



Compliance Bulletin No. 9

Price taker bids and changes in distribution network linepack

October 2012

Commonwealth of Australia 2012

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AER reference: 49659-D12/155211

Amendment record

Version	Date	Pages

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Shortened forms

Shortened form	Full title
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Decrease MOS	Balancing gas used when less gas flows from a transmission pipeline to a hub than is nominated, resulting in the excess gas being 'parked' on the transmission pipeline.
EGP	Eastern Gas Pipeline
Increase MOS	Balancing gas used when more gas flows from a transmission pipeline to a hub than is nominated.
JGN	Jemena Gas Network
Linepack	The pressurised volume of gas stored in the pipeline system. Linepack is essential for gas transportation through the pipeline network throughout each day, and is required as a buffer for within-day balancing. ¹
MOS	A standing agreement between AEMO and pipeline operators for supplying or withdrawing gas beyond the quantities provided by the pipeline schedules. ² Also known as 'balancing gas'.
MSP	Moomba to Sydney Pipeline
NGR	National Gas Rules
Price taker bid	A bid submitted by an STTM user for a hub to withdraw quantities of natural gas from that hub on a gas day at the ex ante market price that applies on that gas day ³
STTM	Short Term Trading Market. There is an STTM hub in Adelaide, Sydney, and Brisbane.
STTM distributor	The person who holds a gas distribution licence for the relevant distribution system/network. JGN is the STTM distributor in Sydney.
STTM user	An STTM user has a registered, contractual right to withdraw gas from an STTM distribution system or an STTM facility. Typically, STTM users are retailers or large consumers who hold distribution contracts with STTM distributors. STTM users are able to bid for gas on the STTM as trading participants. Only STTM users are able to place price-taker bids—that is,

¹ AEMO Glossary. www.aemo.com.au

² *ibid.*

³ See Rule 364 of the NGR

to purchase gas at any price. Large consumers who register as STTM users are referred to as self-contracting users.⁴ See also part 15A clause 135ABA of the NGR.

STTM shipper

An STTM shipper has a registered, contractual right to haul gas on an STTM facility and may also be permitted to store gas in the pipeline. Shippers delivering gas upstream of the hub are only required to register as an STTM shipper if they also ship gas through the hub. Only STTM shippers are able to offer gas for sale on the STTM (see "trading participant"). STTM shippers can also bid to withdraw gas from the hub (to replenish gas stored in the pipeline, for example).⁵ See also part 15A clause 135ABA of the NGR.

Trading Participant

An STTM shipper or STTM user

⁴ AEMO - Overview of the short term trading market for natural gas - page 8, www.aemo.com.au
⁵ *ibid.*, page 7–8

Executive Summary

The purpose of this Compliance Bulletin is to inform participants in the Sydney, Adelaide, and Brisbane Short Term Trading Market (STTM) hubs about the AER's view on bidding in certain circumstances.

This Compliance Bulletin has been prepared in response to uncertainty about bidding obligations when a change in linepack within a distribution network is notified to STTM users. The bulletin has been prepared following a Sydney gas day in March 2011 when over \$1 million of Marker Operator Service (MOS) payments resulted from STTM users not accounting for a reduction in linepack within the distribution network when submitting price taker bids.⁶

Subsequently in 2011 and 2012, further changes in linepack within the Sydney distribution network have been scheduled and STTM users have queried whether the National Gas Rules (NGR) allow changes in network line pack to be accounted for in price taker bids.

The AER considers that when STTM users are notified of changes in linepack in the distribution network they should take account of those changes when submitting price taker bids.

⁶ The AER understands some participants may not have known about the change in linepack.

1 Background

The term 'linepack' refers to the pressurised volume of gas stored in pipelines. This Compliance Bulletin relates to linepack within the distribution network (as opposed to linepack within transmission pipelines).

