



Wholesale Market Settlement Procedures (Victoria)

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Current version release details

Version	Effective date	Summary of changes
1.0	1 May 2024	<p>AEMO is making amendments to these Wholesale Market Procedure to account for the AEMC’s “DWGM distribution connected facilities” and “Review into extending the regulatory frameworks to hydrogen and renewable gases” rule changes.</p> <p>AEMO is making this new Procedure consolidating the existing:</p> <ol style="list-style-type: none"> 1. Wholesale Market Ancillary Payment Procedures 2. Wholesale Market Uplift Payment Procedures 3. Wholesale Market Compensation Procedures 4. Wholesale Market Distribution Unaccounted for Gas Procedures <p>A history of the Procedure changes for each document can be found in the last section of this document.</p>

Note: There is a full version history at the end of this document.

1. Introduction

1.1. Purpose and scope

These are the Wholesale Market Management and Settlements Procedures (Victoria) (Procedures) made in accordance with section 91BL of the National Gas Law (NGL) and the National Gas Rules (NGR).

The NGL and the NGR prevail over these Procedures to the extent of any inconsistency.

These Procedures may only be amended in accordance with Part 15B of the NGR.

The purpose of these Procedures is to govern the Procedures that directly result in a settlements statement line item:

- (a) Ancillary Payment Procedures
- (b) Uplift Payment Procedures
- (c) Distribution Unaccounted for Gas Procedures
- (d) Compensation Procedures

1.2. Application

These Procedures apply to AEMO and each person to whom they are expressed to apply.

1.3. Legal and regulatory framework

These Procedures have been made under section 91BL of the NGL.

AEMO is required by the Rules to have the following Procedures:

- (a) Ancillary Payment Procedures required by rule 239
- (b) Uplift Payment Procedures required by rule 240
- (c) Distribution Unaccounted for Gas Procedures required by rule 317
- (d) Compensation Procedures required by rule 237

1.4. Definitions and interpretation

1.4.1. Glossary

Terms defined in the NGL and the NGR have the same meanings in these Procedures unless otherwise specified in this clause.

Terms defined in the NGL and NGR are intended to be identified in these Procedures by italicising them, but failure to italicise a defined term does not affect its meaning.

The words, phrases and abbreviations in the table below have the meanings set out opposite them when used in these Procedures.

Table 1 Glossary of terms

Term	Definition
Actual Gas Injection Negative Offset Quantity or AGINO	The difference between the amount of gas injected by a <i>Market Participant</i> and their constrained on injection quantity.
Actual Gas Withdrawal Negative Offset Quantity or AGWNO	The difference between the amount of gas withdrawn by a <i>Market Participant</i> and their constrained on withdrawal quantity.
Ad Hoc Operating Schedule	An <i>operating schedule</i> produced by AEMO in circumstances covered by rule 215(4).
Adjusted deviation	As determined in section 3.8.5
Amount	An amount of money in dollars and cents. For example, a surprise uplift amount of \$15,000.00
annual cap	The limit on total <i>DTS SP</i> liability for <i>uplift payments</i> under its <i>service envelope agreement</i> in dollars for all <i>gas days</i> during a calendar year
APC	<i>administered price cap</i>
BoD	Beginning of <i>gas day</i>
Class A supply points	<i>Class A supply points</i> is defined by the Distribution Code.
Class B supply points	<i>Class B supply points</i> is defined by the Distribution Code.
Common model	A modelled representation of the <i>declared transmission system</i> agreed between AEMO and the <i>DTS SP</i> under the <i>service envelope agreement</i> as may be updated from time to time to reflect changes to the <i>DTS</i>
Common uplift	An <i>uplift payment category</i> as determined in section 3.9 of these Procedures. Where <i>total uplift payments</i> are payable in respect of a <i>gas day</i> and <i>operating schedule</i> , and are not fully recovered by other <i>uplift payment categories</i> , the balance of the <i>total uplift payments</i> will be allocated to <i>Market Participants</i> in proportion to their <i>adjusted withdrawals</i> from the <i>declared transmission system</i> in respect of that <i>gas day</i> .
Controllable injection	A quantity of gas that may be scheduled for injection at a <i>market injection point</i> and modified on a <i>gas day</i> in accordance with an <i>injection bid</i> and the applicable accreditation by AEMO under Rule 210
Controllable withdrawal	A quantity of gas that may be scheduled for withdrawal at a <i>market withdrawal point</i> and modified on a <i>gas day</i> in accordance with a <i>withdrawal bid</i> and the applicable accreditation by AEMO under Rule 210
Controllable injection point	A <i>market injection point</i> at which a <i>Market Participant</i> may submit <i>injection bids</i>
Controllable withdrawal point	A <i>market withdrawal point</i> at which a <i>Market Participant</i> with may submit <i>withdrawal bids</i>
CTM Injection	Custody Transfer Meter (CTM) injection data is provided by AEMO, in accordance with clause 5.4.4.
DDS	<i>declared distribution system</i> as defined in Part 19 of the Rules. [Note only <i>declared distribution systems</i> that are directly connected to the <i>DTS</i> are covered by Part 19]
Distribution Code	Gas Distribution Code of Practice, or another instrument that replaces the Code, made by the <i>jurisdictional regulator</i> for Victoria, as amended from time to time.
DTS	<i>declared transmission system</i>
DTS SP	<i>declared transmission system service provider</i>
DTS SP uplift	An <i>uplift payment category</i> as determined in section 3.5 of these Procedures. <i>DTS SP uplift</i> occurs when a transmission constraint is applied by AEMO in an <i>operating schedule</i> where the <i>DTS SP</i> has failed to fulfil its obligations under the <i>service envelope agreement</i> and a some or all of the <i>ancillary payments</i> are attributable to the failure.
DTS SP uplift event	Where <i>DTS SP</i> uplift occurs as set out in section 3.5.1 for a <i>gas day</i> and an <i>operating schedule</i>
DTS SP annual liability cap exceedance uplift	An <i>uplift payment category</i> as determined in section 3.7 of these Procedures.

Term	Definition
	<i>DTS SP annual liability cap exceedance uplift</i> is allocated to the <i>DTS SP</i> where the total payment in a calendar year for <i>DTS SP uplift</i> exceeds the annual cap in the <i>service envelope agreement</i> . <i>DTS SP annual liability cap exceedance uplift</i> is always a payment to the <i>DTS SP</i> .
DTS SP event liability cap exceedance uplift	An <i>uplift payment category</i> as determined in section 3.6 of these Procedures. <i>DTS SP event liability cap exceedance uplift</i> is allocated to the <i>DTS SP</i> where the aggregate payment rate (\$ per GJ) over the <i>gas day</i> for <i>DTS SP uplift</i> exceeds the event cap in the <i>service envelope agreement</i> . <i>DTS SP event liability cap exceedance uplift</i> is always a payment to the <i>DTS SP</i> .
DTS SP uplift payment	The <i>amount</i> of <i>DTS SP Uplift</i> payable for an <i>operating schedule</i>
DTS SP uplift quantity	The <i>quantity</i> of <i>DTS SP Uplift</i> for an <i>operating schedule</i>
DUAFG	Distribution unaccounted for gas (DUAFG) has the same meaning as unaccounted for gas in the Distribution Code.
DUAFG benchmark rate	The DUAFG benchmark rate for Class A <i>supply points</i> and Class B <i>supply points</i> is the relevant unaccounted for gas benchmark as defined in the Distribution Code, as amended from time to time.
DUAFG period	A DUAFG year or part of a DUAFG year during which a single DUAFG benchmark rate applied to a Class A <i>supply point</i> or Class B <i>supply point</i> and <i>Distributor</i> .
DUAFG reconciliation amount	The DUAFG reconciliation amount calculated in section 5.6.2 for the current DUAFG year and section 5.6.3 for a DUAFG period in a previous DUAFG year.
DUAFG year	A calendar year
effective demand forecast	A <i>Market Participant's demand forecast</i> adjusted for any AEMO <i>demand forecast override</i> as set out in these Procedures. A <i>Market Participant</i> is allocated an effective demand forecast where they have a <i>deviation</i> from their <i>demand forecast</i> and AEMO has issued a <i>demand forecast override</i> .
event cap	The limit on the <i>DTS SP liability</i> for <i>uplift payments</i> under its <i>service envelope agreement</i> in dollars per GJ
negative average ancillary payment rate	Determined for a <i>gas day</i> and an <i>operating schedule</i> in accordance with the <i>ancillary payment procedures</i> (NAVAPR _s)
NGL or Law	National Gas Law
NGR or Rules	National Gas Rules
positive average ancillary payment rate	Determined for a <i>gas day</i> and an <i>operating schedule</i> in accordance with the <i>ancillary payment procedures</i> (PAVAPR _s)
Quantity	A quantity of gas in GJ For example, a surprise uplift quantity 1,000 GJ
residual uplift payment quantity	Determined for an <i>operating schedule</i> as the total uplift payment quantity less <i>DTS SP uplift</i> quantity if total uplift payment quantity is positive, and the total uplift payment quantity if negative.
Schedule	An <i>operating schedule</i> or a <i>pricing schedule</i>
SEA ancillary quantity	The estimated ancillary payment quantity (SEAQD _s) that would have been applicable to an <i>operating schedule</i> if the <i>DTS</i> was not affected by a <i>DTS SP uplift event</i> , determined in accordance with section 3.5.2
SEA capacity	The flow capacity for the portion of the <i>DTS</i> affected by a <i>DTS SP uplift event</i> as determined using the common model and system conditions applicable at the start of the <i>DTS SP uplift event</i> .
SEA operating schedule	An <i>operating schedule</i> produced by AEMO in manner consistent with rule 215 and the <i>gas scheduling procedures</i> , with the <i>SEA capacity</i> used as a constraint
SEA pricing schedule	A <i>pricing schedule</i> produced by AEMO in manner consistent with rule 221 and the <i>gas scheduling procedures</i> , with the <i>SEA capacity</i> used as a constraint
SIHDQ	Scheduled interval hourly deviation as determined in section 3.8.5(c)
SWN	A System Wide Notice (SWN) to <i>Market Participants</i> , or any other relevant Participants under the Wholesale Market Electronic Communication Procedure.

Term	Definition
surprise uplift	An <i>uplift payment category</i> as determined in section 3.8 of these Procedures. Surprise uplift is allocated to <i>Market Participants</i> who have not followed their effective demand forecast or scheduling <i>instructions</i> for the preceding <i>scheduling interval</i> or have changed their <i>demand forecast</i> and/or have changed <i>scheduling instructions</i> for the upcoming <i>scheduling horizon</i> .
total uplift payment amount	Determined for a <i>gas day</i> and <i>operating schedule</i> in accordance with section 3.4.2 (TUP _s)
total uplift payment quantity	Determined for a <i>gas day</i> and <i>operating schedule</i> in accordance with the section 3.4.3 (TUQ _s)
uplift payment category	Each category of <i>uplift payment</i> determined by AEMO in the <i>uplift payment procedures</i>

1.4.2. Interpretation

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

- (a) These Procedures are subject to the principles of interpretation set out in Schedule 2 of the National Gas Law.
- (b) References to time are references to Australian Eastern Standard Time.
- (c) Market prices are determined to four decimal places and gas is scheduled in integer gigajoule terms to the whole gigajoule.

1.5. Related documents

The following documents support this Procedure.

Table 2 Related wholesale market procedures

Reference	Title	Location
Capacity Transfer and Auction Procedures	Capacity Transfer and Auction Procedures	https://www.aemo.com.au/energy-systems/gas/pipeline-capacity-trading-pct/procedures-policies-and-guides
Gas Emergency Protocol	Gas Emergency Protocol	https://www.aemo.com.au/energy-systems/gas/emergency-management/victorian-role
Connection Approval Procedures	Wholesale Market Connection Approval Procedures (Victoria)	https://www.aemo.com.au/energy-systems/gas/declared-wholesale-gas-market-dwgm/procedures-policies-and-guides
Gas Quality Procedures	Wholesale Market Gas Quality Monitoring Procedures (Victoria)	
Maintenance Planning Procedure	Wholesale Market Maintenance Planning Procedures (Victoria)	
Management Procedures	Wholesale Market Management Procedures (Victoria)	
Market Operations Procedures	Wholesale Market Operations Procedures (Victoria)	
Metering Procedures	Wholesale Market Metering Procedures (Victoria)	
Settlement Procedures	Wholesale Market Settlement Procedures (Victoria)	
System Security Procedures	Wholesale Market System Security Procedures (Victoria)	

2. Ancillary Payment Procedures

2.1. Purpose

These are the *ancillary payment procedures* made under rule 239 of the National Gas Rules (NGR) (**Procedures**).

2.2. Scope

These Procedures govern the determination of *ancillary payments*.

2.3. Ancillary payments – general

2.3.1. Constrained on injections and withdrawals

In accordance with rule 239(3), subject to rules 239(4), (5) and (6), a *Market Participant* who is given a *scheduling instruction* to inject or withdraw more gas under the *operating schedule* than the quantity of gas that the *Market Participant* was scheduled to inject or withdraw under the relevant *pricing schedule*, is entitled to receive an *ancillary payment*. For the purposes of these Procedures, any such increased injection is deemed to be a constrained on injection quantity and any such increased withdrawal is deemed to be a constrained on withdrawal quantity.

Ancillary payments are adjusted at each *operating schedule* during the *gas day*.

Until such time as:

- (a) the constrained on injection quantity is injected into the relevant *market injection point*; or
- (b) the constrained on withdrawal quantity is withdrawn from the relevant *market withdrawal point*,

by the *Market Participant*, the *amount of ancillary payments* payable to that *Market Participant* in respect of that constrained on injection quantity or withdrawal quantity (as applicable) increases or decreases at each subsequent updated *operating schedule* in that *gas day* to the extent that the amount of the constrained on injection quantity or constrained on withdrawal quantity increases or decreases in each subsequent updated *operating schedule* in that *gas day*.

2.3.2. Actual injections or withdrawals of gas

Where a *Market Participant*:

- (a) injects less than the constrained on injection quantity; or
- (b) withdraws less than the constrained on withdrawal quantity,

ancillary payments will not be generated in respect of that shortfall in constrained on injection or withdrawal quantity (as applicable) and for the purposes of the calculations in clauses 2.7 and 2.8 of these Procedures, such shortfall in the constrained on injection quantity is deemed to be the Actual Gas Injection Negative Offset Quantity (**AGINO**) and such shortfall in the constrained on withdrawal quantity is deemed to be the Actual Gas Withdrawal Negative Offset Quantity (**AGWNO**).

Where a *Market Participant*:

- (a) injects more than the constrained on injection quantity; or
 - (b) withdraws more than the constrained on withdrawal quantity,
- ancillary payments* will not be generated in respect of that excess of constrained on injection or withdrawal quantity (as applicable).

2.3.3. Reduced bid quantities in reschedules

If the bid quantities in reschedules are reduced such that the constrained on quantities in the reschedules are reduced the negative *ancillary payments* are modified so as to totally offset the positive *ancillary payments* incurred in previous schedules.

2.4. Determination of adjusted bid steps

2.4.1. Determination of adjusted bid steps

For each *injection bid* or *withdrawal bid* in respect of any *pricing schedule* and *operating schedule*, break points are determined automatically by AEMO between bid steps from zero up to the maximum quantity offered by that *Market Participant* shown by way of example in Table 3. In this example, the *injection bid* quantities in the 1st and 2nd reschedules are lower than the total quantity bid in the BoD schedule.

As shown by way of example in columns 1 and 2 in Table 4, all break points across all *pricing schedules* and *operating schedules* are ranked by their cumulative quantities so that there are up to 55 injection or withdrawal break points between 0 and the maximum quantity bid over all schedules.

For each *injection bid* or *withdrawal bid* in respect of each *pricing schedule* and *operating schedule*, the existing bid steps are divided by AEMO into more steps by applying the new break points. This is carried out by associating each pricing break point for each schedule with each cumulative quantity break point. In the example in Table 4, a total of 13 adjusted bid steps are created and apply to each *pricing schedule* and *operating schedule*. For adjusted bid steps where the cumulative bid quantity for a *pricing schedule* and *operating schedule* exceeds the maximum bid quantity for that schedule the bid price is set in accordance with clause 2.4.2 of these Procedures.

The resulting divided *injection* or *withdrawal bids* are used by AEMO in the calculations set out in sections 2.5 to 2.12 of these Procedures.

In Table 4, a total of 13 adjusted bid steps are created. The system should generate the same number of adjusted bid steps for each schedule for the relevant bids for each combination of MP(x) and *system point* (point).

