

**GAS SUPPLY HUB EXCHANGE AGREEMENT
IMPACT & IMPLEMENTATION REPORT – SUMMARY SECTION**

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| Issue Number | GSH IIR 009 | | |
| Impacted Jurisdiction (s) | South Australia, Queensland All Gas Supply Hub Trading Locations | | |
| Proponent | Darryl White | Company | Australian Energy Market Operator |
| Affected Gas Markets(s) | Gas Supply Hub | Consultation process (Ordinary or Expedited) | Ordinary |
| Industry Consultative forum(s) used | GSH Reference Group | Date Industry Consultative forum(s)consultation concluded | 2 August 2016 |
| Short Description of change(s) | Amendments to the Gas Supply Hub (GSH) Exchange Agreement to modify minimum order price, maximum quantity order size, minimum quantity order and parcel size for non-netted pre-matched products, and extending the Trading Window for pre-matched non-netted Daily products | | |
| Procedure(s) or Documentation impacted | GSH Exchange Agreement | | |
| Summary of the change(s) | Amendment of the GSH Exchange Agreement, <ul style="list-style-type: none"> • Reduce the minimum order price for Gas Supply Hub commodity products from \$0/GJ to -\$100/GJ • Increase the maximum quantity size for Balance of Day products from 1,450 GJ/h to 2,500 GJ/h and all other products from 32,000 GJ/d to 50,000 GJ/d • Reduce the minimum quantity order and parcel size for non-netted pre-matched products (except Balance of Day) from 1,000 GJ/d to 100 GJ/d • Extend Trading Window for pre-matched non-netted Daily products from the Delivery period commencing Gas Day D-2 to D-7, to for the Delivery period commencing Gas Day D-2 to D-30. | | |
| I&IR Prepared By | Darryl White | Approved By | Nathan White |
| Date I&IR published | 6th September 2016 | Scheduled date for end of consultation under EA 3.3, 3.4 or 3.6 | 4 th October 2016 |
| Email address for responses | Hub_Reference@aemo.com.au | | |
| AEMO contact for enquiries | Darryl White – 03 9609 8562 | | |

IMPACT & IMPLEMENTATION REPORT – DETAILED REPORT SECTION

CRITICAL EXAMINATION OF PROPOSAL

1. Description of change(s) and reasons for change(s)

Minimum Order Price

In June 2016 trading at the Moomba Gas Supply Hub trading locations commenced and facilitated the introduction of Spread products between Wallumbilla and Moomba.

The establishment of Moomba products can create trading opportunities between the Moomba hub and the Wallumbilla hub. There may be scenarios where negative prices may be required to facilitate transactions between the hubs. For a buyer, the transaction price may need to be negative to justify the transportation cost from the hub to their withdrawal location. While for a seller it may be preferable to trade at a negative price rather than flare or store the gas in the event of a large excess of supply.

The proposed change reduces the minimum order price for all Gas Supply Hub commodity products from \$0/GJ to -\$100/GJ.

Maximum Quantity Order Size

Since the commencement of the Gas Supply Hub, AEMO has observed a steady increase in the average quantity size of trades. While trade quantities have only been constrained by the maximum order quantity size on a limited number of occasions, a continuation of this trend could potentially impact a participant's ability to manage their positions in the most efficient number of transactions.

The proposed change increases the maximum quantity order size for Balance of Day products from 1,450 GJ to 2,500 GJ / hour, and for all other products from 32,000 GJ to 50,000 GJ / day.

Minimum Quantity and Parcel Order Size for Pre-Matched Non-Netted products

A reduction to the minimum quantity and parcel order size may encourage participants with smaller gas positions to participate in the Gas Supply Hub. However, a smaller parcel size may be undesirable for larger wholesale participants in managing their trading volumes as they might have a preference to minimize the number of transaction they enter into and deliver.

The proposed change will reduce the minimum order quantity and parcel size from 1,000 GJ / day to 100 GJ / day for pre-matched non-netted products. The minimum order quantity and parcel size of Balance-of-Day products will remain at 25 GJ / hour.

Extending the Trading Window for Pre-Matched Non-Netted Daily products

The Trading Window for a product defines the specific time period during which that product can be traded.