There have been a number of occasions when the linepack within the Sydney distribution network has changed substantially since the STTM commenced in September 2010. For example, if the Sydney STTM Distributor (Jemena Gas Networks - JGN) is planning to carry out some maintenance within the distribution network it may be necessary to decrease the linepack on that day. Once the maintenance is complete, the linepack will then be increased back to normal.⁷

Changes in linepack in the distribution system can also be caused by the transmission pipeline operator. This could happen if a transmission pipeline operator changes the pressure of gas being delivered into the distribution network.

It is understood that the STTM Distributor will inform AEMO when a change in linepack within the distribution network is planned.⁸ AEMO will then inform the STTM users and other stakeholders by a market notice.

STTM users are required to submit to AEMO in good faith ex ante bids and/or price taker bids (and any revisions to those bids) that reflect their best estimate of the quantities of gas they expect to supply or withdraw (from a hub).⁹

Some STTM users asked the Australian Energy Market Operator (AEMO) and the AER if they are required to take into account changes in linepack within the distribution network when submitting price taker bids.

This question was raised in part because Market Operator Service (MOS) is usually required as a result of STTM users not taking into account changes in linepack when submitting price taker bids.¹⁰ When MOS is used, there is a cost which is paid for by market participants.

If there is planned reduction in linepack within the distribution network, and STTM users do not take account of their individual shares of the linepack change, actual withdrawals from the hub into the distribution network may be less than the amount nominated. This results in decrease MOS.

Conversely, if there is a planned increase in linepack and STTM users don't take account of their individual shares, actual withdrawals from the hub into the distribution network may be more than the amount nominated, which will result in increase MOS.

In March 2011 in the Sydney STTM, the submission of price taker bids which did not take into account a change in linepack within the distribution network resulted in MOS payments exceeding \$1 million.

⁷ The AER notes that it can be normal for the distribution network linepack to fluctuate on a daily basis. This compliance bulletin specifically relates to changes in linepack within the distribution network which are notified in advance to STTM users.

⁸ This is in addition to any information it is contractually obligated to provide to network users

⁹ Rule 410(1)

¹⁰ AEMO manages the balancing of what was scheduled by the pipeline operator for each gas pipeline at each hub on each gas day with the actual quantities of gas flowed on the gas day. This physical balancing is known as MOS.

This large MOS payment was caused by a large amount of decrease MOS as the 'excess' gas was parked on the Moomba to Sydney Pipeline (MSP).¹¹

This Compliance Bulletin addresses this issue, and states the AER's view on how participants should bid when there is a change in linepack in the distribution network.

¹¹ In comparison, the average daily MOS payment since the commencement of the Sydney STTM is under \$13,000.

2 The National Gas Rules

The following rules from the NGR relate to the issue of price taker bids and changes in linepack in a distribution network.

Rule 406: Requirement to submit ex ante offers, ex ante bids and price taker bids

...

(3) An STTM User who intends to withdraw a quantity of natural gas from a hub into one or more STTM distribution systems for that hub on a gas day must include that quantity in:

- (a) an ex ante bid for that hub; or
- (b) to the extent that subrule (4) applies, a price taker bid for that hub,

which:

- (c) in the case of an ex ante bid, complies with rule 408; and
- (d) in the case of a price taker bid, complies with rule 409; and
- (e) in either case, is submitted to AEMO in accordance with rule 410.

(4) An STTM User must include the following quantities in a price taker bid for a hub:

- (a) the quantity of natural gas which the STTM User expects to withdraw from the hub on a gas day to meet the demand of end users whose gas supply is not interruptible on a commercial and measurable basis by agreement between the STTM User and an end user; and
- (b) any other quantity of natural gas which the STTM User intends to withdraw from the hub on a gas day, unless that quantity is included in an ex ante bid.

...

Rule 409: Price taker bids

(1) Subject to rule 412(1), a price taker bid must only relate to natural gas that the STTM User expects to withdraw from a hub on a particular gas day.

...