Table 3 Bid steps

Bid Step	BoD Schedule		1 st reschedule		2 nd reschedule	
	Cumulative Quantity (GJ)	Bid Price (\$/GJ)	Cumulative Quantity (GJ)	Bid Price (\$/GJ)	Cumulative Quantity (GJ)	Bid Price (\$/GJ)
1	15	2.0	16	2.1	17	2.2
2	30	2.5	32	2.6	34	2.7
3	45	3.0	48	3.1	51	3.2

Bid Step	BoD Schedule		1 st reschedule		2 nd reschedule	
	Cumulative Quantity (GJ)	Bid Price (\$/GJ)	Cumulative Quantity (GJ)	Bid Price (\$/GJ)	Cumulative Quantity (GJ)	Bid Price (\$/GJ)
4	60	3.5	64	3.6	68	3.7
5	75	4.0				

Table 4 Adjusted bid steps

Adj bid step	Cumulative Quantity (GJ)	Bid price (\$/GJ)		
		BoD Schedule	1 st reschedule	2 nd reschedule
1	15	2.0	2.1	2.2
2	16	2.5	2.1	2.2
3	17	2.5	2.6	2.2
4	30	2.5	2.6	2.7
5	32	3.0	2.6	2.7
6	34	3.0	3.1	2.7
7	45	3.0	3.1	3.2
8	48	3.5	3.1	3.2
9	51	3.5	3.6	3.2
10	60	3.5	3.6	3.7
11	64	4.0	3.6	3.7
12	68	4.0	3.6	3.7
13	75	4.0	3.6	3.7

2.4.2. Association of bid prices with adjusted bid steps

The bid prices associated with the adjusted bid steps of each *pricing schedule* and *operating schedule* are set by AEMO equal to the bid price for that bid step in that schedule.

For adjusted bid steps where the cumulative bid quantity for a *pricing schedule* and *operating schedule* exceeds the maximum bid quantity for that schedule the bid price is set equal to the bid price of the maximum bid step for that schedule.

If AEMO has limited the *market price* to the *administered price cap* for a schedule in accordance with Rule 239(5) then the bid prices associated with the adjusted bid steps for that schedule are capped at the *administered price cap*.

2.5. Determination and allocation of quantities to adjusted bid steps

2.5.1. Pricing schedule – determination of effective pricing schedule quantities for ancillary payments

For each *Market Participant*, the effective *pricing schedule* quantity used by AEMO in calculating *ancillary payments* for that *Market Participant's pricing schedule controllable quantity* at each *system injection and withdrawal point* is:

- (a) for the initial *pricing schedule* of the gas day, equal to the *pricing schedule* quantity produced at the start of the gas day; and
- (b) for each subsequent updated *pricing schedule* of the gas day, equal to:
 - (i) the *pricing schedule* quantity for the *scheduling horizon* of that subsequent updated *pricing schedule*
 plus
 - (ii) the sum of each *pricing schedule* quantity for each relevant *scheduling* interval for each of the previous *pricing schedules*.

2.5.2. Pricing schedule – allocation of effective pricing schedule quantities to adjusted bid steps

The *pricing schedule* controllable quantities determined under clause 2.5.1 for a *Market Participant* for each *pricing schedule* are allocated to the adjusted bid steps of the bid that applied for that *pricing schedule* in order of increasing price for injections and decreasing price for withdrawals.

Effective *pricing schedule* quantities should be allocated to each adjusted bid step including adjusted bid steps where the cumulative quantity for that adjusted bid step exceeds the maximum bid quantity.

2.5.3. Operating schedule – determination of operating schedule quantities for ancillary payments

For each *Market Participant*, the *operating schedule* quantity used by AEMO in calculating *ancillary payments* for that *Market Participant's operating schedule* controllable injection or *operating schedule* controllable withdrawal is:

- (a) for the initial *operating schedule* of the gas day, equal to the *operating schedule* quantity produced at the start of the gas day; and
- (b) for each subsequent *operating schedule* of the gas day, equal to:
 - (i) the *operating schedule* quantity of that subsequent *operating schedule* for the *scheduling horizon*
 plus
 - (ii) the sum of each *operating schedule* quantity for each *scheduling* interval related to each of the previous *operating schedules*.

If an ad hoc *operating schedule* is produced to replace an already approved *operating schedule*, then the schedule quantity for the *scheduling interval* in that ad hoc *operating schedule* will be used to calculate the *operating schedule* quantities.

2.5.4. Operating schedule – allocation of operating schedule quantities to adjusted bids steps

The *operating schedule* controllable quantities determined under clause 2.5.3 for a *Market Participant* for each *operating schedule* are allocated to the adjusted bid steps of the bid that

applied for that *operating schedule* in order of increasing price for injections and decreasing price for withdrawals.

Operating pricing schedule quantities should be allocated to each adjusted bid step including adjusted bid steps where the cumulative quantity for that adjusted bid step exceeds the maximum bid quantity.

2.6. Actual quantities

The next sections cover the application of actual quantities via section 2.7 (AGINO) and section 2.8 (AGWNO) and sets out the methodology used by AEMO to calculate for each *Market Participant*, the quantity of gas within each adjusted bid step of an *operating schedule* that will not generate *ancillary payments* due to that *Market Participant's* failure to comply with the relevant *scheduling instruction*.

2.7. Calculation of actual gas injected negative offset (AGINO)

2.7.1. Determination of effective actual injection quantity

A *Market Participant's* effective actual injection quantity at a controllable injection point in a *scheduling interval* is a quantity of gas equal to the lesser of:

- (a) the last approved *operating schedule* injection approved by AEMO for; and
- (b) the quantity of gas actually injected by,

that *Market Participant* at that controllable injection point in that *scheduling interval*.

A *Market Participant's* effective actual injection quantity at a controllable injection point for a gas day is the sum of the effective actual injection quantity of all the *scheduling intervals* for that gas day.

2.7.2. Allocation of effective actual injection quantity to adjusted bid steps

A *Market Participant's* effective actual injection quantity for a controllable injection point for an *operating schedule* will be allocated by AEMO to the adjusted bid steps of the bid that applied to that *operating schedule* in order of increasing price.

2.7.3. Calculation of AGINO for the last *operating schedule* of the gas day

A *Market Participant's* AGINO for a controllable injection point for each adjusted bid step in the last *operating schedule* of the gas day is a quantity of gas equal to the greater of:

- (a) zero; and
- (b) the *operating schedule* injections for that adjusted bid step for the last *operating schedule* of the gas day allocated in accordance with clause 2.5.4 less the effective actual injections allocated to that adjusted bid step in accordance with clause 2.7.2.

2.7.4. Calculation of AGINO for *operating schedules* prior to the last *operating schedule* of the gas day

A *Market Participant's* AGINO for a controllable injection point for each adjusted price step in each *operating schedule* prior to the last *operating schedule* of the gas day is a quantity of gas equal to the greater of:

- (a) zero; and
- (b) the AGINO for that adjusted bid step as determined under clause 2.7.3 less
 - (i) the *operating schedule* injections for that adjusted bid step for the last *operating schedule* of the gas day allocated in accordance with clause 2.5.4; and
 - (ii) the minimum of *operating schedule* injections for that adjusted bid step for the specified *operating schedule* and all the subsequent *operating schedules* for the remainder of the gas day allocated in accordance with clause 2.5.4.

2.8. Calculation of actual gas withdrawn negative offset (AGWNO)

2.8.1. Determination of effective actual withdrawal quantity

A *Market Participant's* effective actual withdrawal quantity from a controllable withdrawal point in a *scheduling interval* is a quantity of gas equal to the lesser of:

- (a) the last approved *operating schedule* withdrawal approved by AEMO for; and
- (b) the quantity of gas actually withdrawn by

that *Market Participant* at that controllable withdrawal point in that *scheduling interval*.

A *Market Participant's* effective actual withdrawal quantity at a controllable withdrawal point for a gas day is the sum of that *Market Participant's* effective actual withdrawal quantity of all the *scheduling intervals*.

2.8.2. Allocation of the effective actual withdrawal quantity to adjusted bid steps

The quantity determined under clause 2.8.1 for each *Market Participant* for each controllable withdrawal point for each *operating schedule* is then allocated by AEMO to the adjusted bid steps of the bid that applied to that *operating schedule* in order of decreasing price.

2.8.3. Calculation of AGWNO for the last *operating schedule* of the gas day

A *Market Participant's* AGWNO for each controllable withdrawal point for each adjusted bid step for the last *operating schedule* of the gas day is the greater of:

- (a) zero; and
- (b) the *operating schedule* withdrawals by that *Market Participant* for that adjusted bid step for the last *operating schedule* of the gas day allocated in accordance with clause 2.5.4

less the effective actual withdrawals allocated to that adjusted bid step in accordance with clause 2.8.2

2.8.4. Calculation of AGWNO for *operating schedules* prior to the last *operating schedule* of the gas day

A *Market Participant's* AGWNO for a controllable withdrawal point for each adjusted price step in each *operating schedule* prior to the last *operating schedule* of the gas day is a quantity of gas equal to the greater of:

- (a) zero; and
- (b) the AGWNO for that adjusted bid step as determined under clause 2.8.3
less
 - (i) the *operating schedule* withdrawals for that adjusted bid step for the last *operating schedule* of the gas day allocated in accordance with clause 2.5.4; and
 - (ii) the minimum of *operating schedule* withdrawals by that *Market Participant* for the adjusted bid step for the specified *operating schedule* and all the subsequent *operating schedules* for the remainder of the gas day allocated in accordance with clause 2.5.4.

2.9. Calculation of ancillary payments

2.9.1. Determining the constrained on injection quantity for an adjusted bid step and *operating schedule*

A *Market Participant's* constrained on injection quantity for each controllable injection point for each adjusted bid step for each *operating schedule* is determined by AEMO as the greater of:

- (a) zero; and
- (b) that *Market Participant's operating schedule* injection quantity at that controllable injection point for that adjusted bid step and *operating schedule* allocated in accordance with clause 2.5.4
less
that *Market Participant's* AGINO for that adjusted bid step and *operating schedule* at that controllable injection point as determined under clauses 2.7.3 and 2.7.4
less
that *Market Participant's* effective *pricing schedule* for that adjusted bid step and *operating schedule* at that controllable injection point as determined under clauses 2.5.1 and 2.5.2

2.9.2. Determining the constrained on withdrawal quantity for an adjusted bid step and operating schedule

A *Market Participant's* constrained on withdrawal quantity for each controllable withdrawal point for each adjusted bid step for each *operating schedule* is determined by AEMO as the greater of:

- (a) zero; and
- (b) that *Market Participant's operating schedule* withdrawal quantity for that adjusted bid step and *operating schedule* at that controllable withdrawal point allocated in accordance with clause 2.5.4

less

that *Market Participant's* AGWNO for that adjusted bid step and that *operating schedule* at that controllable withdrawal point determined under clauses 2.8.3 and 2.8.4

less

that *Market Participant's* effective *pricing schedule* for that adjusted bid step and that *operating schedule* at that controllable withdrawal point as determined under clauses 2.5.1 and 2.5.2.

2.10. Calculation of matched changes in constrained on injection and withdrawal quantities

2.10.1. Calculation of matched changes in constrained on injection quantity for an adjusted bid step and operating schedule

A *Market Participant's* matched change in constrained on injection quantities for each controllable injection point and each adjusted bid step is the quantity of constrained on injection quantity which was scheduled in an earlier *operating schedule* but was scheduled off in a subsequent *operating schedule*.

The matched change in constrained on injection quantities for each controllable injection point for each adjusted bid step for each *operating schedule* is calculated by AEMO for each combination of two different *operating schedules* of the gas day starting with the second *operating schedule* (s=2) and then iterating forward to the last *operating schedule* (s=5), as shown in the example in the table below.

Table 5 Matched changes - Injections

Operating schedule s	Combinations of operating schedules (s, s')
S=2	(2,1)
S=3	(3,2), (3,1)
S=4	(4,3), (4,2), (4,1)
S=5	(5,4), (5,3), (5,2), (5,1)

For each *operating schedule* s in a gas day and for each earlier *operating schedule* $s' = s-1, s-2, \dots, 1$ (in that order) in that gas day, a *Market Participant's* matched change in constrained on injection quantity for schedules s and s' is calculated by AEMO as follows:

- (a) if $s' = s-1$ (i.e. combinations (2,1), (3,2), (4,3), (5,4)), the matched change in constrained on injection quantities equals the lesser of:
 - (i) the greater of zero and the negative of the change in that *Market Participant's* constrained on injection quantity at *operating schedule* s ; and
 - (ii) the greater of zero and the change in that *Market Participant's* constrained on injection quantity at *operating schedule* s' .
- (b) Otherwise, the matched change equals the lesser of:
 - (i) the greater of zero and the negative of the change in that *Market Participant's* constrained on injection quantity at *operating schedule* s , less the sum over all *operating schedules* s'' from *operating schedule* $s'+1$ to *operating schedule* $s-1$ of that *Market Participant's* matched change in constrained on injection quantity for combinations of *operating schedules* s and s'' ; and
 - (ii) the greater of zero and the change in that *Market Participant's* constrained on injection quantity at *operating schedule* s' , less the sum over all *operating schedules* s'' from *operating schedule* $s'+1$ to *operating schedule* $s-1$ of the matched change in constrained on injection quantity for combinations of *operating schedules* s' and s'' .

2.10.2. Calculation of the matched change in constrained on withdrawal quantity for a bid step and *operating schedule*

A *Market Participant's* matched change in constrained on withdrawal quantity for each controllable withdrawal point and each adjusted bid step is calculated by AEMO for each combination of two different *operating schedules* of the gas day for each *operating schedule* starting with the second *operating schedule* ($s=2$) and then iterating forward to the last *operating schedule* ($s=5$).

Table 6 Matched changes - withdrawals

Operating schedule s	Combinations of operating schedules (s, s')
S=2	(2,1)
S=3	(3,2), (3,1)
S=4	(4,3), (4,2), (4,1)
S=5	(5,4), (5,3), (5,2), (5,1)

For each *operating schedule* s and for each earlier *operating schedule* $s' = s-1, s-2, \dots, 1$ (in that order) in that gas day, a *Market Participant's* matched change in constrained on withdrawal quantity for schedules s and s' is calculated as follows:

- (a) if $s' = s-1$ (i.e. combinations (2,1), (3,2), (4,3), (5,4)), the matched change in constrained on withdrawal quantity equals the lesser of:

- (i) the greater of zero and the negative of the change in that *Market Participant's* constrained on withdrawal quantity at *operating schedule s*; and
 - (ii) the greater of zero and the change in that *Market Participant's* constrained on withdrawal quantity at *operating schedule s'*.
- (b) Otherwise, the matched change in constrained on withdrawal quantities equals the lesser of:
- (i) the greater of zero and the negative of the change in that *Market Participant's* constrained on withdrawal quantity at *operating schedule s*, less the sum over all *operating schedules s''* from $s'' = s'+1$ to $s'' = s-1$ of the matched change in that *Market Participant's* constrained on withdrawal quantity for combinations of schedules *s* and *s''*; and
 - (ii) the greater of zero and the change in constrained on withdrawal quantity at *operating schedule s'*, less the sum over all *operating schedules s''* from *operating schedule s'+1* to *operating schedule s-1*, of the matched change in constrained on withdrawal quantity for combinations of schedules *s'* and *s''*.

2.11. Calculation of ancillary payments for injection quantities

2.11.1. Calculation of initial ancillary payments for the initial operating schedule of the gas day

The initial injection *ancillary payment* (if any) payable to a *Market Participant* for each controllable injection point for each adjusted bid step for the first *operating schedule* in the gas day is calculated by AEMO in accordance with the following formula:

$A \times B$

Where

A = that *Market Participant's* constrained on injection quantity for that adjusted bid step for the first *operating schedule* in the gas day at that controllable injection point determined under clause 2.9.1,

B = an *amount* of compensation expressed in \$/GJ equal to the greater of:

zero; and

the bid price for the adjusted bid step in the first *operating schedule* less the *market price* applicable for the first *operating schedule* in the gas day.

For the avoidance of doubt, a positive initial injection *ancillary payment* represents a payment from AEMO to a *Market Participant*.

If gas was injected by that *Market Participant* without that injection being accredited by AEMO in accordance with the Rules, the amount of the initial injection *ancillary payment* for that adjusted bid step must be zero.

