributed actual *basic-metered* withdrawal is unavailable, the latest version available of estimated *basic-metered* withdrawal at the *basic-metered* delivery point for the *historical UAFG day*.

(b) Within 24 hours after the end of *gas day* D, *AEMO* must notify the *Network Operator* and each *User* who is a supplier of UAFG for the *sub-network* of the UAFG calculated under paragraph (a).

8.7. Shipper's Deemed Injections

(a) For each *shipper* for each *gate point* for each *gas day*, in the range of *gas day* D-1 to *gas day* D-425, after the end of the fourth *business day* of each month, *AEMO* must calculate, and advise the *shipper* and the *transmission pipeline operator* of the *shipper's deemed injection*s by:

(i) first, for each *User* in the *sub-network*, taking the latest version available of *User's estimated total withdrawals* in the *sub-network* for the *gas day* calculated under clause 8.6.13 and allocating it across *shippers* in accordance with the *User's allocation instruction* for the *gas day* under clause 8.3.2; and

(ii) then summing all amounts allocated by *User* to the *shipper* under paragraph (a)(i).

(b) To avoid doubt, if clause 8.2.1 requires a *User* to procure the injection into the *sub-network* of a negative amount of *gas* on a *gas day*, that negative amount may result in a negative *shipper's deemed injection* for the *gas day*.

Note: Any negative *shipper's deemed injection* may be resolved between the *User* and its *related shipper*, between the *shipper* and the *transmission pipeline operator* or by an arrangement with another *User*.

8.8. Data Failure

8.8.1. Data failure

(a) If *AEMO* does not receive the relevant data for an *interval metered delivery point* as required under clause 3.6.1 to calculate the *net system load* for a *sub-network* under clause 8.6.5, *AEMO* must estimate the *User's* withdrawals at the *interval metered delivery point* using the *like day substitution methodology*.

(b) If *AEMO* does not receive *gate point metering data* from a *Network Operator* for a *gate point* for a *gas day* by the time specified in clause 3.3.2(a)(ii), then *AEMO* must estimate the *gate point metering data* using the *nomination estimation methodology* and record that *AEMO* has used an *AEMO* generated estimate in the allocation and reconciliation results for the relevant *gas day*.

(c) Whenever *AEMO* is required under this clause 8.8.1 to estimate a value, then *AEMO* may use the *estimated meter reading* (in place of the value which was not received) wherever necessary under these Procedures.

8.9. Miscellaneous Provisions

8.9.1. Multi shipper allocation agreement

(a) If a *transmission contract* or *applicable access arrangement* requires an agreement for the apportionment of actual deliveries of *gas* between all *shippers* who receive *gas* from the *transmission pipeline operator* at a *gate point*:

(i) this clause 8.9.1 is taken to comprise that agreement; and

(ii) in respect of each applicable *gate point*, the agreement is referred to as a *multi-shipper allocation agreement*.

(b) For a *gate point* to which paragraph (a) applies, each *shipper* is deemed to have taken delivery of its *shipper's deemed injection* for the *gas day* for the *transmission pipeline* which interconnects to the *gate point*, calculated under clause 8.7.

(c) For each *transmission pipeline* for each *sub-network* for each *gas day*, within 5 hours after the end of the *gas day*, *AEMO* must:

(i) prepare a report ("*multi-shipper allocation report*") setting out the information referred to in paragraph (b) for each *shipper* on the *transmission pipeline*;

(ii) provide the multi-shipper allocation report to the transmission pipeline operator; and

(iii) provide to each *shipper* on the *transmission pipeline*, the information in the *multi-shipper allocation report* in respect of that *shipper*.

(d) To avoid doubt, if clause 8.2.1 requires a *User* to procure the injection or repayment into the *sub-network* of a negative amount of *gas* on a *gas day*, that negative amount is to be included in the calculations for the *multi-shipper allocation agreement* and may result in a *shipper* having a negative deemed injection for the *gas day*.

8.9.2. Recovery from AEMO failure

(a) If for any period of time on a day that is not a *business day*, *AEMO* cannot perform its obligations under this Chapter 8 because the *metering database* is unavailable ("**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) by 8.00 am on the day after the day on which the system failure is rectified, *AEMO* must provide the information it is required to provide under this Chapter 8 for each *gas day* during the system down time up to any including the *gas day* on which the information is provided, in chronological order.