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| | <p>Extending the Trading Window for products that are traded on the Exchange risks overcrowding the market for certain delivery periods and splitting liquidity across tenors. Trading participants however may value the ability to transact certain products outside currently defined Trading Windows. While there is a preference to maximise the liquidity of exchange traded markets, extending the Trading Window for Pre-matched Non-Netted products would provide participants with greater flexibility in managing their forward positions while minimising adverse impact on exchange traded market liquidity.</p> <p>The proposed changes would extend the Trading Window for Pre-matched Non-Netted Daily products (currently Gas Day D-2 to D-7) to the Delivery period commencing Gas Day D-2 through to D-30.</p> |
| <p>2. Reference documentation</p> <ul style="list-style-type: none"> ▪ Exchange Agreement ▪ Other | <p><u>Exchange Agreement</u></p> <p>(see attachment A for a marked up version of the changes)</p> <p>Proposal:</p> <ul style="list-style-type: none"> • Schedule 4: Product Specifications for Daily Gas (Wallumbilla) • Schedule 5: Product Specifications for Day Ahead Gas (Wallumbilla) • Schedule 6: Product Specifications for Balance-of-Day Gas (Wallumbilla) • Schedule 7: Product Specifications for Weekly Gas (Wallumbilla) • Schedule 8: Product Specifications for Monthly Gas (Wallumbilla) • Schedule 9: Product Specifications for Daily Gas (Moomba) • Schedule 10: Product Specifications for Day Ahead Gas (Moomba) • Schedule 11: Product Specifications for Balance-of-Day Gas (Moomba) • Schedule 12: Product Specifications for Weekly Gas (Moomba) • Schedule 13: Product Specifications for Monthly Gas (Moomba) • Schedule 14: Product Specification for Day-Ahead Physical Gas Spread Product (Moomba-Wallumbilla) • Schedule 15: Product Specification for Daily Physical Gas Spread Product (Moomba-Wallumbilla) |
| <p>3. The high level details of the change(s)</p> <p>including:</p> <ul style="list-style-type: none"> ▪ A comparison of the existing operation with changed operation | <p><u>Minimum Order Price</u></p> <p><u>Current Operation</u></p> <p>The minimum order price a trading participants can currently submit when entering a trade order is \$0/GJ</p> <p><u>Proposed Operation</u></p> <p>The minimum order price a trading participants will be permitted to submit will be reduced to -\$100/GJ</p> |

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| <ul style="list-style-type: none"> A marked up version as amended (see section 1) | <p><u>Maximum Quantity Order Size</u></p> <p><u>Current Operation</u></p> <p>The maximum quantity order size a Trading participant can currently submit when entering a Balance of Day trade order is 1,450 GJ / hour, and 32,000 GJ / day for all other Gas Supply Hub products.</p> <p><u>Proposed Operation</u></p> <p>The maximum quantity order size a trading participant will be permitted to submit for Balance of Day trades will increase to 2,500 GJ / hour, and 50,000 GJ / day for all other products.</p> <p><u>Minimum Quantity and Parcel Order Size for Pre-Matched Non-Netted products</u></p> <p><u>Current Operation</u></p> <p>The minimum quantity and parcel order size a Trading participant can currently submit when entering a Balance of Day trade order is 25 GJ / hour, and 1,000 GJ / day for all other products.</p> <p><u>Proposed Operation</u></p> <p>The minimum quantity and parcel order size a trading participant will be permitted to submit for pre-matched non-netted products will reduce to 100 GJ / day, with the exception of Balance of Day products that remain at 25 GJ / hour.</p> <p><u>Extending the Trading Window for Pre-Matched Non-Netted Daily products</u></p> <p><u>Current Operation</u></p> <p>The Trading Window for Gas Supply Hub Daily products is from the Delivery period commencing Gas Day D-2 to D-7.</p> <p><u>Proposed Operation</u></p> <p>The Trading Window for pre-matched non-netted Daily products will be extended to the Delivery period commencing Gas Day D-2 to D-30.</p> |
| <p>4. Assessment of significant of change</p> <p>(eg: material, non-material or non-substantial)</p> | <p>The proposed amendment is a non-material change to current market operations.</p> |

ASSESSMENT OF LIKELY EFFECT OF PROPOSAL

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| <p>5. Overall Industry Cost / benefit (tangible /</p> | <p>AEMO anticipates there will be no costs for gas trading exchange members associated with the implementation of the proposed</p> |
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| <p>intangible / risk) analysis and/or cost estimates</p> | <p>change.</p> <p>The benefit of the proposal is that it will provide trading participants greater trade flexibility in relation to minimum order price and maximum order quantity size, allowing participants the ability to manage orders in a more efficient manner.</p> <p>The proposed decrease in the minimum order and parcel size for pre-matched non-netted products may encourage participants with smaller gas positions to participate in the Gas Supply Hub, as it allows them to incrementally manage their position relative to their size. As the transactions are pre-matched it allows participants the ability to opt-in through bi-lateral agreement by transacting in smaller parcels.</p> <p>In extending the Trading Window for Pre-matched Non-Netted products it provides trading participants greater flexibility in managing their forward positions outside the currently defined Trading Window, while still minimising the impact on exchange traded liquidity by not crowding the ETS trading screen.</p> |
| <p>6. The likely implementation effect of the change(s) on stakeholders</p> <p>(e.g. Industry or end-users)</p> | <p>There are no changes to participant interfaces associated with the proposed change.</p> |
| <p>7. Testing requirements</p> | <p>The proposed changes do not involve any changes to AEMO systems, however will involve configuration changes to the Trayport Exchange Trading System. AEMO will test these changes in conjunction with the Wallumbilla Hub Services changes for the October 2016 release.</p> |
| <p>8. AEMO's preliminary assessment of the proposal's compliance with rule 540(1) NGR:</p> <ul style="list-style-type: none"> - consistency with NGL and NGR, - appropriate with regard to national gas objective - appropriate with regard to likely compliance costs for Operator or Members | <p><u>Consistency with NGL and NGR</u></p> <p>The NGR provisions relating to the gas trading exchange requires the Exchange Agreement to set out, amongst other things, a description of the products offered on the exchange and the process for amending the Exchange Agreement.</p> <p><u>National Gas Objective</u></p> <p>The national gas objective is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply.</p> <p>The proposed changes will provide trading participants greater flexibility in managing their positions through the Gas Supply Hub.</p> <p><u>Potential compliance costs</u></p> <p>AEMO does not anticipate any additional compliance costs to gas trading exchange members associated with this proposal.</p> |