2.11.2. Calculation of initial ancillary payments for each updated operating schedule of the gas day

The initial injection *ancillary payment* (if any) payable to a *Market Participant* for each controllable injection point for each adjusted bid step for each updated schedule is calculated in accordance with the following formula:

$$(A - B) \times C$$

Where:

- A = that *Market Participant's* constrained on injection quantity for that adjusted bid step for the current *operating schedule* at that controllable injection point as determined under clause 2.9.1;
- B = that *Market Participant's* constrained on injection quantity for that adjusted bid step for the previous *operating schedule* at that controllable injection point as determined under clause 2.9.1;
- C = an *amount* of compensation expressed in \$/GJ equal to the greater of:
 - zero; and
 - the current *operating schedule* bid price for that adjusted bid step less the current *pricing schedule* market price.

For the avoidance of doubt, a positive initial injection *ancillary payment* value represents a payment from AEMO to a *Market Participant*.

If gas was injected by that *Market Participant* without that injection being accredited by AEMO in accordance with the Rules, the initial injection *ancillary payment* for that adjusted bid step must be zero.

2.11.3. Calculation of revised injection ancillary payments for the initial operating schedule of the gas day

The revised injection *ancillary payment* payable to a *Market Participant* for each adjusted bid step for the initial *operating schedule* in the gas day at a controllable injection point equals the initial injection *ancillary payment* payable to that *Market Participant* for that controllable injection point and for that adjusted bid step as determined under clause 2.11.1.

2.11.4. Calculation of the revised injection ancillary payments for each updated operating schedule of the gas day

The revised injection *ancillary payment* payable to a *Market Participant* for each controllable injection point and for each adjusted bid step for the updated *operating schedule* in the gas day equals:

- (a) the initial injection *ancillary payment* for that adjusted bid step for that current schedule for that *Market Participant* at that controllable injection point as determined under clause 2.11.1 if this value is greater than or equal to zero
- (b) Otherwise, the sum over all previous *operating schedules* in the gas day of:

- (i) the negative of that *Market Participant's* matched change in constrained on injection quantity of the current schedule and the relevant prior schedule as determined under clause 2.10.1
- (ii) multiplied by an *amount* (\$/GJ) of compensation defined as
 - (A) the greater of zero and
 - (B) the lesser of the bid price for the adjusted bid step in the current *operating schedule*; and the bid price for that adjusted bid step in the relevant prior *operating schedule*
 less
 the *market price* applicable for the current *operating schedule*.

For the avoidance of doubt, a positive revised injection *ancillary payment* value represents a payment from AEMO to a Market Participant.

If gas was injected by that *Market Participant* without that injection of gas being accredited by AEMO under the Rules, the amount of the revised injection *ancillary payment* for that adjusted bid step must be equal to zero.

2.11.5. Calculation of modified injection *ancillary payments* for the initial *operating schedule* of the gas day

The modified injection *ancillary payment* payable to a *Market Participant* for each adjusted bid step for the initial *operating schedule* in the gas day at a controllable injection point equals the initial injection *ancillary payment* payable to that *Market Participant* for that controllable injection point and for that adjusted bid step as determined under clause 2.11.1.

2.11.6. Calculation of modified injection *ancillary payments* for each updated *operating schedule* of the gas day

The modified injection *ancillary payment* payable to a *Market Participant* for each controllable injection point and for each adjusted bid step for the updated *operating schedule* in the gas day equals:

- (a) the initial injection *ancillary payment* for that adjusted bid step for that current schedule for that *Market Participant* at that controllable injection point as determined under clause 2.11.1 if this value is greater than or equal to zero
- (b) Otherwise, the sum over all previous *operating schedules* in the gas day of:
 - (i) the negative of that *Market Participant's* matched change in constrained on injection quantity of the current schedule and the relevant prior schedule as determined under clause 2.10.1
 - (ii) multiplied by an *amount* (\$/GJ) of compensation defined as the greater of:
 - (A) zero; and
 - (B) the modified bid price for the adjusted bid step in the current *operating schedule*

less

the modified market price applicable for the current *operating schedule*.

2.11.7. Calculation of final injection *ancillary payments* for the initial *operating schedule* of the gas day

The final injection *ancillary payment* payable to a *Market Participant* for each adjusted bid step for the first *operating schedule* in the gas day at each controllable injection point is equal to the revised injection *ancillary payment* payable to that *Market Participant* under clause 2.11.3

For the avoidance of doubt, the calculations in clause 2.11.3 and this clause do not change the initial *ancillary payment* payable to a *Market Participant* for each adjusted bid step for the first *operating schedule* in the gas day at each controllable injection point.

2.11.8. Calculation of final injection *ancillary payments* for each updated *operating schedule* of the gas day

The final injection *ancillary payment* payable to a *Market Participant* for each controllable injection point for each adjusted bid step for each updated *operating schedule* in the gas day is:

- (a) the revised injection *ancillary payment* payable to that *Market Participant* for that controllable injection point and adjusted bid step for the current schedule if not all of the following conditions are met:
 - (i) the sum of all revised injection *ancillary payments* to all *Market Participants* for all controllable injection points and all adjusted bid steps for the current *operating schedule* is greater than zero;
 - (ii) the initial injection *ancillary payment* payable to that *Market Participant* for the current *operating schedule* is less than zero;
 - (iii) not all revised injection *ancillary payments* equal the corresponding initial injection *ancillary payments* payable to each *Market Participant* for all controllable injection points, and adjusted bid steps for the updated schedule;
- (b) Otherwise, it is the greater of
 - (i) the initial injection *ancillary payment* payable to that *Market Participant*; and
 - (ii) the revised injection *ancillary payment* payable to that *Market Participant* plus an amount calculated as the average rate of *ancillary payment* multiplied by that *Market Participant's* change in constrained on injection quantity for the current *operating schedule*.
 - (iii) For the purposes of (ii), the average rate of *ancillary payment* is the sum of all revised injection *ancillary payments* across all *Market Participants*, all controllable injection points and all adjusted bid steps for the current *operating schedule* divided by the greater of:
 - (A) the sum over all *Market Participants*, all controllable injection points and all adjusted bid steps for the current *operating schedule* of the sum of all positive changes in constrained on injection quantity for the current *operating schedule*; and

- (B) negative one multiplied by the sum over all *Market Participants*, all controllable injection points and all adjusted bid steps for the current *operating schedule* of the negative changes in constrained on injection quantity for the current *operating schedule*.

2.12. Calculation of ancillary payments for withdrawal quantities

2.12.1. Calculation of initial withdrawal ancillary payments for the initial operating schedule of the gas day

The initial withdrawal *ancillary payment* payable to each *Market Participant*, for each controllable withdrawal point for each adjusted bid step for the first *operating schedule* in the gas day is:

$A \times B$

Where:

A = that *Market Participant's* constrained on withdrawal quantity for that adjusted bid step for the first *operating schedule* in the gas day at each controllable withdrawal point as determined under clause 2.9.2; and

B = an *amount* of compensation expressed in \$/GJ which is the greater of:

- (i) zero; and
- (ii) the *market price* less the bid price for the adjusted bid step in the first *operating schedule* of the gas day.

For the avoidance of doubt, a positive initial withdrawal *ancillary payment* represents a payment from AEMO to a *Market Participant*.

If gas was withdrawn by that *Market Participant* without that withdrawal being accredited by AEMO under the Rules, the *amount* of initial withdrawal *ancillary payment* payable to that *Market Participant* for that adjusted bid step is zero.

2.12.2. Calculation of initial withdrawal ancillary payments for each updated operating schedule of the gas day

The initial withdrawal *ancillary payment* payable to a *Market Participant* for each controllable withdrawal point and for each adjusted bid step for each updated schedule is:

$(A - B) \times C$

Where:

A = the constrained on withdrawals by that *Market Participant* for that adjusted bid step for the current *operating schedule* at each controllable withdrawal point as determined for that *Market Participant* under clause 2.9.2

B = the constrained on withdrawals by that *Market Participant* for that adjusted bid step for the previous *operating schedule* at each controllable withdrawal point as determined under clause 2.9.2

C = an *amount* of compensation expressed as \$/GJ equal to the greater of:

- (i) zero; and
- (ii) the current *pricing schedule market price* less the current *operating schedule* bid price for that adjusted bid step.

For the avoidance of doubt, a positive *ancillary payment* represents a payment from AEMO to a *Market Participant*.

If gas was withdrawn by that *Market Participant* without that withdrawal being accredited by AEMO under the Rules, the *ancillary payment* payable to that *Market Participant* for that adjusted bid step is zero.

2.12.3. Calculation of revised withdrawal *ancillary payments* for the initial *operating schedule* of the gas day

The *amount* of revised withdrawal *ancillary payment* determined for each *Market Participant*, for each controllable withdrawal point for each adjusted bid step for the first *operating schedule* in the gas day is equal to the initial withdrawal *ancillary payment* for that adjusted bid step for the first *operating schedule* in the gas day for that *Market Participant* at that controllable withdrawal point as determined under clause 2.12.1.

2.12.4. Calculation of revised withdrawal *ancillary payments* for each updated *operating schedule* of the gas day

The *amount* of revised withdrawal *ancillary payment* for each *Market Participant*, for each controllable withdrawal point and for each adjusted bid step for the updated *operating schedule* in the gas day is determined as:

- (a) the initial withdrawal *ancillary payment* for that adjusted bid step for that current *operating schedule* for that *Market Participant* at that controllable withdrawal point as determined under clause 2.12.2 if this value is greater than or equal to zero.
- (b) otherwise, the sum over all prior schedules in the gas day of:
 - (i) the negative of the matched change in constrained on withdrawal quantity of the current *operating schedule* and the relevant prior *operating schedule* as determined under clause 2.10.2
 - (ii) multiplied by a per unit amount of compensation defined as the greater of
 - (A) zero; and
 - (B) the lesser of the bid price for the adjusted bid step in the current *operating schedule* and the bid price for that adjusted bid step in the relevant prior *operating schedule* less the *market price* for the current *operating schedule*.

For the avoidance of doubt, a positive revised withdrawal *ancillary payment* value represents a payment from AEMO to a *Market Participant*.

If gas was withdrawn by that *Market Participant* without that withdrawal of gas being accredited by AEMO under the Rules, the amount of the revised withdrawal *ancillary payment* for that adjusted bid step is equal to zero.

2.12.5. Calculation of modified withdrawal *ancillary payments* for the initial *operating schedule* of the gas day

The *amount* of revised withdrawal *ancillary payment* determined for each *Market participant*, for each controllable withdrawal point for each adjusted bid step for the first *operating schedule* in the gas day is equal to the initial withdrawal *ancillary payment* for that adjusted bid step for the first *operating schedule* in the gas day for that *Market Participant* at that controllable withdrawal point as determined under clause 2.12.1.

2.12.6. Calculation of modified withdrawal *ancillary payments* for each updated *operating schedule* of the gas day

The *amount* of modified withdrawal *ancillary payment* determined for each *Market Participant*, for each controllable withdrawal point for each adjusted bid step for the updated *operating schedule* in the gas day is determined as:

- (a) The *Market Participant's* initial withdrawal *ancillary payment* for that bid step for that current schedule for that participant at that supply source as determined under clause 2.12.2 if this value is greater than or equal to zero.
- (b) Otherwise, the sum over all prior schedules in the gas day of:
 - (i) the negative of the matched change in constrained on withdrawal quantity of the current *operating schedule* and the relevant prior *operating schedule* as determined under clause 2.10.2
 - (ii) multiplied by a per unit *amount* of compensation defined as the greater of
 - (A) zero; and
 - (B) the modified bid price for the adjusted bid step in the current *operating schedule* less the modified *market price* applicable for the current *operating schedule*

2.12.7. Calculation of final withdrawal *ancillary payments* for the initial *operating schedule* of the gas day

The *amount* of final withdrawal *ancillary payment* to be paid to each *Market Participant*, for each controllable withdrawal point for each adjusted bid step for the first *operating schedule* in the gas day is equal to the revised withdrawal *ancillary payment*.

2.12.8. Calculation of the final withdrawal *ancillary payments* for each updated *operating schedule* of the gas day

The final withdrawal *ancillary payment* payable to a *Market Participant* for each controllable withdrawal point for each bid step for the updated schedule in the *gas day* is determined as:

- (a) the revised withdrawal *ancillary payment* payable for that *Market Participant*, controllable withdrawal and bid step for the current *operating schedule* if not all of the following conditions are met:
 - (i) the sum of all revised withdrawal *ancillary payments* across all *Market Participants*, controllable withdrawal points and all adjusted bid steps for the current *operating schedule* is greater than zero;
 - (ii) the initial withdrawal *ancillary payment* payable to that *Market Participant* for the current *operating schedule* is less than zero; and
 - (iii) not all revised withdrawal *ancillary payments* equal the corresponding initial withdrawal *ancillary payment* for each *Market Participant*, controllable withdrawal point, and adjusted bid step for the updated schedule.
- (b) otherwise, it is the greater of
 - (i) the initial withdrawal *ancillary payment* payable to that *Market Participant*; and
 - (ii) the revised withdrawal *ancillary payment* payable to that *Market Participant* plus an *amount* calculated as the average rate of *ancillary payment* multiplied by the value of the change in constrained on withdrawal quantity for the current *operating schedule*.
 - (iii) For the purposes of (ii), the average rate of *ancillary payment* is the sum of all revised withdrawal *ancillary payments* across all *Market Participants*, all controllable withdrawal *points* and all adjusted bid steps for the current *operating schedule* divided by the greater of:
 - (A) the sum over all *Market Participants*, controllable withdrawal *points* and all adjusted bid steps for the current *operating schedule* of the sum of all positive changes in constrained on withdrawal quantity for the current *operating schedule*; and
 - (B) negative one multiplied by the sum over all *Market Participants*, controllable withdrawal *points* and all adjusted bid steps for the current *operating schedule* of the negative changes in constrained on withdrawal quantity for the current *operating schedule*.

2.13. Calculation of Average *Ancillary payments Rates*

- (a) The average rates for positive and negative *ancillary payments* are calculated for each schedule.
- (b) The average rate for positive *ancillary payments* (**positive average *ancillary payment rate***) for a schedule is determined as:

- (i) the sum of the positive final *ancillary payments* across all *Market Participants*, all controllable injection and withdrawal points and all bid steps for that schedule divided by
 - (ii) the sum of the positive changes in constrained up injection and withdrawal quantities across all *Market Participants*, controllable injection and withdrawal points and all bid steps for that schedule.
- (c) The average rate for negative *ancillary payments* (**negative average ancillary payment rate**) for a schedule is determined as:
 - (i) the sum of the negative final *ancillary payments* across all participants, controllable injection and withdrawal points and all bid steps for the schedule divided by
 - (ii) the sum of the negative changes in constrained up injection and withdrawal quantities across all participants, controllable injection and withdrawal points and all bid steps for the schedule.
- (d) The positive average *ancillary payment* rate and the negative average ancillary payment rate are positive values.

3. Uplift Payment Procedures

3.1. Purpose

These are the Uplift Payment Procedures (Procedures) made under rule 240 of the National Gas Rules (NGR).

3.2. Scope

The Procedures set out the determination of *uplift payments* for each uplift payment category, which in total recover the *ancillary payments* for each *gas day*.

3.3. Uplift payments – general

The total *amount* of all *uplift payment categories* determined in respect of a *gas day* and *operating schedule* must recover the total *amount* of all *ancillary payments* determined in respect of that *gas day* and *operating schedule*.

3.3.1. Total uplift payment amount and uplift payment quantity

The total uplift payment amount and total uplift payment quantity to be recovered by all uplift payment categories for each *operating schedule* for each *gas day* is determined by AEMO in accordance with section 3.4.

3.3.2. Uplift payment categories

The uplift payment categories to be determined under these Procedures are as follows:

- (a) DTS SP uplift.
- (b) DTS SP event liability cap exceedance uplift.
- (c) DTS SP annual liability cap exceedance uplift.
- (d) Surprise uplift.
- (e) Common uplift.

Each is described in more detail below.

3.3.3. DTS SP uplift

Where *ancillary payments* are payable in respect of a *gas day* and *operating schedule*, *DTS SP uplift* is allocated to the *DTS SP* where the *DTS SP* has failed to fulfil its obligations under the *service envelope agreement* and some or all of the *ancillary payments* are attributable to the failure.

DTS SP uplift is always a payment by the *DTS SP*.

3.3.4. DTS SP event liability cap exceedance uplift

Where *DTS SP uplift* is payable in respect of a *gas day* and *operating schedule*, *DTS SP event liability cap exceedance uplift* is allocated to the *DTS SP* where the aggregate payment rate (\$ per GJ) over the *gas day* for *DTS SP uplift* exceeds the event cap in the *service envelope agreement*.