(b) If the system failure only affects the input of information to *AEMO*, then *AEMO* will perform for each *gas day* during the system down time the calculations described in this Chapter 8 using estimates for each piece of data that it does not receive under these Procedures.

8.9.3. Maintenance and accessibility of AEMO data

AEMO must maintain all data collected, received, generated or sent to any person by *AEMO* under this Chapter 8 and any data that is the result of *AEMO*'s latest final calculations for a *gas day*:

(a) in a format that identifies:

(i) the time and date the data was collected, received, generated or sent by *AEMO*; and

(ii) the person from whom *AEMO* collected or received the data, or to whom *AEMO* sent the data, or if *AEMO* generated the data, *AEMO* is identified as having generated the data, and

(b) for at least 2 years, in a format that is accessible within 2 *business days* to enable the repeated performance of calculations *AEMO* is responsible for performing under this Chapter 8 for any of and up to the previous 425 *gas day*s; and

(c) at least another 5 years after that, in a format which is accessible within 5 *business days*.

8.9.4. Treatment of gas injections under haulage contracts

(a) Despite anything contained in a *haulage contract*, this Chapter 8 governs:

(i) how the *gas* injected into a *sub-network* on a *gas day* is allocated between *Users*; and

(ii) how a *User* must reconcile any difference between the quantity of *gas* that the *User* injects or procures for injection into a *sub-network* on a *gas day* and the quantity of *gas* withdrawn by the *User* from the *sub-network*,

and in the event of inconsistency between a *haulage contract* and this Chapter 8, Chapter 8 prevails to the extent of the inconsistency.

CHAPTER 9. ERROR CORRECTION PROCESS

9.1. Correction of AEMO Standing Data - Error Correction Notices

9.1.1. Error correction notice

(a) If a *current User* becomes aware of an error or inaccuracy in an item of the *AEMO standing data* as the result of:

(i) lodging an incorrect *transfer request* with *AEMO* — the *current User* must as soon as practicable notify the *previous User* of this fact; or

(ii) the *Network Operator* having lodged incorrect details with *AEMO* in respect of a new *basic meter* under clause 4.1(e)(iii) or a notification that the *delivery point* has been permanently removed under clause 4.4.2(b)(iii) — the *current User* must as soon as practicable notify the *Network Operator* of this fact.

(b) If a *previous User* is notified under paragraph (a)(i) it must as soon as practicable lodge an *error correction notice* for the *delivery point* with *AEMO*.

(c) If a *Network Operator* becomes aware of an error or inaccuracy in an item of the *AEMO standing data* as the result of:

(i) being notified by the *current User* under paragraph (a)(ii); or

(ii) lodging incorrect details with *AEMO* in respect of a new *basic meter* under clause 4.1(e)(iii) or an incorrect notification that the *delivery point* has been permanently removed under clause 4.4.2(b)(iii),

then subject to paragraph (d), it must as soon as practicable lodge an *error correction notice* for the *delivery point* with *AEMO*.

(d) Before a *Network Operator* lodges an *error correction notice* as a result of paragraph (c)(ii), it must notify the *current User* that it intends to lodge such a notice.

(e) Only a *previous User* or a *Network Operator* may lodge an error correction notice.

(f) An *error correction notice* must specify the data attributes as defined in the *AEMO Specification Pack.*

9.1.2. Requirements for error correction notice

(a) An *error correction notice* is valid only if:

(i) the *delivery point* exists within *AEMO*'s *metering database*;

(ii) it corresponds to a completed *transfer*, a new *basic meter* or a notification that the *delivery point* has been permanently removed under clause 4.4.2 (b) (iii);

(iii) if the specified *error correction notice* relates to a *transfer*:

(A) there is not, in relation to the *delivery point*, an *open transaction*, unless the *open transaction* relates to an *energisation request* under clause 4.2.8(b)(iv) or *de-energisation request* under clause 4.2.2(b)(v) or 4.2.4(e)(iv) for which the effective date is the same as the effective date of the *transfer day* of the completed *transfer*;

(B) the Participant lodging the *error correction notice* is the *previous User*;