Rule 410: Timing of submissions of ex ante offers, ex ante bids and price taker bids

(1) If a Trading Participant expects to supply quantities of natural gas to, or withdraw quantities of natural gas from, a hub on a gas day, the Trading Participant must submit to AEMO in good faith:

- (a) ex ante offers, ex ante bids or price taker bids for that gas day that reflect; or
- (b) revisions to an earlier ex ante offer, ex ante bid or price taker bid for that gas day so as to reflect,

the Trading Participant's best estimate of the quantities of natural gas it expects to supply or withdraw on that gas day, as at each of the times specified in subrule (2).

...

371 Adelaide hub

(1) The STTM distribution system for the Adelaide hub comprises the Adelaide Metro sub network in the South Australian gas distribution system that is identified by the gas zone code 2101 in the Retail Market Procedures for South Australia

(2) The Adelaide hub comprises those custody transfer points that are connected to the STTM distribution system described in subrule (1) and specified in the STTM Procedures.

Rule 372: Sydney hub

(1) The STTM distribution system for the Sydney hub comprises:

- (a) the Wilton-Newcastle Network Section; and
- (b) the Wilton-Wollongong Network Section,

of the distribution pipeline owned at the STTM commencement date by Jemena Gas Networks (NSW) Ltd ACN 003 004 322 and referred to as "NSW Gas Networks", as those sections are defined from time to time in the applicable access arrangement for that pipeline.

(2) The Sydney hub comprises those custody transfer points that are connected to the STTM distribution system described in subrule (1) and specified in the STTM Procedures.

372A Brisbane hub

(1) The Brisbane hub comprises the custody transfer points specified in the STTM Procedures.

(2) The STTM distribution systems for the Brisbane hub are:

(a) the distribution systems for the Brisbane North and Ipswich distribution areas described in clauses 2.1 and 2.2 of Schedule 1 to Area Distribution Authority number DA–A-007 issued under the Gas Supply Act 2003 of Queensland; and

(b) the distribution system for the South East Queensland distribution area described in clause 2.1 of Schedule 1 to Area Distribution Authority number DA–A-009 issued under the Gas Supply Act 2003 of Queensland; and

(c) a facility that is taken to be an STTM distribution system under subrule (3).

(3) Unless otherwise specified in these rules or the STTM Procedures, for the purposes of this Part 20:

(a) a facility that is directly connected to an STTM pipeline at a custody transfer point that is part of the Brisbane hub where natural gas is withdrawn for consumption in that facility, is taken to be an STTM distribution system;

(b) the withdrawal of natural gas into the facility at that custody transfer point is taken to be a distribution service under a distribution contract for which the STTM pipeline operator is the contract issuer and the user of that service is the contract holder; and

(c) the user of that service is taken to be the STTM distributor for the facility.

(4) AEMO may, by written notice, exempt a person who is taken to be an STTM distributor under subrule (3) from a requirement to comply with a provision of this Part 20, subject to any conditions reasonably specified by AEMO.

3 AER view on price taker bids

An STTM user's price taker bid must only relate to quantities of natural gas the STTM user expects to withdraw from the hub into the distribution network.¹²

The Sydney hub is defined as the 'custody transfer points' connected to STTM distribution network.¹³ ¹⁴ The NGR describes withdrawals as being *from* the hub *into* a distribution network.¹⁵ Therefore, an STTM hub can be characterised as the point(s) where the transmission pipeline and distribution networks meet (as opposed to the wider area comprising the distribution network).¹⁶

The AER understands that if an STTM user is notified of a total change in linepack in a distribution network for a gas day, then the STTM user will be able to determine its share of the change in linepack for that gas day. Once the STTM user is aware of its share of a change in linepack, this in turn should change the quantity of gas the STTM user expects to withdraw from the hub.

It follows that if an STTM user is notified of a change in linepack within the distribution system, it should take account of this change in linepack in its price taker bid, to best meet the best estimate and good faith obligations set out in the NGR.