DTS SP event liability cap exceedance uplift is always a payment to the *DTS SP*.

3.3.5. DTS SP annual liability cap exceedance uplift

Where *DTS SP uplift* is payable in respect of a *gas day* and *operating schedule*, *DTS SP annual liability cap exceedance uplift* is allocated to the *DTS SP* where the total payment in a calendar year for *DTS SP uplift* exceeds the annual cap in the *service envelope agreement*.

DTS SP annual liability cap exceedance uplift is always a payment to the *DTS SP*.

3.3.6. Surprise uplift

Where *total uplift payments* are payable in respect of a *gas day* and *operating schedule*, *surprise uplift* will be allocated to any *Market Participant* which does not inject or withdraw gas in a *gas day* in accordance with that *Market Participant's* *scheduled injection* or *scheduled withdrawal* (as applicable) for the previous *scheduling interval* or if that *Market Participant's* *demand forecast* or its *scheduled injection* or *scheduled withdrawal* (as applicable) for the upcoming *scheduling horizon* increase or decrease between the previous and the current *operating schedules*.

Surprise uplift is a payment by the *Market Participant* if the total *uplift payment* for the *operating schedule* is positive.

Surprise uplift is a payment to the *Market Participant* if the total *uplift payment* for the *operating schedule* is negative.

3.3.7. Common uplift

Where *total uplift payments* are payable in respect of a *gas day* and *operating schedule*, and are not fully recovered by other *uplift payment* categories, the balance of the *total uplift payments* will be allocated to *Market Participants* in proportion to their *adjusted withdrawals* from the *declared transmission system* in respect of that *gas day*.

Common uplift is a payment by a *Market Participant* if the total *uplift payment* for the *operating schedule* is positive.

Common uplift is a payment to a *Market Participant* if the total *uplift payment* for the *operating schedule* is negative.

3.4. Uplift amounts and quantities

3.4.1. General

- (a) The *uplift payment amounts and quantities* for all *operating schedules* for each *gas day* must be determined by AEMO after *ancillary payments* for the *gas day* are determined in accordance with the *ancillary payment procedure*.
- (b) AEMO must apply the algorithm set out in section 3.4.2 (also known as the ‘AP flip-flop algorithm’) once the *ancillary payment amounts* have been determined for the *gas day*.
- (c) The *uplift payment quantities* are derived from the *uplift payment amounts*, so they also reflect the adjusted *uplift payment amounts*.

3.4.2. Determining the uplift amount for operating schedules

- (a) The total *ancillary payment by operating schedule* must be determined by AEMO as the sum over all *Market Participants* of the *ancillary payment* to be paid by or to each *Market Participant*, for each controllable withdrawal *point* or controllable injection point for each *adjusted bid step* for that *operating schedule* as determined under the *ancillary payment procedures*.

For schedule s the total *ancillary payment* is calculated as follows.

$$TAP_s = ITAP_s + WTAP_s$$

where

$$ITAP_s = \sum_{x, \text{point}, s, \text{astep}} AP_{(x, \text{point}, s, \text{astep})}$$

where $AP_{(x, \text{point}, s, \text{astep})}$ is the final injection *ancillary payment amount* for *Market Participant* x at controllable injection point ‘point’ and adjusted bid step ‘a step’, for *operating schedule* s as determined under *ancillary payment procedures* section 3.8.7.

$$WTAP_s = \sum_{x, \text{point}, s, \text{astep}} AP_{(x, \text{point}, s, \text{astep})}$$

where $AP_{(x, \text{point}, s, \text{astep})}$ is the final withdrawal *ancillary payment amount* for *Market Participant* x at controllable withdrawal point ‘point’ and adjusted bid step ‘a step’, for *operating schedule* s as determined under *ancillary payment procedures* section 3.8.8.

- (b) The total adjusted *ancillary payment* associated with each *operating schedule* must be determined by AEMO for each *operating schedule* s in turn starting with the first *operating schedule* ($s=1$) and then iterating to the last *operating schedule* ($s=5$) for the same *gas day*. Positive *total ancillary payments* at one *operating schedule* will be offset with negative *total ancillary payments* at another schedule.

For each schedule s

- (i) if $s=1$ or the total *ancillary payment* for *operating schedule* $s>1$ is greater than or equal to zero, then the total adjusted *ancillary payment* for *operating schedule* s is

set to the maximum of zero and minimum over all *operating schedules s'* from *operating schedule s* to *operating schedule 5* of the sum over all *operating schedules s''* from *operating schedule s* to *operating schedule s'* of the total *ancillary payments* for those *operating schedules*. This is calculated as follows:

$$TAAP_s = \text{Max} \{0, \text{Min} [(\sum_{s''=s \text{ to } s'} TAP_{s''}) \text{ for } s'=s \text{ to } 5]\}$$

- (ii) if $s > 1$ and the total *ancillary payment* for *operating schedule s* is less than zero then the total adjusted *ancillary payment* for *operating schedule s* is set to the minimum of zero and the total *ancillary payment* for *operating schedule s* plus the sum over all *operating schedule s'* from *operating schedule 1* to *operating schedule s-1* of $TAP(s')$ minus $TAAP(s')$.

$$TAAP_s = \text{Min} \{0, [TAP_s + \sum_{s'=1 \text{ to } s-1} (TAP_{s'} - TAAP_{s'})]\}$$

- (c) The *total uplift payment amount* to associate with each *operating schedule s* must be determined by AEMO by multiplying the total *ancillary payment* for that *operating schedule s* by the ratio of the total adjusted *ancillary payment* to the total *ancillary payments* over a group of sequential *operating schedule* including *operating schedule s* having the same signed total *ancillary payment*.

This is calculated as follows:

$$TUP_s = TAP_s \times (\sum_{s' \text{ in } GROUP_s} TAAP_{s'}) / (\sum_{s' \text{ in } GROUP_s} TAP_{s'})$$

Where $GROUP_s$ indicates the set of sequential schedules containing *operating schedule s* which have the same signed TAP_s value as *operating schedule s*. The rules for defining $GROUP_s$ are:

- (i) If $TAP_s \geq 0$, then $GROUP_s$ indicates the set of sequential schedules before and after schedule s that all have $TAP_s \geq 0$
- (ii) If $TAP_s < 0$, then $GROUP_s$ indicates the set of sequential schedules before and after schedule s that all have $TAP_s < 0$.

Table 7 Example of calculation for total uplift payment

	1	2	3	4	5	Total
TAPs	\$900	-\$400	-\$800	\$200	\$0	-\$100
Group	1	2	2	3	3	
TAAPs	\$0	\$0	-\$300	\$200	\$0	-\$100
TUP	\$0	-\$100	-\$200	\$200	\$0	-\$100

3.4.3. Determining the uplift payment quantities for each operating schedule

- (a) The total *uplift payment* quantity must be determined by AEMO for each *operating schedule* for each *gas day* after total *uplift payment* amounts for the *gas day* have been determined as set out in section 3.4.2.
- (b) The total *uplift payment* quantity for *operating schedule s* is determined as the total *uplift payment* amount divided by the positive *ancillary payment rate* if positive, or negative *ancillary payment rate* if negative:
 - (i) If total *uplift payment* amount is positive:

$$\text{TUQ}_s = \text{TUP}_s / \text{PAVAPR}_s$$

(ii) If *total uplift payment* amount is negative:

$$\text{TUQ}_s = \text{TUP}_s / \text{NAVAPR}_s$$

3.5. DTS SP uplift category

3.5.1. General

- (a) DTS SP uplift occurs when a transmission constraint is applied by AEMO in an operating schedule where the DTS SP has failed to fulfil its obligations under the service envelope agreement and some or all of the *ancillary payments* are attributable to the failure. Where these constraints give rise to positive *total uplift payments* in the affected or subsequent *operating schedules* as determined under section 3.4, some or all of the positive *total uplift payments* will be recovered as DTS SP uplift and a DTS SP uplift event has occurred.
- (b) DTS SP uplift must be:
 - (i) determined for all *operating schedules* and *gas days*.
 - (ii) determined before any other *uplift payment* categories.
 - (iii) zero unless a DTS SP uplift event has occurred.
 - (iv) taken to be zero after a DTS SP uplift event until the SEA *operating schedules* for the DTS SP uplift event have been determined.
- (c) Because only positive *total uplift payments* can give rise to DTS SP uplift, the DTS SP uplift must also always be zero or positive.

3.5.2. Determining the DTS SP Uplift quantity

- (a) When AEMO determines that a DTS SP uplift event has occurred, AEMO must use the common model applicable to the relevant gas day to determine the expected transmission constraint that would have applied had the DTS been operating at SEA capacity rather than the actual transmission constraint used in producing the *operating schedule*.
- (b) AEMO must then use the expected constraint to manually produce an SEA *operating schedule* and an SEA *pricing schedule* for the affected *operating schedule* and all subsequent *operating schedules* for the *gas day*. All other inputs to the SEA *operating schedules* and SEA *pricing schedules* are unchanged from those used in producing the *operating schedules* published on the relevant *gas day*.
- (c) AEMO must estimate the SEA *ancillary quantities* that would have been associated with the SEA *operating schedule* and an SEA *pricing schedule* for the affected *operating schedule* and all subsequent *operating schedules* for the *gas day* in a manner consistent with the determination of *ancillary payments* in the *ancillary payment procedures* but simplified to ignore the impacts of AGINO and AGWINO (which only affect the payment of *ancillary payments* to *Market Participants*).

- (i) Determine the SEA ancillary quantity for the first affected *operating schedule n* as the sum of the simple constrained on injections or withdrawals for each controllable injection point or controllable withdrawal point calculated as the maximum of zero and the difference between the quantities scheduled at that *system point* for the *operating schedule* and the *pricing schedule* for:

(A) All *system points*; and

(B) All hours in the *scheduling horizon* for schedule *n*

$$\text{SEAQD}_{s=n} = \text{Max} [0, Q_s^{\text{SEA OS}} - Q_s^{\text{SEA PS}}] \text{ summed for all } \textit{system points} \text{ for all hours in the } \textit{scheduling horizon} \text{ for the affected schedule } n$$

Note that this value must be positive.

- (ii) Determine the SEA ancillary quantity for all subsequent schedules $s = n+1$ to 5 as the sum of the simple constrained on injections or withdrawals for each controllable injection point or controllable withdrawal point calculated as the maximum of zero and the difference between the quantities scheduled at that *system point* for the *operating schedule* and the *pricing schedule* for:

(A) All *system points*; and

(B) All hours in the *scheduling horizon* for schedule *s*

Less

The simple constrained on injections or withdrawals for the same period of the previous schedule $s-1$ as the sum of the simple constrained on injections or withdrawals for each controllable injection point or controllable withdrawal point calculated as the maximum of zero and the difference between the quantities scheduled at that *system point* for the *operating schedule* and the *pricing schedule* for:

(C) All *system points*; and

(D) All hours in the *scheduling horizon* for current schedule *s*

$$\text{SEAQD}_{s=n+1} = \text{Max} [0, Q_s^{\text{SEA OS}} - Q_s^{\text{SEA PS}}] \text{ summed for all } \textit{system points} \text{ and hours in } \textit{scheduling horizon} \text{ for schedule } s$$

less

$$\text{Max} [0, Q_{s-1}^{\text{SEA OS}} - Q_{s-1}^{\text{SEA PS}}] \text{ summed for all } \textit{system points} \text{ and hours in } \textit{scheduling horizon} \text{ for schedule } s$$

Note this value can be positive or negative.

- (iii) Determine the DTS SP uplift quantity for the affected *operating schedule* and all subsequent *operating schedules* for the *gas day* as zero or the positive difference between the positive total *uplift payment* quantity for the *operating schedule* as determined in section 3.3 and the SEA ancillary quantity:

$$\text{Final QD}_s = \text{Max} [0, \text{Max} [0, \text{TUQ}_s] - \text{SEA QD}_s]$$

Note that this value can only be zero or positive

- (d) AEMO must determine the final DTS SP uplift quantity for an *operating schedule* as zero under the following circumstances:
 - (i) When AEMO has not determined that a DTS SP uplift event occurred; or
 - (i) When AEMO has determined that a DTS SP uplift event has occurred and where:
 - (A) The *operating schedule* is before the first affected *operating schedule* in a *gas day*; or
 - (B) The total *uplift payment* quantity for the *operating schedule* is zero or negative; or
 - (C) *SEA operating schedules* and *SEA pricing schedules* for all affected *operating schedules* are not available.

3.5.3. Determining the DTS SP uplift amount

- (a) The DTS SP *uplift payment* amount must be determined by AEMO for all *operating schedules* for each *gas day*.
- (b) For the avoidance of doubt, where:
 - (i) a DTS SP uplift event has not occurred for an *operating schedule*, or
 - (ii) the Final DTS SP uplift quantity for an *operating schedule* is less than or equal to zero, or
 - (iii) the *total uplift payment amount* for an *operating schedule* is zero or negative
 then the DTS SP *Uplift payment* for the *operating schedule* must be zero.

$$\text{DUP}_s = \text{zero}$$

- (c) The DTS SP uplift amount for an affected operating schedule is the Final DTS SP uplift quantity multiplied by the positive ancillary payment rate.

$$\text{DUP}_s = \text{Final QD}_s \times \text{PAVAPR}_s$$

Note that the DTS SP uplift amount will always be positive and is a payment by the DTS SP to AEMO.

- (d) For the avoidance of doubt, the total payment to be made by the DTS SP will be the sum of the DTS SP uplift amount (if any) to be paid by the DTS SP and the sum of DTS SP event liability cap exceedance amount (if any) plus the DTS SP annual liability cap exceedance amount (if any) to be paid to the DTS SP.

3.6. DTS SP event liability cap exceedance uplift category

3.6.1. General

The DTS SP event liability cap exceedance uplift is determined for an affected *operating schedule* after the DTS SP uplift amount has been determined in accordance with section 3.5 of this Procedure.

3.6.2. Determining DTS SP event liability cap exceedance amount

The DTS SP event liability cap exceedance uplift for the affected operating schedules must be determined as the Final DTS SP uplift quantities multiplied by the minimum of zero and the difference between the event cap and the positive ancillary payment rate

$$DELCS = \text{Final } QD_s \times \text{Min} [0, (\text{event cap} - \text{PAVAPR}_s)]$$

Note – where the event cap is not exceeded by the positive *ancillary payment rate*, this value will be zero. Where the event cap is exceeded by the positive *ancillary payment rate*, this value will be negative indicating a payment to the DTS SP.

3.6.3. Estimate the DTS SP event liability cap exceedance quantity

The DTS SP event liability cap exceedance quantity for the affected *operating schedules* must be estimated as the DTS SP event liability cap exceedance uplift amount divided by the positive *ancillary payment rate* for the *gas day*.

$$DQELCS = D_ELCS / \text{PAVAPR}_s$$

3.7. DTS SP annual liability cap exceedance uplift category

3.7.1. General

The DTS SP annual liability cap exceedance uplift must be determined for an affected scheduling interval after the DTS SP uplift amount has been determined for that *operating schedule* in accordance with clause 3.5 of this procedure, and the DTS SP event liability cap exceedance uplift has been determined in accordance with clause 3.6 of this procedure.

3.7.2. Determining DTS SP annual liability cap exceedance amount

- (a) The annual cap balance for a DTS SP uplift event is the annual cap amount remaining in the calendar year of the DTS SP uplift event for the affected *operating schedule s*.
- (b) The total payments subject to the annual cap for prior *operating schedules* for the affected *gas day's* calendar year must be determined as the sum of DTS SP uplift amounts, DTS SP event liability cap exceedance amounts and DTS SP annual liability cap exceedance amounts.

$$\text{Prior ALCamt} = \sum_{\text{current year prior schedules}} (D_UP_s + D_ELCS + D_ALCS)$$

Note D_ELC and D_ALC are zero or negative

- (c) The total payments subject to the annual cap for the current *operating schedule s* must be determined as the sum of DTS SP uplift amounts and DTS SP event liability cap exceedance amounts.

$$\text{Current ALC amt}_s = (D_UP_s + D_ELCS)$$

Note D_ELC is zero or negative

- (d) The DTS SP annual liability cap exceedance uplift amount for the affected *operating schedule s* must be determined as the minimum of zero and the sum of annual cap less

the prior annual liability cap amount less the current annual liability cap for the affected *operating schedule s*.

$$D_ALC_s = \text{Min} [0, \text{Annual cap} - \text{Prior ALC amt} - \text{Current ALC amt}_s]$$

Note D_ALC is zero or negative, indicating a payment to the DTS SP.