(C) a transfer occurred on the *transfer day* specified in the *error correction notice*;

(D) the MIRN status is energised or de-energised; and

(E) that *transfer* is the most recently completed *transaction* in respect of the *delivery point*, unless the more recently completed *transaction* referred to in

paragraph (A) for which the effective date is the same as the effective date of the *transfer day* of the completed *transfer*;

(iv) if the specified *error correction notice* relates to a new *basic meter* or a notification that the *delivery point* has been permanently removed under clause 4.4.2(b)(iii):

(A) there is not, in relation to the *delivery point*, an *open transaction*;

(B) the Participant lodging the *error correction notice* is the *Network Operator*; and

(C) the effective date of the change to the *MIRN status* recorded in *AEMO's metering database* occurred on the date specified in the *error correction notice*; and

(D) the specified details contained in the *error correction notice* is the most recently completed *transaction* in respect of the *delivery point* as recorded in *AEMO's metering database*; and

(v) the specified details contained in the *error correction notice* did not occur more than 425 days before the date of lodgement of the notice.

(b) Upon receipt of an *error correction notice* which is not valid, *AEMO* must reject the *error correction notice* and notify the *Participant* that lodged it, specifying the reason why the *error correction notice* is not valid.

9.1.3. Response to valid error correction notice

Upon receipt of a valid *error correction notice*, *AEMO* must accept the *error correction notice* and:

(a) if the *error correction notice* relates to a *transfer*, provide the *previous User*, the *Network Operator* and the *current User* the data attributes as defined in the *AEMO Specification Pack* and suspend the *error correction transaction* until the lapse of the *error correction objection resolution period*.

(b) if the *error correction notice* relates to a new *basic meter*, notify the *Network Operator* and the *current User* that the *error correction notice* has been accepted.

Note: If the *error correction notice* relates to a new *basic meter* or, a notification that the *delivery point* has been permanently removed under clause 4.4.2 (b) (iii) the next applicable clause appears at clause 9.2(a) where *AEMO* must update *AEMO's metering database*.

9.1.4. Error correction objection (incorrect transfer)

(a) In relation to an *error correction notice* for a *transfer*, a *Participant* may lodge with *AEMO* an *error correction objection* before the expiry of *2 business days* after the *process time* on one or more of the following grounds:

(i) after making reasonable inquiries, the *Participant* reasonably believes that the *error correction notice* contains incorrect information; or

(ii) the *Participant* reasonably believes that the *transfer* specified in the *error correction notice* is correct.

(b) An *error correction objection* must:

(i) be lodged by the *Network Operator* or the *current User* (as applicable);

(ii) correspond to an *open error correction notice* lodged under clause 9.1.1(a), in respect of a correction to a *transfer*; and

(iii) specify the ground of the *Participant*'s objection under paragraph (a).

(c) Upon receipt of an *error correction objection* which is not valid, *AEMO* must reject the *error correction objection* and notify the *Participant* that lodged the *error correction objection*, specifying the reason why the *error correction objection* is not valid.

9.1.5. Response to valid error correction objection

Upon receipt of a valid *error correction objection*, *AEMO* must accept the *error correction objection* and notify the relevant *Participants*, specifying at least:

(a) details of the *error correction notice* to which the *error correction objection* relates; and

(b) the *process time* of the *error correction objection*.

9.1.6. Withdrawal of error correction objection

(a) Before the expiry of 3 *business days* after the *process time* notified under clause 9.1.5(b), a *Participant* that lodged an *error correction objection* may lodge an *error correction objection withdrawal notice* with *AEMO*.

(b) An *error correction objection withdrawal notice* must correspond to an *open error correction objection* previously lodged by the *Participant* under clause 9.1.4(a);

(c) Upon receipt of an *error correction objection withdrawal notice* which is not valid, *AEMO* must reject the *error correction objection withdrawal notice* and notify the *Participant* that lodged the *error correction objection withdrawal notice*, specifying the reason why the *error correction objection withdrawal notice* is not valid.

9.1.7. Response to valid error correction objection withdrawal notice

Upon receipt of a *valid error correction objection withdrawal notice*, *AEMO* must accept the *error correction objection withdrawal notice* and:

(a) *cancel* the corresponding *error correction objection*; and

(b) notify the relevant *Participants* that the *error correction objection* has been withdrawn, which notice must provide at least details of the *error correction objection* to which the *error correction objection withdrawal notice* relates.