The AER notes in relation to price taker bids:

- the NGR allows STTM users to submit price taker bids in excess of forecast end user withdrawals. This is relevant to days where a change in linepack is positive and linepack needs to be increased.¹⁷
- the NGR requires STTM users to submit their forecast of the gas to be withdrawn from the hub (into the network) to meet end user demand. This is relevant to days when a change in linepack is negative and some end user demand is met by network linepack.

The AER's view is reliant on STTM users receiving notification of the change in linepack in the distribution network within a timeframe that enables them to change their price taker bids.

The AER considers that submitting price taker bids that take into account a change in line pack within the distribution network should lead to lower MOS volumes and lower total market payments.

However, the AER notes this outcome is reliant on STTM distributors and transmission pipeline operators providing timely, reliable and accurate information.

3.1 Example

On an upcoming gas day (the gas day) in the Sydney STTM, JGN is planning some maintenance and has calculated it will need to decrease the linepack within the distribution network by 20 TJ.

JGN notifies AEMO in advance of the planned reduction in linepack. AEMO then informs the STTM users and other stakeholders by a market notice.

¹² Rule 409

¹³ Rule 372

¹⁴ The Adelaide and Brisbane STTM hubs are also defined in the NGR as 'custody transfer points': rules 371 and 372A.

¹⁵ Rule 406(3)

¹⁶ The Brisbane hub has some customers directly connected to transmission pipelines. As there is technically no distribution network in these cases, the custody transfer points are defined as the point where the transmission pipeline meets the customer connection point.

¹⁷ Rule 406(4)(b) which applies to price taker bids

One of the STTM users (the STTM user), who is also a gas retailer, has forecast its unavoidable demand on the gas day to be 30 TJ.¹⁸ In other words, it has forecast that its customers will use 30 TJ of gas on the day.

Under normal circumstances (i.e. if there was no planned change in linepack within the distribution network) the STTM user would place a price taker bid for 30 TJ. This is because it would expect to withdraw 30 TJ from the hub into the distribution network in order to meet its customers' demand.

However, on the gas day, the linepack within the distribution network can only be reduced if less gas is withdrawn from the hub into the distribution network compared to the amount consumed in the distribution network.

The purpose of this Compliance Bulletin is to emphasise the following step:

The STTM user, instead of submitting a 30 TJ price taker bid, will need to submit a price taker bid for a lower amount because part of its customers' consumption will be supplied by the distribution network's linepack.

To do this, the STTM user will need to estimate its share of the change in linepack, and then adjust its price taker bid by this amount. This step will also need to be completed by every other STTM user that is going to submit a price taker bid for the gas day.

If the STTM user calculated its share of the change in linepack to be 5 TJ, it would submit a price taker bid of 25 TJ (30 TJ – 5 TJ).

Every STTM user who intends to submit price taker bids on the gas day will need to estimate their share of the change in linepack, and to either add (in the case of an increase in linepack) or subtract (in the case of a decrease in linepack) the amount from their price taker bid.

3.2 Price taker bids and ex ante bids

As noted above, this Compliance Bulletin has been prepared in response to concerns from STTM users related to price taker bids. Price taker bids typically represent close to 100% of all bids made in the Sydney network. However, the AER notes that STTM users may also submit ex ante bids.¹⁹

Although the majority of bidding is made up of price taker bids, STTM users should take account of any forecast share of change in linepack within the distribution network when submitting ex ante bids in the network as part of their general compliance with rule 410.

Any bid in a network should take account of its respective share of change in linepack within the distribution network.

¹⁸ Price taker bids will usually represent the level of unavoidable demand, meaning the demand will occur independent of the gas price on the day (eg. residential customer gas demand). Ex ante bids will usually represent the level of avoidable demand, meaning the demand is dependent on the gas price being at, or lower than, a given price (eg. demand from gas powered generators).

¹⁹ There are participants in Brisbane who submit both price taker bids and ex ante bids.