3.7.3. Estimate the DTS SP annual liability cap exceedance quantity

The DTS SP annual liability cap exceedance quantity for the affected *operating schedule s* must be estimated as the DTS SP annual liability cap exceedance uplift amount divided by the positive *ancillary payment rate* for the *gas day*.

$$D_QALC_s = D_ALC_s / PAVAPR_s$$

3.8. Surprise uplift category

3.8.1. General

Surprise uplift is determined by AEMO for every *operating schedule* for every *gas day* after the DTS SP uplift, DTS SP event liability cap exceedance uplift, and DTS SP annual liability cap exceedance uplift, but before the common uplift.

3.8.2. Determine Market Participant effective demand forecast

- (a) Where a *demand forecast override* increases the total forecast withdrawals by *Market Participants*, the additional quantity of withdrawals is allocated by AEMO to those *Market Participants* who have under forecast their withdrawals for the purpose of assigning surprise *uplift payments*.
- (b) Where a *demand forecast override* decreases the total forecast withdrawals by *Market Participants*, the subtracted quantity of withdrawals is not considered by AEMO for the purposes of allocating *uplift payments*.

3.8.3. Calculation of adjusted demand forecast override

- (a) If the net effect of all *demand forecast overrides* for all hours of a *scheduling interval* is either zero or a decrease in total forecast withdrawals, then for the purpose of allocating *uplift payments* to *Market Participants*, the adjusted *demand forecast override* in each hour of that *scheduling interval* will be deemed to be zero.
- (b) If the net effect of all *demand forecast overrides* for all hours of a *scheduling interval* is an increase in total forecast withdrawals and the effect of a *demand forecast override* in an hour within the *scheduling interval* is either zero or a decrease in total forecast withdrawals, then for the purpose of allocating *uplift payments* to *Market Participants*, the adjusted *demand forecast override* in that hour of that *scheduling interval* will be deemed to be zero.
- (c) If the net effect of all *demand forecast overrides* for all hours of a *scheduling interval* is an increase in total forecast withdrawals and the effect of a *demand forecast override* in an hour within the *scheduling interval* is an increase in total forecast withdrawals, the

adjusted demand forecast override is this value multiplied by the ratio created by dividing the cumulative demand forecast override in the *scheduling interval* (which must be positive) by the sum of the hourly *demand forecast overrides* in that *scheduling interval* which exceed zero. This ratio must be greater than 0 and less than 1.

3.8.4. Allocation of adjusted demand forecast override to Market Participants

- (a) If there is a positive adjusted *demand forecast override* for an hour under clause 3.8.3, *demand forecast override* in that hour is allocated by AEMO to those *Market Participants* which withdrew more gas in that hour than their *demand forecast*, but the amount of additional withdrawals allocated to a *Market Participant* must not exceed the amount by which that *Market Participant* exceeded its *demand forecast* for that hour.
- (b) For each hour in the *scheduling horizon* of each *operating schedule*:
 - (i) if the adjusted *demand forecast override* exceeds zero but is less than the total amount by which *Market Participants* exceed their *demand forecasts* for that hour, the adjusted *demand forecast override* is allocated on a pro-rata basis to those *Market Participants* whose uncontrollable withdrawals of gas from the declared transmission system in that hour exceeded their *demand forecasts* for that hour; and
 - (ii) if the adjusted *demand forecast override* exceeds the amount by which *Market Participants* in total exceed their *demand forecasts*, the adjusted *demand forecast override* is allocated to those *Market Participants* whose uncontrollable withdrawals of gas from the declared transmission system in that hour exceeded their *demand forecasts* for that hour but only up to the actual quantities by which their actual uncontrollable withdrawals exceed their *demand forecasts* for that hour. Where this does not account for the full amount of the adjusted *demand forecast override*, any *uplift payments* associated with the balance of the adjusted *demand forecast override* are recovered by AEMO as common *uplift payments*.
- (c) A *Market Participant's* effective *demand forecast* for each hour within the scheduling interval of an operating schedule is the demand forecast for that *Market Participant* plus the adjusted demand forecast override for that hour as determined in clauses a) and b) above.

3.8.5. Adjusted deviation

- (a) For each hour of the *gas day* for each *Market Participant*, the hourly *deviation* attributable to that *Market Participant* is the *actual imbalance* quantity for that *Market Participant* in that hour less the *scheduled imbalance* quantity for that *Market Participant* in that hour. For the purposes of these Procedures, the hourly imbalance quantity for a *Market Participant* is calculated as that *Market Participant's* hourly operating *scheduled injection* less the hourly operating *scheduled withdrawal*.

The *demand forecast* used to determine the *scheduled imbalance* for that *Market Participant* is the *demand forecast* of that *Market Participant* as adjusted in accordance with section 3.8.4 of these Procedures to take account of any positive *demand forecast overrides* which may apply in that hour.

- (b) The *deviation* for a *Market Participant* for a *scheduling interval* is the aggregate of the positive and negative hourly *deviations* for that *Market Participant* for all hours of that *scheduling interval*, determined by AEMO pursuant to clause 3.8.5 using the *actual imbalance* quantity and the last *operating schedule published* on that *gas day* to determine that *Market Participant's scheduled imbalances*.
- (c) The scheduled interval hourly deviation (SIHDQ) for a *Market Participant* for each *scheduling interval* is the aggregate of the negative hourly *deviation* quantities for that *Market Participant* for all hours in that *scheduling interval*, determined in accordance with clause 3.8.5 and using the *actual imbalance* quantity and the last *operating schedule published* on that *gas day* for that day to determine *scheduled imbalances*.
- (d) If an ad hoc *operating schedule* is published by AEMO, AEMO must determine the change in constrained on injection quantities resulting from that ad hoc *operating schedule*.
- (e) If an ad hoc *operating schedule* is published and the change in constrained on injection quantities determined by AEMO for that ad hoc *operating schedule* is positive, then the effective *deviation* for a *Market Participant* for that *scheduling interval* is the SIHDQ determined in accordance with clause (c).

Otherwise, the effective deviation for a *Market Participant* for that *scheduling interval* is the deviation determined in accordance with clause (b).

- (f) An allocation factor is used by AEMO to allocate surprise uplift attributable to any increase in constrained on injection quantities in a *scheduling interval* following an ad hoc *operating schedule* to *Market Participants* who have a non-zero SIHDQ for the *scheduling interval* during which the ad hoc *operating schedule* is published.

The allocation factor for a *scheduling interval* in respect of which an ad hoc *operating schedule* is published is:

the greater of:

- minus one multiplied by the increase in constrained on injection quantities within that *scheduling interval*, determined in accordance with clause (d); and
- the sum of all *Market Participants'* effective deviation within that *scheduling interval* for that *operating schedule*

divided by

- the sum of all *Market Participants'* effective deviation within that *scheduling interval* for that *operating schedule*.

- (g) The adjusted deviation for a *Market Participant* for each *operating schedule* is:
- the effective deviation for that *Market Participant* for the *scheduling interval* immediately preceding the current *scheduling interval* for that *operating schedule* determined by AEMO in accordance with clause (e).

plus

- the effective deviation for that *Market Participant* for the *scheduling interval* for that schedule determined by AEMO in accordance with clause (e), multiplied by any allocation factor applicable for that *scheduling interval* determined by AEMO in accordance with clause (f), less
- the effective deviation for that *Market Participant* for the *scheduling interval* immediately preceding that *scheduling interval* for that schedule determined by AEMO in accordance with clause 3.8.5(e), multiplied by any allocation factor applicable for the *scheduling interval* immediately preceding the current *scheduling interval* for that *operating schedule* determined by AEMO in accordance with clause (f).

3.8.6. Surprise uplift quantity for a Market Participant

The surprise uplift quantity for a *Market Participant* for each *operating schedule* is:

- (a) for the first *operating schedule* of a *gas day*:
 - minus one multiplied by the adjusted deviation determined in accordance with clause 3.8.5(g).
- (b) for the subsequent *operating schedules*:
 - the amount by which that *Market Participant's* effective demand forecast (determined under clause 3.8.4) has changed for the hours of the *scheduling horizon* of that *schedule* over that *Market Participant's* effective demand forecast of the same hours in the previous *schedule*.

plus

 - the amount by which that *Market Participant's* operating scheduled controllable withdrawals have changed for the hours of the *scheduling horizon* of that *schedule* over that *Market Participant's* operating scheduled controllable withdrawals for the same hours in the previous *schedule*

minus

 - the adjusted deviation for that *Market Participant* for that *schedule* determined in accordance with clause 3.8.5(g).
- (c) If this calculation results in:
 - (i) a positive amount, this may result in that *Market Participant* having to pay surprise uplift payments to AEMO for that *scheduling interval* in that *operating schedule*; and
 - (ii) a negative amount, this may result in that *Market Participant* being paid surprise uplift payments by AEMO for that *scheduling interval* in that *operating schedule*.

3.8.7. Determination of the modified surprise uplift quantity for each schedule

- (a) The sum of the surprise uplift quantities for an *operating schedule* for all *Market Participants* is limited by the residual uplift payment quantity and is known as the modified surprise quantity.

- (b) The residual *uplift payment* quantity after DTS SP uplift for an *operating schedule* is determined by AEMO as:
 - (i) If the total *uplift payment* quantity is positive, the total *uplift payment* quantity less DTS SP uplift quantity
 - (ii) if the total *uplift payment* quantity is negative, the total *uplift payment* quantity
- (c) The modified surprise quantity for an *operating schedule* is determined by AEMO as:
 - (i) If the residual *uplift payment* quantity is positive, the minimum of the positive residual *uplift payment* quantity and the total positive surprise uplift quantities for all *Market Participants*.
 - (ii) If the residual *uplift payment* quantity is negative, the maximum of the negative residual *uplift payment* quantity and the total negative surprise uplift quantities for all *Market Participants*.
- (d) A *Market Participant's* final surprise uplift quantity for an *operating schedule* must be determined by AEMO
 - (i) If the modified surprise quantity is positive, as a proportional share of the residual surprise quantity for that *operating schedule* in the proportion of that *Market Participant's* positive surprise uplift quantity to the sum of the positive *surprise uplift quantities* for all *Market Participants* for that *operating schedule*.
 - (ii) If the modified surprise quantity is negative, as a proportional share of the residual surprise quantity for that *operating schedule* in the proportion of that *Market Participant's* negative surprise uplift quantity to the sum of the negative surprise uplift quantities for all *Market Participants* for that *operating schedule*.

3.8.8. Determination of the surprise uplift amount for market participant for each schedule

- (a) A *Market Participant's* surprise uplift amount for an *operating schedule* must be determined by AEMO as:
 - (i) If the final surprise uplift quantity for the *Market Participant* is positive, the final surprise uplift quantity multiplied by the positive *ancillary payment rate*
 - (ii) If the final surprise uplift quantity for the *Market Participant* is negative, the final surprise uplift quantity multiplied by the negative *ancillary payment rate*

3.9. Common uplift category

3.9.1. General

- (a) Common uplift is determined by AEMO for every *operating schedule* for every *gas day*, after the DTS SP uplift, DTS SP event liability cap exceedance uplift, DTS SP annual liability cap exceedance uplift, and surprise uplift have been determined.
- (b) Common uplift is determined as an *uplift payment* amount, from which the *uplift payment* quantity is estimated.

- (c) Common uplift includes any DTS SP event liability cap exceedance uplift and DTS SP annual liability cap exceedance *uplift payments* to the DTS SP
- (d) Common uplift is allocated to *Market Participants* in proportion to their adjusted withdrawals from the DTS.

3.10. Common uplift amounts

- (a) The total common *uplift payment* amount for an *operating schedule* for a *gas day* is determined by AEMO as the total *uplift payment* amount less the sum of the DTS SP uplift amount, the DTS SP event liability cap exceedance uplift amount, the DTS SP annual liability cap exceedance uplift amount and the total of the surprise uplift amount for all *Market Participants*.

For the avoidance of doubt, because any DTS SP event liability cap exceedance uplift and any DTS SP annual liability cap exceedance uplift are always a payment to the DTS SP, they are always recovered through common uplift.

- (b) A *Market Participant's* common *uplift payment* amount for an *operating schedule* for a *gas day* is determined by AEMO as a proportionate share of the total common *uplift payment* amount in the ratio of the *Market Participant's* adjusted withdrawals from the DTS to the total of all *Market Participant's* adjusted withdrawals from the DTS.

3.11. Estimated common uplift payment quantities

- (a) The estimated total common *uplift payment* quantity for an *operating schedule* for a *gas day* is determined by AEMO as the total *uplift payment* quantity less the sum of the DTS SP uplift quantity, the DTS SP event liability cap exceedance uplift quantity, the DTS SP annual liability cap exceedance uplift quantity and the total of the surprise uplift quantity for all *Market Participants*.
- (b) A *Market Participant's* estimated common *uplift payment* quantity for an *operating schedule* for a *gas day* is determined by AEMO as a proportionate share of the total common *uplift payment* quantity in the ratio of the *Market Participant's* adjusted withdrawals from the DTS to the total of all *Market Participant's* adjusted withdrawals from the DTS.

4. Compensation Procedures

4.1. Introduction

These are the *compensation procedures*, as required by rule 237, that describe the principles and methodology upon which compensation amounts are to be determined by the dispute resolution panel under rule 238.

4.2. Scope

These Procedures, as required by rule 237, describe the principles and methodology upon which compensation amounts are to be determined when a Registered participant makes a claim under:

- (a) Rule 344 for *Registered participant* claims in respect of an intervention made by AEMO under rule 343.
- (b) Rule 350 for *Registered participant* claims in respect of the application of an *administered price cap* by AEMO.

4.3. Principles for determining compensation amounts

The dispute resolution panel is to apply the following principles in determining any compensation to be awarded:

- (a) Where a *Registered participant* has injected gas into the market in accordance with a direction from AEMO, rule 343(1)(c)¹ or 343(1)(d)² the amount of compensation is limited to the direct costs of the gas injected plus any transmission charges associated with the injection of that gas less any market payments received by the *Registered participant* for that gas where the market payments are the sum of *imbalance payments* and *deviation payments* or charges;
- (b) Where a *Registered participant* has injected gas into the market in accordance with scheduling instructions under rule 215 for schedules where the *administered price cap* (APC) was in place, the compensation is limited to the direct costs of the gas injected plus any associated transmission charges associated with the injection of that gas less any market payments received by the *Registered participant* for that gas where the market payments are the sum of *imbalance payments* and *deviation payments* or charges plus any *ancillary payments*;
- (c) *Ancillary payments* for gas bid at prices that exceed the *market price* and scheduled for injection when an APC has been applied are limited by the APC and AEMO will apply this limit in the settlements process. Where *ancillary payments* are limited by the APC the *Registered participant* may be compensated for losses to the extent that the costs of the gas injected plus any associated transmission charges associated with the injection of

¹ This provision enables AEMO to require a *Registered participant* to inject gas that is available but not bid in on the *gas day*; or non-firm gas.