9.1.8. Cancellation of error correction transaction

If, *AEMO* does not receive a valid *error correction objection withdrawal notice* within the time period specified under clause 9.1.6(a), *AEMO* must:

(a) *cancel* the error correction transaction; and

(b) notify the affected *Participants* that the *error correction transaction* has been *cancelled*.

Note: A *previous User* wishing to reinitiate an *error correction transaction* in respect of a *transfer request* that has been *cancelled* must lodge a new *error correction notice* under clause 9.1.1(b).

9.1.9. Withdrawal of error correction notice

(a) A *previous User* may withdraw an *error correction notice* in respect of a *transfer request* at any time before *AEMO* completes the *error correction notice* under clause 9.1.11, by lodging an *error correction withdrawal notice* to *AEMO*.

(b) A provision of these Procedures permitting or requiring *AEMO* to *cancel* an *error correction transaction* does not limit the previous User's rights under paragraph (a).

(c) An *error correction withdrawal notice* must correspond to an *open error correction notice* previously lodged by the *previous User*.

(d) Upon receipt of an *error correction withdrawal notice* which is not valid, *AEMO* must reject the *error correction withdrawal notice* and notify the *previous User* that lodged the *error correction withdrawal notice*, specifying the reason why the *error correction withdrawal notice* is not valid.

9.1.10. Response to valid error correction withdrawal notice

Upon receipt of a valid *error correction withdrawal notice*, *AEMO* must accept the *error correction withdrawal notice* and:

(a) *cancel* the *error correction transaction*; and

(b) notify the affected *Participants* that the *error correction transaction* has been *cancelled*.

9.1.11. AEMO to mark as pending and complete error correction transaction (incorrect transfer)

(a) If *AEMO*:

(i) has accepted a valid *error correction notice* under clause 9.1.3 in respect of an incorrect *transfer*; and

(ii) has not received a valid *error correction* withdrawal *notice* under clause 9.1.9(a); and

(iii) either:

(A) does not receive a valid *error correction objection*; or

(B) receives a valid error correction objection and also a valid error correction objection withdrawal notice,

then *AEMO* must:

(iv) mark the *error correction transaction* as *pending*; and

(v) notify the affected *Participants* that the *error correction transaction* is *pending*.

(b) Upon notifying *Participant*s under paragraph (a)(v), *AEMO* must:

(i) complete the *error correction transaction*; and

(ii) notify the affected *Participant*s that the *error correction transaction* has been completed.

Note: After completing an *error correction transaction* under paragraph (b), *AEMO* must update its *metering database* under clause 9.2.

9.1.12. When error correction transactions take effect

Unless these Procedures state otherwise, an *error correction transaction* takes effect as from:

(a) in respect of a *transfer* – the start of the *transfer day* on which the *transfer* was purported to have occurred; and

(b) in respect of a *new connection confirmation notice* – the start of the *gas day* on which the *MIRN* was purported to have become *energised*; and

(c) in respect of a notification that the *delivery point* has been permanently removed under clause 4.4.2(b)(iii) – the start of the *gas day* on which the *MIRN* was purported to have become *deregistered*.

9.1.13. Network Operator must provide metering data to new current User

Within 5 *business days* of receiving a notice under clause 9.1.11 in respect of an incorrect *transfer*, the *Network Operator* must provide the new *current User* with the *metering data* for the *delivery point* (if any) that new *current User* would have received had the incorrect *delivery point transaction* (as applicable) not occurred.

9.2. Updating the AEMO Metering Database

AEMO must:

(a) upon accepting an *error correction transaction* in relation to:

(i) an incorrect new *basic meter*; or

(ii) an incorrect notification that the *delivery point* has been permanently removed under clause 4.4.2(b)(iii),

for a *delivery point* under clause 9.1.3 – forthwith correct the relevant item of *AEMO standing data* in ***AEMO's metering database***, to take effect from the start of the *gas day* specified in clause 9.1.12(b) or 9.1.12(c) (as applicable); and

(b) upon completing an *error correction transaction* in relation to an incorrect *transfer* for a *delivery point* under clause 9.1.11 – forthwith correct the relevant item of *AEMO standing data* in ***AEMO's metering database***, to take effect from the start of the *gas day* specified in clause 9.1.12(a).