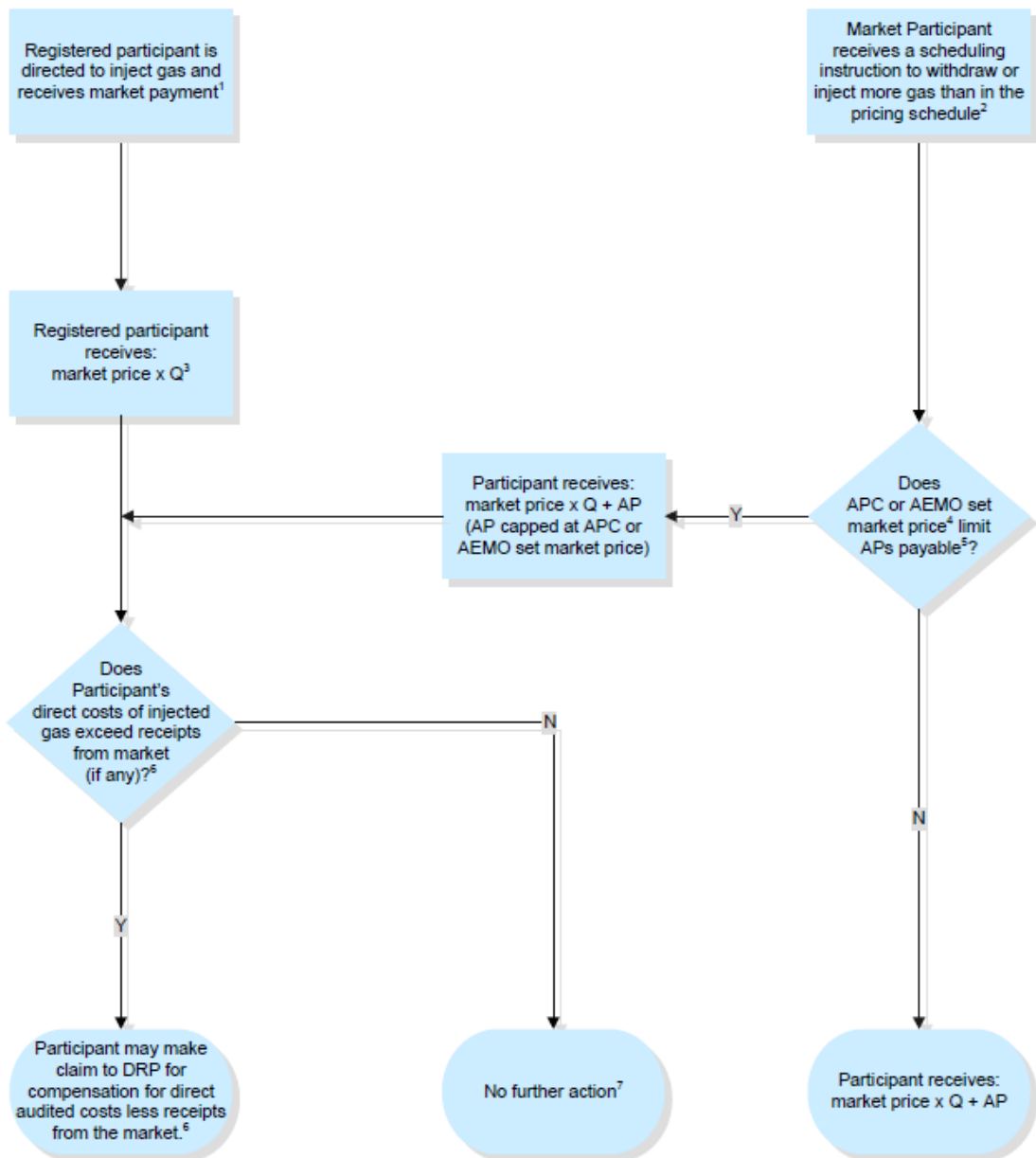
² This provision enables AEMO to require a *Registered participant* to inject *off-specification gas*.

that gas exceed any market payments including any *ancillary payments* received by the *Registered participant*;

- (d) Compensation is not payable for losses incurred by a *Registered participant* in respect of opportunity costs associated with other interconnected gas or electricity markets as consequence of injecting gas in accordance with a direction from AEMO under rule 343.

For guidance, the process flow diagram for award of compensation is set out in the figure below.

Figure 1 Awardable compensation



References for figure 1:

1. Rule 343(1) allows AEMO broad powers to direct any *Registered participant* to certain things and the participant must comply but the right to apply for compensation applies only to injections of gas.
2. Rule 239(3) enables AEMO to schedule out-of-merit order gas to be scheduled in response to a local constraint.
3. Under rule 344(2), where AEMO directs a participant who is not a *Market Participant* to flow gas, that participant is entitled to be paid for that gas at the prevailing market price. This is inclusive of the imbalance payment ($Q \times P$ where Q = the directed quantity) plus any *deviation payments* at the subsequent reschedule price to correct for Participant variation from the directed amount. The Participant must then pay the *declared transmission system service provider* transmission charges that the provider is entitled to receive under its applicable access arrangement.
4. AEMO determines a price to be regarded as a *market price* at times of market suspension under rule 349.
5. Rule 239(5) limits the amount of *ancillary payments* payable to a Participant to the amount of the APC during times where the APC applies or the market has been suspended.
6. Rule 344 allows a Participant who is directed to inject to make a claim to the dispute resolution panel for the cost of the gas as directed in excess of the existing market price
7. Participant's compensation remains either market price \times Q (if gas is directed) or market price \times Q + AP where AP is limited to APC or AEMO set market price.

4.4. Methodology for funding compensation amounts

The funding of compensation payments to a *Registered participant* is to be allocated to *Market Participants* and/ or the *declared transmission system service provider* (DTS SP) as follows:

- (a) Where the compensation payable is associated with reduced ancillary payments due to the application of the APC and where the demonstrated costs of the gas injected exceed the APC, the costs of funding that compensation should be allocated to *Market Participants* and the DTS SP in cases where DTS SP is also liable for uplift under rule 240(6), in direct proportion to the amounts of uplift payments allocated to those parties for that gas day.
- (b) Where the compensation payable is based on demonstrated losses due to the *Registered participant* complying with an AEMO direction to inject gas, the costs of funding that compensation should be allocated to the causers of the event causing congestion in proportion to the estimated contribution to the event by each causer (to the extent that the cause(s) can be reasonably identified and estimated). Where this is not practicable or reasonable the dispute resolution panel should allocate to *Market Participants* in proportion to actual daily withdrawals as determined in the settlement cycle 18 business days after the end of the calendar month.

Two examples are provided below to demonstrate the approach. The first cover a case where ancillary payments have been reduced by and administered price cap. The second covers the case where gas that has not been bid into the *market* is directed to flow by AEMO to assist in an emergency situation.

4.4.1. Example 1 Ancillary payments during an administered pricing period

The \$40/GJ administered price cap applied is from the 2pm schedule on a gas day. At this schedule 11,000 GJ bid at \$100/GJ is scheduled for the first time that day. This *Market*

Participant receives \$400,000 in market payments based on final allocated injections of 10,000 GJ - of the 11,000 GJ scheduled bid. No other bids are impacted. The Market Participant later demonstrates to the dispute resolution panel's satisfaction that they are \$50,000 out of pocket as the 10,000 GJ gas injected cost them on average \$45/GJ.

On this gas day, Participants A, B, C and D were allocated uplift amounts of \$50,000, \$100,000, \$350,000 and -\$80,000, respectively (noting that negative uplift is possible). The *Market Participant* with negative uplift over the day is deemed to have not contributed to the costs of congestion and is not required to fund the compensation. Participant A, B and C fund the compensation in proportion to the uplift allocated to them as shown in the table below:

Table 8 Example 1 – Funding allocation

MP	Daily Uplift Paid (\$)	Causal (+ve)	Proportion (%)	Funding Allocation
A	50,000	50,000	10	5,000
B	100,000	100,000	20	10,000
C	350,000	350,000	70	35,000
D	-80,000	0	0	0
Total	420,000	500,000	100	50,000

It should be noted that due to the application of the 'AP flip flop' algorithm in the uplift process, allocation of funding on an individual schedule basis is not workable.

4.4.2. Example 2 Directed gas flow during an emergency

A registered participant is directed by AEMO to flow gas during an emergency. This *Registered participant* demonstrates to the dispute resolution panel's satisfaction that it is \$100,000 out of pocket after market payments and is awarded compensation accordingly.

Participants A, B, C and D are active in the market on that day. The dispute resolution panel decides on a conservative basis that actions of B caused 50% of these additional costs. As shown in the table below, B must fund 50% of the compensation for contributing directly to the event i.e. \$50,000.

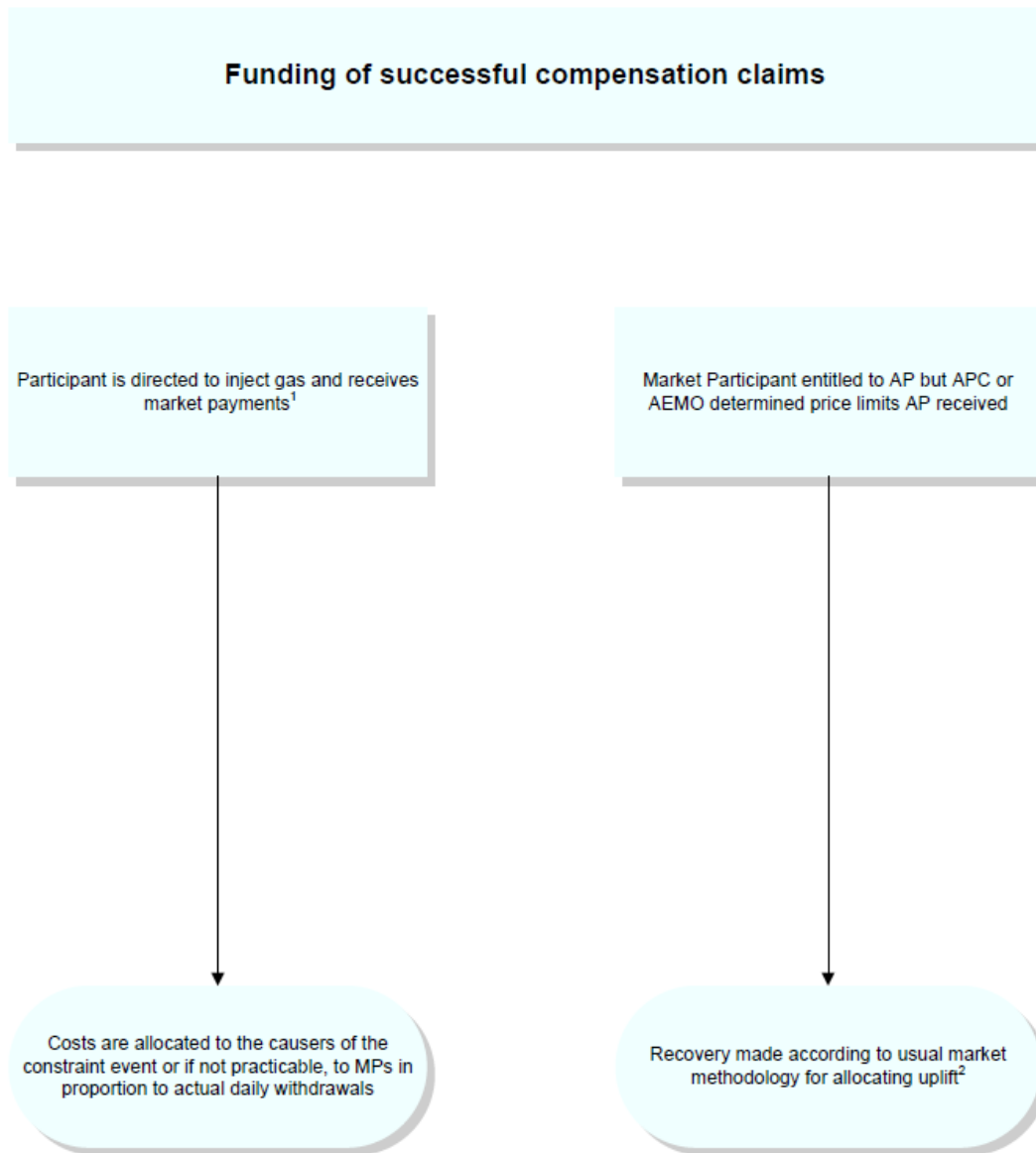
The balance of \$50,000 is funded by A, B, C and D pro-rated on their actual withdrawals as determined at 'month+ 18'. A, B, C and D actually withdrew on the day 150,000, 300,000, 400,000 and 100,000 GJ, respectively. Their shares of the balance of compensation are shown in the second last column table. Total funding allocations are shown in the last column.

Table 9 Example 2 – Funding allocation

MP	Causal Allocation (%)	Funding Allocation 1 (\$)	Withdrawals (GJ)	Proportion (%)	Funding Allocation 2 (\$)	Total Funding Allocation (\$)
A	0	0	150,000	15.8	7,895	7,895
B	50	50,000	300,000	31.6	15,789	65,789
C	0	0	400,000	42.1	21,053	21,053
D	0	0	100,000	10.5	5,263	5,263
Total	100	50,000	950,000	100	50,000	100,000

For guidance, the process flow diagram for compensation allocation is set out in the following figure.

Figure 2 Compensation Allocation



References for figure 2:

1. Price is determined by the schedule in which the Participant scheduled its gas.
2. Recovery is calculated through the ancillary payments uplift mechanism by pro-rating the amount claimed across the uplift/deviation/imbalance payments already calculated.

5. Distribution Unaccounted for Gas Procedures

5.1. Purpose

These are the *Distribution UAFG Procedures* (Procedures) made under rule 317 of the National Gas Rules.

5.2. Scope

The purpose of these Procedures is to :

- (a) require AEMO to calculate unaccounted for gas in a DDS;
- (b) require AEMO to determine payments to be made (and when they are to be made) as between a *Market Participant* and *Distributor* for that gas; and
- (c) provide for how calculation of DUAFG and determination of payments are to be made

For the purpose of Part 19, this Procedure only applies to DTS connected a DDS.

For further information about the application and scope of these Procedures to *declared distributions systems* that are not directly connected to the DTS for the purpose of the Victorian Retail Gas Market see Chapter 7 of the Retail Market Procedures (Victoria).

5.3. Definitions and interpretation

For the purpose of the *Distribution UAFG procedures* the following definition applies, in addition to those in section 1.4.

Table 10 Glossary of Terms

Term	Definition
Market Participant	A registered participant registered in a registrable capacity in accordance with rule 135AB (4)(c) or 135AB (4)(d).

5.4. UAFG process

5.4.1. Timing of AEMO's provision of CTM Injection, Net System Load and Pricing Data reports

The following indicative timeline is identified for the process. The *dispute resolution processes* and Special Revisions issued by AEMO may cause this process to be extended.

Task	Required Timing	Indicative month
AEMO provides Pricing Data, Net System Load (“NSL”) and Custody Transfer Meter (CTM) Injections reports to Distributors and Market Participants.	Within 2 weeks of issuing the month plus 118 business days (“M+118”) revisions for December	July
Distributor determines Class A supply points and Class B supply points withdrawals	<i>Distributors</i> must initiate this process within 5 weeks of receiving data sent by AEMO.	August

Task	Required Timing	Indicative month
Market Participants and Distributors agree withdrawal data	<i>Market Participants</i> must review and agree on the withdrawal data within 8 weeks of the date it is received.	October
Market Participants and Distributors in dispute resolution on withdrawal data.	Dispute resolution determines outcomes on the withdrawal data	
Distributor sends final withdrawal data to AEMO.	Sent by <i>Distributor</i> to AEMO and <i>Market Participant</i> .	February
AEMO determines the draft DUAFG reconciliation amounts based on the final withdrawal data provided by <i>Distributors</i> and <i>Market Participants</i>.	AEMO will determine the draft DUAFG reconciliation amount.	Month after final withdrawal data is received by AEMO.
<i>Distributors</i> and/or <i>Market Participants</i> may dispute the draft DUAFG reconciliation amount	Dispute resolution determines outcomes on the withdrawal data and DUAFG reconciliation amount	
AEMO determines the reissued draft DUAFG reconciliation amounts based on the final withdrawal data determined by <i>dispute resolution</i> processes.	AEMO will re-issue the draft DUAFG reconciliation amount.	Month after dispute resolution is finalised.
AEMO issues the final DUAFG reconciliation amounts to <i>Distributors</i> and <i>Market Participants</i>.	AEMO issues the final statement.	Month after draft reconciliation was agreed.

5.4.2. AEMO determines pricing data

AEMO provides Pricing Data report in accordance with the report format provided in section 5.7.

Calculation of Pricing Data

In respect of each DUAFG period, AEMO must determine the average volume weighted market price (“AVWMP”) in accordance with the following formula:

$$AVWMP = \frac{\sum_{d=1}^n \{ \sum_{s=1}^5 (P_{D,S} \times V_{DS}) \}}{\sum_{d=1}^n \{ \sum_{s=1}^5 (V_{DS}) \}}$$

where:

AVWMP = Average Volume Weighted Market Price for the DUAFG period.

N = Days in DUAFG period

D = Gas day in DUAFG period

S = Scheduling interval

$P_{D,S}$ = Deviation price for gas day D, scheduling interval S (in \$/GJ). In accordance with rule 235(5)(b) of the Rules, this is the market price determined for the commencement of the next scheduling interval after interval S.

$V_{D,S}$ = Total quantity of CTM injections during *scheduling interval* S on *gas day* D, as at the most recent revision prior to the date AVWMP is determined, in GJ terms.

Average transmission tariff (“ATT”)

AEMO obtains from the DTS SP the average transmission use of system (TUoS) tariff.

5.4.3. AEMO determines NSL report data

AEMO must extract the current NSL by *Distributor* by gas day for the period covering at least 2 years before start of DUAFG year to 6 months after the end of the DUAFG year. The NSL data will be provided in accordance with the report format provided in section 5.7.2. The calculation of NSL is described in the Retail Market Procedures (Victoria).