APPENDIX A. ESTIMATION OF DATA BY AEMO

A.1 Estimation of Data for Net System Load and Interval Meters

In relation to estimates for a time interval of the 'Substitution Day' for *net system load* and *interval meters*, *AEMO* is to create an estimate of the data using the *like day substitution methodology* by using data from the same time interval of the first available 'Preferred Day' (as detailed in the table below) unless:

- The substitution day was a public holiday, in which case the most recent Sunday is to be used.
- The substitution day was not a public holiday but the 'Preferred Day' is a public holiday, in which case the substitution 'Preferred Day' to be used must be the most recent Preferred Day that is not a public holiday.

Substitution Day	Preferred 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**

Note:

* Occurring in the same week as the substitution day.

** Occurring in the week preceding that in which the substitution day occurs.

Examples: If we fail to get data for a site on Monday the 8th of January 2007. In accordance with the table we would first try Monday 1 January 2007, and as this is a public holiday, we next try Monday 25 December 2006, and as this is also a public holiday we finally end up using the data from Monday 18th December 2006 as estimate for Monday the 8th of January 2007.

Similarly if we need data for Friday the 2nd of May 2003, we first try Friday 25 April, ANZAC day, next try Friday 18 April, Good Friday, and finally use Friday 11th April.

A.2 Estimation of Data for Gate Point Meters

In relation to estimates for a time interval of the 'Substitution Day' for *gate point metering data*, *AEMO* is to create an estimate of the *gate point metering data* using the following methodology ("*nomination estimation methodology*"):

> The estimate of the *gate point metering data* is to be created by summing the *pipeline profiled forecast* for the relevant *gate point* for the relevant *gas day*.

APPENDIX B. HEATING DEGREE DAY FOR SOUTH AUSTRALIA

B.1 Register of Weather Related Information

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

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

B.2 HDD zones

(a) For the purposes of clause 8.1.6, South Australia contains the following *positive HDD zone*s:

(i) Northern *HDD zone*;

(ii) Adelaide Region *HDD zone*;

(iii) Riverland *HDD zone;* and

(iv) Mount Gambier *HDD zone.*

The designated weather observation station for the *HDD zone* described in sub clause (i) to (iv) are published in the register described in sub clause (a).

(b) For the purposes of clause 8.1.6, South Australia contains the following *negative HDD zone*s:

(i) Adelaide Metropolitan *HDD zone*.

(c) The designated weather observation stations for the *HDD zones* described in paragraphs (a) and (b) are published in the *Register of Weather Related Information*.

(d) A *basic-metered delivery point*:

(i) is in the Northern *HDD zone* if the *basic-metered delivery point* is located in one of the following *gas zone*s, or in a new *gas zone* designated under clause 1.6 as being in the Northern *HDD zone*:

11 – Peterborough

12 – Port Pirie

13 – Whyalla

54 – Whyalla A

55 – Whyalla B

56 – Whyalla C

59 – Port Bonython

(ii) is in the Adelaide Region *HDD zone* if the *basic-metered delivery point* is located in one of the following *gas zone*s, or in a new *gas zone* designated under clause 1.6 as being in the Adelaide Region *HDD zone*:

02 – Waterloo Corner

03 – Virginia

04 – Wasleys

05 – Freeling

06 – Nurioopta

07 – Angaston

08 – Murray Bridge

50 – Daveyston

51 – Burra

57 – Smithfield

60 – Angaston A

61 – Two Wells

62 - Pallamana

(iii) is in the Riverland *HDD zone* if the *basic-metered delivery point* is located in one of the following *gas zone*s, or in a new *gas zone* designated under clause 1.6 as being in the Riverland *HDD zone*:

09 – Berri

10 – Mildura

(iv) is in the Mount Gambier *HDD zone* if the *basic-metered delivery point* is located in one of the following *gas zone*s, or in a new *gas zone* designated under clause 1.6 as being in the Mount Gambier *HDD zone*:

14 – Mount Gambier

52 – Nangwarry

53 – Snuggery

58 – Penola.