5.4.4. AEMO determines CTM injection data

AEMO will determine the Custody Transfer Meter (CTM) injection for each *Distributor's* DDS using the most recent revision settlement data for each billing period in the DUAFG period. The CTM injection will include energy content from *meters* representing:

- (a) DTS to DDS *transfer points*;
- (b) *settlement metering points* where gas is transferred between *declared distribution systems*;
- (c) *DDS injection point* that is a *market injection point*; and
- (d) *distribution delivery point* that is a *market withdrawal point*.

For the avoidance of doubt, *distribution delivery points* that are not *market withdrawal points* will have their withdrawals determined as *Class A supply points* and *Class B supply points* withdrawals. The CTM data will be provided in accordance with the report format provided in section 5.7.1

CTM injection adjustments for DUAFG period in previous DUAFG year

If AEMO has issued a Special Revision settlement for any billing period in accordance with rule 249(2) of the NGR, in the immediately preceding DUAFG year, AEMO must determine the CTM injection adjustment to apply to the current DUAFG year.

Note: AEMO may publish Special Revision settlement for the DUAFG period, in this event AEMO will provide updated CTM injection data.

CTM injection data for DUAFG period

AEMO will determine the CTM injections to each *Distributor* by *Market Participant* using the most recent revision settlement data for each billing period in the DUAFG period.

Note: AEMO may publish Special Revision settlement for the DUAFG period, in this event AEMO will provide updated CTM injection data.

See section 5.7.8 for details of how participants can confirm this determination using MIBB settlement reports during the year.

5.4.5. Distributor estimate of CTM injection split between New South Wales and Victoria

Withdrawal in Australian Gas Networks Limited (AGNL) distribution system is split between NSW and Victoria, and different DUAFG benchmark rates may apply in each state.

For *Market Participants* that have customers in Victoria and NSW, AEMO estimates the split of withdrawal as follows:

$$MP\ Inj\ Vic = \frac{Class\ A\ Cons\ Vic}{(1 - Class\ A\ Benchmark\ Rate)} + \frac{Class\ B\ Cons\ Vic}{(1 - Class\ B\ benchmark\ Rate)}$$

$$MP\ Inj\ NSW = (MP\ Total\ CTM) - MP\ Inj\ Vic$$

Where:

Class A Cons Vic = *Market Participants* Class A supply points withdrawal in Victoria for the DUAFG period

Class B Cons Vic = *Market Participants* Class B supply points withdrawal in Victoria for the DUAFG period

MP Inj Vic = CTM injections for a *Market Participant* in Victoria in AGNL distribution system

MP Inj NSW = CTM injections for a *Market Participant* in NSW in AGNL distribution system

MP Total CTM = MP Total CTM injections in AGNL distribution system

5.4.6. Distributors determine Class A and Class B withdrawal data

For interval meters, *Distributors* determine the Class A supply points and Class B supply points withdrawal data using the MIBB reports published by AEMO:

- (a) INT254 Metering Data Monthly
- (b) INT55a Metering Registration Monthly Data

For basic meters *Distributors* use their own records to determine the Class A supply points and Class B supply points withdrawal for each *Market Participant*.

Distributors must initiate this process within 5 weeks of AEMO publishing the M+118 settlement data for December or within 5 weeks of AEMO publishing a revision of this data.

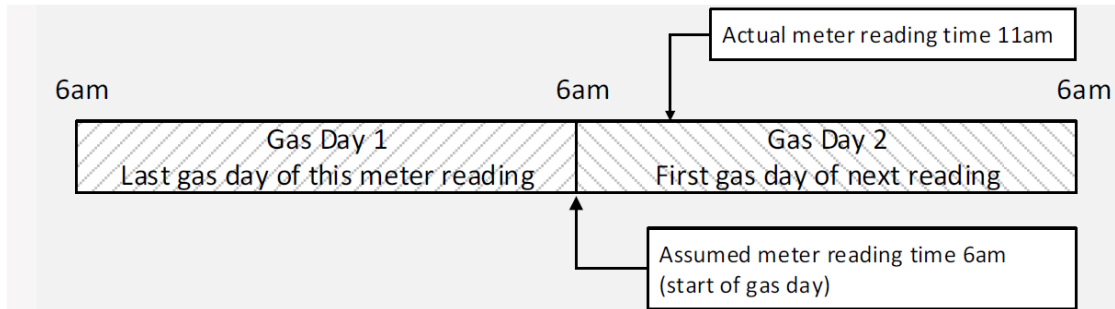
5.4.7. Distributors determine Basic Meter data to be allocated between DUAFG periods

Distributor determines the Basic Meter (BM) data to be allocated to the DUAFG period. The following process determines the apportionment.

Meter Read Start Time

Meter reads are assumed to start at the beginning of the *gas day*. This means that the last *gas day* of the meter reading period is the previous *gas day*, and the first *gas day* of the next reading period is *gas day* on which the meter reading was made.

Figure 3 Meter reading start time



Apportionment of meter readings across DUAFG periods

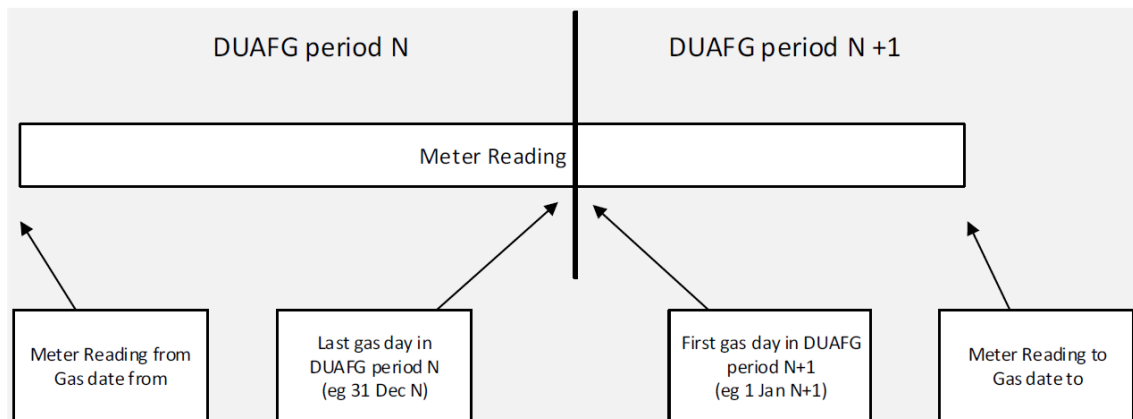
Meter readings that span a DUAFG period must be apportioned between the DUAFG periods as follows:

$$Apportionment\ DUAFG\ period\ N = \frac{\sum_{d=gas\ date\ from}^{d=last\ gas\ day\ in\ period} NSL_{d,DB} \times meter\ reading\ GJ}{\sum_{gas\ date\ from}^{gas\ date\ to} NSL_{d,DB}}$$

$$Apportionment\ DUAFG\ period\ N + 1 = meter\ reading - Apportionment\ DUAFG\ period\ N$$

Note: Can be done individually or by summing all meter readings with the same gas date from and gas date to.

Figure 4 Apportionment between DUAFG periods



5.4.8. Distributor provides Class A supply points and Class B supply points withdrawal to Market Participants

Distributor provides Class A supply points and Class B supply points withdrawal data to each Market Participant in accordance with the report format provided in section 5.7.5.

Market Participants and Distributors must agree the withdrawal data via the process in section 5.5.

5.5. Market Participants and Distributors agree withdrawal data

Market Participants and the *Distributors* are to agree the withdrawal data allocation. *Market Participants* review the data they received from *Distributors*.

5.5.1. Review withdrawal data

Market Participants review the withdrawal data received from *Distributors*.

Market Participants and *Distributors* must review and agree on the withdrawal data within 8 weeks of the date it is received.

5.5.2. Queries on data issues

Market Participants may submit queries if they find any issues in the withdrawal data provided by *Distributors*.

Market Participant data queries must be consistent with the report format provided in section 5.7

5.5.3. Resolve data issues

Distributors attempt to resolve any data issues raised by *Market Participants*.

Distributor resends the corrected data to the *Market Participants*.

5.5.4. Agree on withdrawal data

Market Participants inform the *Distributors* that they agree the withdrawal data.

If *Market Participants* and *Distributors* cannot agree, then the dispute resolution process in section 5.5.5 may be followed.

5.5.5. Dispute resolution

The *Distributor* and *Market Participant* may contact the Adviser to begin the process under Part 15C if they dispute the withdrawal data.

Note: Disputes as to withdrawal data and DUAFG reconciliation amounts are “relevant disputes” within the meaning of rule 135F and as such determined in accordance with Part 15C of the Rules.

5.5.6. Distributor advises AEMO and Market Participant on final withdrawal data

Distributor sends final withdrawal data to AEMO and *Market Participants* by a month (e.g. February) before the date specified in section 5.6.1.

5.6. Determine DUAFG reconciliation amounts

5.6.1. Determine DUAFG reconciliation amounts

AEMO determines the DUAFG reconciliation amounts based on the final withdrawal data provided by *Distributors* and *Market Participants* in section 5.5.6.

If AEMO has not been provided the final withdrawal data by the time specified, AEMO cannot produce the DUAFG reconciliation amounts.

Previous DUAFG period adjustments will be taken into account in the current DUAFG year. The price used for the adjustments will be the prices used in the previous DUAFG period. If there is a revision to the settlement data provided by AEMO for the DUAFG period:

- Adjustments will be done only for DUAFG periods in the immediately preceding DUAFG year.
- AEMO will not consider any adjustments to the withdrawal data after M+118, unless it has a significant material impact resulting in Special Revision settlement being published.
- AEMO will send a settlement notification stating a future date on which AEMO will provide data as outlined in section 5.4.2, section 5.4.3 and section 5.4.4, as a result of Special Revision being published.

5.6.2. Calculation of DUAFG reconciliation amounts for the current DUAFG year

The DUAFG reconciliation amounts for a DUAFG year is the sum of the DUAFG reconciliation amounts for each of the DUAFG period in that DUAFG year and any adjusted DUAFG reconciliation amounts for a DUAFG period in the previous DUAFG year.

The DUAFG reconciliation amount for a DUAFG period is:

$$\text{DUAFG reconciliation amount} = (\text{AVWMP} + \text{ATT}) \times (\text{B} - \text{A})$$

where:

AVWMP = determined by AEMO under clause 5.4.2 for the DUAFG period;

ATT = the average transmission tariff (ATT) for the DUAFG period expressed in \$ per gigajoule as calculated under the declared transmission system service provider's prevailing reference tariffs, as per clause 5.4.2,

A = Class A *supply points* withdrawal determined by the formula:

$$A = D - \left(\frac{E}{(1 - G)} \right)$$

D = Amount determined by AEMO as the CTM injection, as per clause 5.4.4, for the *Distributor's* DDS for *Market Participant* for the DUAFG period;

E = the quantity of gas withdrawn by *Distributor* for *Market Participants* at all Class A *supply points* for the DUAFG period;

G = the DUAFG benchmark rate for Class A *supply points* for that DUAFG period;

B = Class B *supply point's* withdrawal determined by the formula:

$$B = \frac{H}{(1 - F)}$$

H = the quantity of gas withdrawn by *Distributor* for *Market Participants* at all Class B *supply points* for the DUAFG period as advised to AEMO;

F = the DUAFG benchmark rate for Class B *supply points* for that DUAFG Period.

5.6.3. Calculation of DUAFG reconciliation amount for a DUAFG period in a previous DUAFG year

The adjustment to a previous DUAFG period in the immediately preceding DUAFG year will be:

$$\text{Adjusted DUAFG Reconciliation Amount} = (\text{AVWMP} + \text{ATT}) \times (B' - A')$$

where:

AVWMP = determined by AEMO, under clause 5.4.2, for the DUAFG period;

ATT = the average transmission tariff for the DUAFG period expressed in \$ per gigajoule as calculated under the declared transmission system service provider's prevailing reference tariffs, under clause 5.4.2;

A' = Class A *supply points* withdrawal for previous period determined by the formula:

$$A' = \text{ADJ}_D - \frac{\text{ADJ}_A}{(1 - G)}$$

ADJ_D = adjustment (revised value – previous value) to amount determined by AEMO as the CTM Injection, as per clause 5.4.4, for the *Distributor* for *Market Participant* for the DUAFG period in immediately preceding DUAFG year;

ADJ_A = adjustment (revised value – previous value) to Class A *supply points* withdrawal in DUAFG period in immediately preceding DUAFG year as advised by *Distributor* and agreed by *Market Participant* and provided to AEMO with withdrawal data for current DUAFG year;

G = the DUAFG benchmark rate for Class A *supply points* for that DUAFG period;

B' = Class B *supply point's* withdrawal for previous period determined by the formula:

$$B' = \frac{\text{ADJ}_B}{(1 - F)}$$

ADJ_B = adjustment (revised value – previous value) to Class B *supply point's* withdrawal in DUAFG period in immediately preceding DUAFG year as advised by *Distributor* and agreed by *Market Participant* and provided to AEMO with withdrawal data for current DUAFG year;

F = the DUAFG benchmark rate for Class B *supply points* for that DUAFG period.

5.6.4. AEMO issues draft DUAFG reconciliation amounts

Once AEMO determines the DUAFG reconciliation amounts and sends the draft DUAFG reconciliation amounts statement to *Market Participants* and *Distributors*.

5.6.5. Disputes on reconciliation amounts

The Distributor and Market Participant may contact the Adviser to begin the process under Part 15C if they dispute the draft DUAFG reconciliation amounts statement. AEMO must be informed of the outcome of the dispute.

Note: Disputes as to withdrawal data and DUAFG reconciliation amounts are “relevant disputes” within the meaning of rule 135F of the Rules and as such determined in accordance with Part 15C of the Rules.

5.6.6. AEMO issues Final DUAFG reconciliation amounts

If there are no disputes on the draft DUAFG reconciliation amounts statement reported to AEMO within 10 business days, AEMO issues the final DUAFG reconciliation amounts statement to *Distributors* and *Market Participants*.

5.6.7. Payment of DUAFG reconciliation amounts

Market Participants and *Distributors* pay the final DUAFG reconciliation amounts statement. The following potential outcomes can occur in the final DUAFG reconciliation amounts statement.

Distributor pays market participant

If the DUAFG reconciliation amount is negative, the *Distributor* must pay the DUAFG reconciliation amounts to the *Market Participants* as per rule 317(3) of the NGR.

Market participant pays distributor

If the DUAFG reconciliation amount is positive the *Market Participants* must pay the DUAFG reconciliation amounts to the *Distributor* as per rule 317(3) of the NGR.

5.7. Distribution UAFG transactions definitions

This section of the Procedure defines each of the transactions to be used in the DUAFG process.

5.7.1. CTM injection report provided by AEMO

This report is provided by AEMO to *Distributors* and *Market Participants* as defined in the report definition below.

The data format used is the same for both parties, but *Distributors* receive the report by *Market Participants* operating in their network and the *Market Participants* receive by distribution networks in which they operate.

Each *Market Participants* or *Distributor* will only receive data relating to them.

Format for data provision (unless otherwise agreed):

Table 11 CTM injection report data format

Column Name	Data Type	Comments
year_mm	Int	Current DUAFG period
pipeline_id	Int	
state	Char(3)	VIC/NSW
statement_version_id	Int	
version_from_date	Varchar(20)	
version_to_date	Varchar(20)	
inj_gj	Numeric18(9)	Injections by <i>Distributor</i> by State by <i>Market Participant</i> for current DUAFG period (positive)
adj_inj_gj	Numeric18(9)	Adjusted DUAFG period (positive or negative)
adj_inj_duaafg_period	Varchar(10)	Adjusted DUAFG period
distributor_id	Int	Defines which <i>Distributor</i> the report data applies too.
distributor_name	Varchar(40)	
fro_id	Int	Defines which <i>Market Participant</i> the report data applies too.
fro_name	Varchar(40)	
current_date	Varchar(20)	

5.7.2. NSL report provided by AEMO

This report is provided by AEMO to *Distributors* and *Market Participants*. *Market Participants* receive all report data and *Distributor* receive only the data for their Distribution system.

Format for data provision (unless otherwise agreed):

Table 12 NSL report data format

Column Name	Data Type	Comments
year_mm	Int	Current DUAFG period
pipeline_id	Int	
gas_date	Varchar(20)	
distributor_id	Int	Defines which <i>Distributor</i> the report data applies too.
dist_name	Varchar(40)	
nsl_id	Int	
nsl_gj	Numeric18(9)	
nsl_update	Numeric18(9)	
current_date	Varchar(20)	

5.7.3. Pricing data report provided by AEMO

This report is provided by AEMO to *Distributors* and *Market Participants*.