(v) is in the Adelaide Metropolitan *HDD zone* if the *basic-metered delivery point* is located in one of the following *gas zone*s, or in a new *gas zone* designated under clause 1.6 as being in the Adelaide Metropolitan *HDD zone*:

01 – Adelaide Metropolitan.

APPENDIX C. CALCULATION OF EDD, HDD AND RELATED VALUES

C.1 EDD calculations for gas days

(a) The *EDD* for *gas day* D ("$E_{(D)}$") is calculated as follows:

$$E_{(D)} = \max\left(0, 18 - \left(\frac{T_{\max(D)} + T_{\min(D)}}{2}\right) - \left(C_8 \times H_{sun(D)}\right)\right)$$

where:

$E_{(D)}$	= the *EDD* for the *HDD zone* for *gas day* D;
$T_{max(D)}$	= the maximum air temperature forecast for the *HDD zone* for *gas day* D in degrees Celsius;
$T_{min(D)}$	= the minimum air temperature forecast for the *HDD zone* for *gas day* D in degrees Celsius; and
$H_{sun(D)}$	= the hours of sun forecast for the *HDD zone* for *gas day* D,

(b) The *EDD* for *gas day* D-1 ("$E_{(D-1)}$") is calculated as follows:

$$E_{(D-1)} = \max\left(0, 18 - \left(\frac{T_{\max(D-1)} + T_{\min(D-1)}}{2}\right) - \left(C_8 \times H_{sun(D-1)}\right)\right)$$

where:

$E_{(D-1)}$	= the *EDD* for the *HDD zone* for *gas day* D-1;
$T_{max(D-1)}$	= the maximum air temperature for the *HDD zone* for *gas day* D-1 in degrees Celsius;
$T_{min(D-1)}$	= the minimum air temperature for the *HDD zone* for *gas day* D-1 in degrees Celsius; and
$H_{sun(D-1)}$	= the hours of sun forecast for the *HDD zone* for *gas day* D-1.

(c) The *EDD* for *gas day* D-2 ("$E_{(D-2)}$") is calculated as follows:

$$E_{(D-2)} = \max\left(0, 18 - \left(\frac{T_{\max(D-2)} + T_{\min(D-2)}}{2}\right) - \left(C_8 \times H_{sun(D-2)}\right)\right)$$

where:

$E_{(D-2)}$	= the *EDD* for the *HDD zone* for *gas day* D-2;
$T_{max(D-2)}$	= the maximum air temperature for the *HDD zone* for *gas day* D-2 in degrees Celsius;
$T_{min(D-2)}$	= the minimum air temperature for the *HDD zone* for *gas day* D-2 in degrees Celsius; and
$H_{sun(D-2)}$	= the hours of sun forecast for the *HDD zone* for *gas day* D-2.

(d) The *EDD* for *gas day* D-*3* ("$E_{(D-3)}$") is calculated as follows:

$$E_{(D-3)} = \max\left(0, 18 - \left(\frac{T_{\max(D-3)} + T_{\min(D-3)}}{2}\right) - \left(C_8 \times H_{sun(D-3)}\right)\right)$$

where:

$E_{(D-3)}$	= the *EDD* for the *HDD zone* for *gas day* D-3;
$T_{max(D-3)}$	= the maximum air temperature for the *HDD zone* for *gas day* D-3 in degrees Celsius;
$T_{min(D-3)}$	= the minimum air temperature for the *HDD zone* for *gas day* D-3 in degrees Celsius; and
$H_{sun(D-3)}$	= the hours of sun forecast for the *HDD zone* for *gas day* D-3.

C.2 Calculation of related values

(a) The "*average temperature*" for the period of 30 *gas day*s between *gas day* D-30 and *gas day* D-1 is calculated as follows:

$$T_{30} = \frac{\sum_{i=d-1}^{d-30}\left(T_{\max i} + T_{\min i}\right)}{60}$$

where:

T_{30}	= the *average temperature* for the *HDD zone* for the period of 30 *gas day*s between *gas day* D-30 and *gas day* D-1 in degrees Celsius;
$T_{max\ i}$	= the maximum air temperature for the *HDD zone* in degrees Celsius for *gas day i*;
$T_{min\ i}$	= the minimum air temperature for the *HDD zone* in degrees Celsius for a *gas day i*; and
i	= a *gas day* i in the range of 30 *gas day*s between *gas day* D-30 and *gas day* D-1.

(b) The "*total sun hours*" for the period of 7 *gas day*s between *gas day* D-7 and *gas day* D-1 is calculated as follows:

$$SSH_{sun7} = \frac{\sum_{i=d-1}^{d-7} H_{sum\,i}}{7}$$

where:

SSH_{sun7}	= the *total sun hours* for the *HDD zone* for the period of 7 *gas day*s between *gas day* D-7 and *gas day* D-1;
$H_{sun\ i}$	= the hours of sun forecast for the *HDD zone* for a *gas day*; and
I	= a *gas day* i in the range of 7 *gas day*s between *gas day* D-7 and *gas day* D-1.

(c) The "*proxy ground temperature*" ("T_{gnd}") for *gas day* D is calculated as follows:

$$T_{gnd} = \frac{[C_4 \times \max(0, 18 - T_{30})] + [C_5 \times (18 - T_{30})]}{(C_4 + C_5)} + (C_6 \times SSH_{sun7})$$

where:

Tgnd	= the *proxy ground temperature* for the *HDD zone* for *gas day* D in degrees Celsius;
T30	= the *average temperature* for the *HDD zone* for the period of 30 *gas day*s between *gas day* D-30 and *gas day* D-1 in degrees Celsius; and
SS*Hsun*7	= the *total sun hours* for the *HDD zone* for the period of 7 *gas day*s between *gas day* D-7 and *gas day* D-1.

C.3 Actual HDD calculations

The "*actual heating degree day*" ("HDDA") for *gas day* D-1 is calculated as follows:

$$HDD_A = (C_1 \times E_{(D-1)}) + (C_2 \times E_{(D-2)}) + (C_3 \times E_{(D-3)}) + (C_7 \times T_{gnd})$$

where:

HDD_A	= the *actual heating degree day* for the *HDD zone* for *gas day* D-1, provided that for each *positive HDD zone*, if that value is less than zero, HDDA shall be treated as zero;
$E_{(D-1)}$	= the *EDD* for *gas day* D-1;
$E_{(D-2)}$	= the *EDD* for *gas day* D-2;
$E_{(D-3)}$	= the *EDD* for *gas day* D-3; and
T_{gnd}	= the *proxy ground temperature* for the *HDD zone* for *gas day* D-1 in degrees Celsius.

C.4 Forecast EDD and HDD calculations for gas day D+1

(a) The "*forecast EDD*" for *gas day* D+1 is calculated as follows:

$$F_{(D+1)} = \max\left(0, 18 - \left(\frac{T_{\max(D+1)} + T_{\min(D+1)}}{2}\right) - (C_8 \times H_{sun(D+1)})\right)$$

where:

$F_{(D+1)}$	= the *forecast EDD* for the *HDD zone* for *gas day* D+1 in degrees Celsius;
$T_{max(D+1)}$	= the maximum air temperature forecast for the *HDD zone* for *gas day* D+1 in degrees Celsius;
$T_{min(D+1)}$	= the minimum air temperature forecast for the *HDD zone* for *gas day* D+1 in degrees Celsius; and
$H_{sun(D+1)}$	= the hours of sun forecast for the *HDD zone* for *gas day* D+1 at 9.00 am CST on *gas day* D.

(b) The *forecast heating degree day* ("HDD_F") for *gas day* D+1 is calculated as follows:

$$HDD_F = (C_1 \times F_{(D+1)}) + (C_2 \times E_{(D)}) + (C_3 \times HDD_A) + (C_7 \times T_{gnd})$$

where:

HDD_F	= the *forecast heating degree day* for the *HDD zone* for *gas day* D+1, provided that for each *positive HDD zone*, if that value is less than zero, *HDDF* shall be treated as zero;
$F_{(D+1)}$	= the *forecast EDD* for the *HDD zone* for *gas day* D+1 in degrees Celsius;
$E(D)$	= the *EDD* for *gas day* D;
HDD_A	= the *actual heating degree day* for the *HDD zone* for *gas day* D-1; and
T_{gnd}	= the *proxy ground temperature* in degrees Celsius for the *HDD zone* for *gas day* D-1.