Format for data provision (unless otherwise agreed):

Table 13 Pricing Data Format

Column Name	Data Type	Comments
year_mm	Int	Current DUAFG period
pipeline_id	Int	
avg_vol_wt_price	Numeric (18,9)	
avg_trans_tariff	Numeric (9,4)	Average transmission tariff
adj_avg_vol_wt_price	Numeric (9,4)	
adj_avg_trans_tariff	Numeric (9,4)	
created_date	Varchar(20)	

5.7.4. MIBB Reports provided by AEMO

AEMO provides the MIBB reports:

- INT254 Monthly report after the settlement processing; and
- INT55a Published after each revision.

These MIBB reports are defined in the User Guide to MIBB Reports.

5.7.5. Class A and Class B supply points withdrawal report provided by Distributor

Distributor provides Class A *supply points* and Class B *supply points* withdrawal data (shown at consumption in report specification below) for each *Market Participant*.

Format for data provision (unless otherwise agreed):

Table 14 Class A and Class B supply points withdrawal data format

Column Name	Data Type	Mandatory/Optional	Comments
MIRN	Alpha(10)	M	
Invoice_Number	Alpha(20)	M	
Transaction_Id	Alpha(17)	M	
Transaction_Date	Date(10)	M	
Adjustment_Indicator	Alpha(1)	M	C = Cancelled R = Rebilled N = New Transaction
Period	Alpha(6)	M	
Billing_Days	Numeric(3)	M	
Type_of_Read	Alpha(1)	M	A = Actual

Column Name	Data Type	Mandatory/Optional	Comments
			E = Estimated S = Substituted C = Customer own read
Consumption_MJ	Numeric(11)	M	Withdrawal quantity
Current_Read_Date	Date(10)	M	
Previous_Read_Date	Date(10)	M	
Distributor_ID	Alpha(10)	M	
Network_Tariff_Code	Alpha(10)	M	
Current_NSL_Split	Numeric18(9)	O	
Category	Alpha(1)	O	<p>Category A, B, C, D, E, Z</p> <p>A – When the bill falls between Start date and End date of Review periods the complete bill is taken into consideration.</p> <p>B - When the bill starts before the start date and ends before the previous cut off date and the ends before the previous cut off date and the end date of the review periods the bill is issued before the previous cut off date; profile the bill from the start date of the review periods.</p> <p>C – When the bill starts after the start date of the review period and ends after end date of the review period but before the current cut off date the bill is issued before cut off date for the current review period; profile the bill to the end date of the review period</p> <p>E – When the bill is issued after the cut off date of the previous review period and before the cut off date of the current review period bill starts before the start date of the review period and ends before the end date of the review period; complete bill is taken into consideration</p> <p>Z – Captures billing which occurs after the previous cut off date. To capture late adjustments which continue to occur after reconciliation.</p>

5.7.6. Market Participant queries on data issues

Market Participants submit queries if they find any issues in the withdrawal data (shown as consumption in the report definition) provided by *Distributors*.

Format used by *Market Participants* (unless otherwise agreed):

Market Participants submit queries if they find any issues in the withdrawal data provided by *Distributors*.

Format used by *Market Participants* (unless otherwise agreed):

Table 15 Market Participant queries data format

Column Name	Data Type	Mandatory/Optional	Comments
MIRN	Alpha(10)	M	
Invoice_Number	Alpha(20)	M	
Transaction_Id	Alpha(17)	M	
Transaction_Date	Date(10)	M	
Adjustment_Indicator	Alpha(1)	M	
Period	Alpha(6)	M	
Billing_Days	Numeric(3)	M	
Type_of_Read	Alpha(1)	M	
Consumption_MJ	Numeric(11)	M	Withdrawal quantity
Current_Read_Date	Date(10)	M	
Previous_Read_Date	Date(10)	M	
Distributor_ID	Alpha(10)	M	
Network_Tariff_Code	Alpha(10)	M	
Current_NSL_Split	Numeric18(9)	O	
Category	Alpha(1)	O	<p>Category A, B, C, D, E, Z</p> <p>A – When the bill falls between Start date and End date of Review periods the complete bill is taken into consideration.</p> <p>B - When the bill starts before the start date and ends before the previous cut off date and the ends before the previous cut off date and the end date of the review periods the bill is issued before the previous cut off date; profile the bill from the start date of the review periods.</p> <p>C – When the bill starts after the start date of the review period and ends after end date of the review period but before the current cut off date the bill is issued before cut off date for the current review period; profile the bill to the end date of the review period</p>

Column Name	Data Type	Mandatory/Optional	Comments
			<p>E – When the bill is issued after the cut off date of the previous review period and before the cut off date of the current review period bill starts before the start date of the review period and ends before the end date of the review period; complete bill is taken into consideration</p> <p>Z – Captures billing which occurs after the previous cut off date. To capture late adjustments which continue to occur after reconciliation.</p>
Comments	Memo	M	<i>Market participant's</i> Comments on Data issues

5.7.7. Final withdrawal data advice provided to AEMO

Distributors and *Market Participants* send final withdrawal (shown as consumption in the report definition) data to AEMO by *Distributor* by *Market Participant*.

Format of final withdrawal advice (unless otherwise agreed):

Table 16 Final withdrawal advice data format

Column Name	Data Type	Mandatory/Optional	Comments
DUAFG_Period	Int	M	current DUAFG period
class_A_consumption	Numeric(18,9)	M	Withdrawal quantity (GJ)
class_B_consumption	Numeric(18,9)	M	Withdrawal quantity (GJ)
adj_prv_yr_class_A	Numeric(18,9)	M	GJ average adjustments (+ve or -ve) to previous year Class A <i>supply points</i>
adj_prv_yr_class_B	Numeric(18,9)	M	GJ average adjustments (+ve or -ve) to previous year Class B <i>supply points</i>
Adj_prv_yr_duafe_period	Varchar(10)	M	<i>DUAFG period</i> to which adjustments apply e.g. : 2015A, 2015B etc

5.7.8. Identifying Metering in MIBB Reports

Basic meter withdrawals into a distribution area are profiled and allocated to each *Market Participants* and assigned to a logical meter. This information and the data for interval metered sites provided in INT254 are sufficient to determine the volume of gas withdrawn from the declared transmission system by *Distributor* by *Market Participants*. The profiled logical meters and interval meters are identified using the INT55a MIBB report as follows.

Meter	Attributes
profiled logical meter	inject_withdraw = "W" meter_type = "LC" evp_name = "Basic Meter Profiler" billing = "Y"
Interval meter	inject_withdraw = "W"

Meter	Attributes
	meter_type = "PD" billing = "Y"

Process and sample queries:

- (a) Create two tables into a new database:
 - (i) meter_register with column names as per INT55a MIBB report
 - (ii) meter_data with column names as per INT254 MIBB report
- (b) Import INT55a and INT254 MIBB reports into meter_register and meter_data tables respectively.

Note import the dates as text.

Sample query for *Distributors* to obtain monthly withdrawals for each *Market Participant*:

```
SELECT meter_register.fro_name, Month([meter_data]![gas_date]) AS [Month],
Sum(meter_data.uafg_adj_energy_gj) AS CTM_Withdrawals
FROM meter_data INNER JOIN meter_register ON (meter_data.gas_date =
meter_register.gas_date) AND (meter_data.mirn = meter_register.mirn)
WHERE meter_register.inject_withdraw="W" (And [meter_register].[mirn] Like "53*" Or
[meter_register].[mirn] Like "3*LC" Or [meter_register].[mirn] Like "52*" Or
[meter_register].[mirn] Like "2*LC")
GROUP BY meter_register.fro_name, Month([meter_data]![gas_date]);
```

Sample output if tables contain data for month of January and February:

fro_name	Month	CTM_Withdrawals
Market Participant A	1	350000.000
Market Participant B	1	300000.000
Market Participant C	1	7000.000
Market Participant A	2	250000.000
Market Participant B	2	200000.000
Market Participant C	2	6000.000

Sample query for *Market Participants* to obtain monthly withdrawals for each *Distributor*:

```
SELECT [meter_register].[distributor_name], Month([meter_register]![gas_date]) AS Month,
Sum([meter_data].[uafg_adj_energy_gj]) AS CTM_Withdrawals
FROM meter_data INNER JOIN meter_register ON
([meter_data].[gas_date]=[meter_register].[gas_date]) AND
([meter_data].[mirn]=[meter_register].[mirn])
WHERE [meter_register].[inject_withdraw]="W" And [meter_register].[distributor_name]<>"No
Access" (And [meter_register].[mirn] Like "53*" Or [meter_register].[mirn] Like "3*LC" Or
[meter_register].[mirn] Like "52*" Or [meter_register].[mirn] Like "2*LC")
```

GROUP BY [meter_register],[distributor_name], Month([meter_register],[gas_date]);

Sample Output if tables contain data for month of January and February:

distributor_name	Month	CTM_Withdrawals
<i>Distributor A</i>	1	350000.000
<i>Distributor B</i>	1	300000.000
<i>Distributor C</i>	1	7000.000
<i>Distributor A</i>	2	350000.000
<i>Distributor B</i>	2	300000.000
<i>Distributor C</i>	2	7000.000

If there are no flows to NSW the information in italics in the above queries is not required.

Version release history

Wholesale Market Settlement Procedures (this document)

Version	Effective date	Summary of changes
0.1	1 May 2024	<p>AEMO is making amendments to these Wholesale Market Procedure to account for the AEMC's "DWGM distribution connected facilities" and "Review into extending the regulatory frameworks to hydrogen and renewable gases" rule changes.</p> <p>AEMO is making this new Procedure consolidating the existing:</p> <ul style="list-style-type: none"> a) Wholesale Market Ancillary Payment Procedures b) Wholesale Market Uplift Payment Procedures c) Wholesale Market Compensation Procedures d) Wholesale Market Distribution Unaccounted for Gas Procedures.

The version release history for each existing Procedure that forms the consolidated Procedure is summarised below. These Procedures will be superseded from 1 May 2024.

Ancillary Payment Procedures

Version	Effective date	Summary of changes
3.0	1 Jan 2023	<p>Reflect changes to NGR as result of National Gas Amendment (DWGM Simpler Wholesale Price) rule 2020.</p> <p>Remove requirement to exclude Uplift hedge quantities from ancillary payments.</p> <p>Remove inclusion of Market Participant constraints in ancillary payments (negative ancillary payments).</p> <p>AP redistribution algorithm ("AP flip flop") moved to Uplift Payment Procedures.</p> <p>Number changes to enhance clarity.</p> <p>Reinstatement of part of clause 5.2.4 previously deleted in error.</p>
2.0	1 May 2012	Final – effective 1 May 2012. Changes to reflect enhanced AP algorithm for reduced updated bid functionality
1.1	13 Oct 2011	Draft - Updated to reflect enhanced AP algorithm for reduced updated bid functionality
1.0	6 Aug 2010	Rebranded and updated for NGR Market & Systems Operation Rules replaced by NGR Part 19
1.2	May 2008	Updated to incorporate AP Flip Flop and clawback methodologies
1.1	Jan 2007	Remove words "minus one multiplied by" written into section 8.1 Amend errors detected in version 1.0
1.0	11 Nov 2005	First issue

Uplift Payment Procedures

Version	Effective date	Summary of changes
4.1	1 Jan 2023	<p>Changes to:</p> <ul style="list-style-type: none"> • simplify DTS SP uplift payment quantity (section 4.2) and add consequential new definition of SEA ancillary quantity • Removal of redundant sections for clarity and because residual demand forecast override no longer reported (section 7.2.3, 7.2.6 and 7.3) • Minor editorial amendments. • Updated Procedure template
4.0	1 Jan 2023	<p>Updated to reflect the AEMC's DWGM improvement to AMDQ regime, Rule determination, 12 March 2020:</p> <ul style="list-style-type: none"> • Remove AMIQ, Congestion Uplift • Add uplift categories • Recover uplift payments using average ancillary payments and adjusted uplift quantities

Version	Effective date	Summary of changes
3.0	25 October 2016	<ul style="list-style-type: none"> Update to reflect the National Gas Amendment (DWGM-AMDQ Allocation) Rule 2016 No. 1 As a consequence of the above rule change it is required to take AMDQ CC into account in clause 3.6 for the determination of Uplift hedge for the Longford CPP. Add missing clause 6.1 heading, and correct reference in clause 6.4 from clause 6.1 to clause 6.2. Update document to current procedure format.
2.1	1 May 2012	<ul style="list-style-type: none"> Updated to reflect that IHN and AIHN are by CPP, not by SIPs. Emphasised that Market Participants can update their AMIQ profile during the gas day, but only the AMIQ profile submitted for the last schedule is used for AMIQ calculation. Clarified that the total uplift payments for an operating schedule is equal to the total ancillary payments for that schedule adjusted for 'AP clawback' as per the Ancillary payments functional design v9.0. Included Mortlake system injection point in the Iona CPP group. Removed 'LNG' from 'Authorised MDQ/ AMDQ credit certificate location' column in the CPP table and replaced it with 'N/A'. Deleted '2:00 AM' from the AMIQ Profile Limit table.
2.0	5 Feb 2011	Changes in section 3.2, daily tariff V authorised MDQ updated every gas day rather than every business day
1.0	1 Jul 2010	Rebranded and updated for NGR Market & Systems Operation Rules replaced by NGR Part 19
5.3	May 2009	Updated to include the daily apportionment of tariff V AMDQ in Clause 4.2
5.2	May 2008	<ul style="list-style-type: none"> Headings 8.4 and 8.5 were repeated with all references being to the contents in 8.5. The heading 8.5 has been removed with all cross references corrected to be to 8.4. Correction of AP flip flops has been incorporated.
5.1	Jan 2007	<ul style="list-style-type: none"> Remove words "minus one multiplied by" written into sections 8.1, 8.2 and 8.3. Amend errors detected in version 5.0 Provide further clarity in some of the clauses Note, Version 5.0 was superseded by this version before it was implemented
5	11 Nov 2005	Rewrite for Gas Market Project
4	20 Aug 2004	<ul style="list-style-type: none"> Correct references between uplifts procedures clause 5.2 and 5.3 and MSO Rules clause 5.1.4. Alter clause 5.1 and 5.2 to remove words "by Market Participant" which were erroneously inserted in a previous version of these procedures Correct "reference documents" section Reword section 3.3 Clarification that compressor fuel gas is excluded from Cumulative D AMDQ exceedance (clause 6.3.1)
3	26 Nov 2002	Incorporates new concepts of conditional transfers and interchangeable close proximity injection points
2	May 2002	Complete rewording to align with the function design document Procedures extended to include site AMDQ credits
1	2 July 2001	First issue.

Compensation Procedures

Version	Effective date	Summary of changes
1.1	4 May 2015	Updated to reflect the removal of force majeure provisions
1.0	3 December 2010	Rebranded and updated for NGR Market & Systems Operation Rules replaced by NGR Part 19
3.0	01 October 2006	Rewrite for Gas Market Project
2.0	22 October 2004	Updating of background, and principles section for determination of payments; Compensation panel to determine funding of compensation amounts awarded by it. Transfer of detail from MSO Rules clause 3.6.6 to these guidelines and insertion of principles section to describe methodology and principles to be applied by panel in making this decision;

Version	Effective date	Summary of changes
		Amendment of methodology for funding of compensation to better align with original GMCC intent on this matter Reflects new timeline for establishment of compensation panel; Insertion of section for updating and interpretation of these guidelines; and Formatting changes, including italicising terms defined in the MSO Rules.
1.0	5 July 2001	First issue.

Distribution Unaccounted for Gas Procedures

Version	Effective date	Summary of changes
3.0	1 January 2016	Amend the formula for the average volume weighted market price (AVWMP). Align the AVWMP formula with the formula for the Unaccounted for Gas reconciliation amount in item C2 of Part C of Schedule 1 of Victorian Gas Distribution System Code (the Code). Allow a DUAFG year to be split into DUAFG periods with the same benchmark values for a supply point class and distributor. Data formats adjusted for DUAFG year and DUAFG periods. Allow other data formats to be agreed. Correct typographic errors and improve clarity of diagrams. Remove Appendix E – Sample Reconciliation Statement.
2.0	1 August 2012	Update procedure to include reference to “all” Market Participants (IN013/12)
1.0	1 July 2010	First Issue