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| <p>9. Consultation Forum Outcomes</p> <p>(e.g. the conclusions made on the change(s) whether there was unanimous approval, any dissenting views)</p> | <p>The proposal was discussed at the Gas Supply Reference Group on 23 June 2016 and 2 August 2016.</p> <p>The proposed changes were broadly supported by Gas Supply Hub Reference Group members.</p> <p>During the consultation one market participant stated a view that no minimum order quantity should be set for pre-matched non-netted products. This would allow market participants to use their discretion when trading smaller quantities. Feedback from other market participants however stated that 100 GJ was sufficient and it would be unlikely they would be interested in trading volumes any smaller.</p> |
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| RECOMMENDATION(S) | |
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| <p>10. Should the proposed changes be made, (with or without amendments)?</p> | <p>AEMO recommends that the proposal should be implemented.</p> |
| <p>11. If applicable, a proposed effective date for the proposed change(s) to take effect and justification for that timeline.</p> | <p>Proposed implementation date is 26 October 2016.</p> <p>The proposed implementation date coincides with the proposed implementation date for Wallumbilla Hub Services release.</p> |

ATTACHMENT A

Documentation Changes

See draft GSH Exchange Agreement with amendments as specified above (section 2)

Blue represents additions. Red and strikethrough represents deletions – Marked up changes.

1.1 Daily Gas Amendments

The Product Specifications in the schedules listed below will be amended:

- Schedule 4: Product Specifications for Daily Gas (Wallumbilla)
- Schedule 9: Product Specifications for Daily Gas (Moomba)

Each Product Specification will be amended as shown below:

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| Product Limits | Minimum Price: \$0 -100/GJ Maximum Price \$999/GJ Maximum Quantity 3250 ,000 GJ (3250 TJ) |
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In Schedule 4, the 'Trading Window' definition will be amended as follows:

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| Trading Window | For Gas Day D, Trading Hours on each of Gas Day D-7 to Gas Day D-2. For a Pre-matched Trade where the Trading Participants have specified that Delivery Netting is not to apply, the Trading Window for Gas Day D are Trading Hours on each of Gas Day D-30 to Gas Day D-2. |
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In Schedule 4, the 'Pre-matched Trades' definition will be amended as follows:

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| Pre-matched Trades | Permitted. Trading Participants may specify that Delivery Netting is not to apply to a Pre-matched Trade (see clause 13.2(a2) of this agreement). If the Trading Participants have specified that Delivery Netting is not to apply to the Pre-matched Trade, the Trading Participants may also specify that the delivery point for the Pre-matched Trade is a delivery point agreed between the Trading Participants that is not specified in a Product Specification (alternate delivery point). If the Trading Participants have specified that Delivery Netting is not to apply to the Pre-matched Trade, the |
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| | Parcel Size and the Minimum Transaction Quantity is 100GJ. |
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1.2 Balance-of-Day Gas Amendments

The Product Specifications in the schedules listed below will be amended:

- Schedule 6: Product Specifications for Balance-of-Day Gas (Wallumbilla)
- Schedule 11: Product Specifications for Balance-of-Day Gas (Moomba)

Each Product Specification will be amended as shown below:

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| Product Limits | Minimum Price: \$0 -100/GJ Maximum Price \$999/GJ Maximum Quantity 12,4500 GJ (1.45 2.5TJ) |
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1.3 Physical Gas Spread Product Amendments

The Product Specifications in the schedules listed below will be amended:

- Schedule 14: Product Specification for Day-Ahead Physical Gas Spread Product (Moomba-Wallumbilla)
- Schedule 15: Product Specification for Daily Physical Gas Spread Product (Moomba-Wallumbilla)

Each Product Specification will be amended as shown below:

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| Product Limits | Minimum Spread Product Price: - \$100/GJ (ie negative) Maximum Spread Product Price \$100/GJ Maximum Quantity 3250 ,000 GJ (3250 TJ) |
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1.4 Other Product Amendments

The Product Specifications in the schedules listed below will be amended:

- Schedule 5: Product Specifications for Day Ahead Gas (Wallumbilla)
- Schedule 7: Product Specifications for Weekly Gas (Wallumbilla)
- Schedule 8: Product Specifications for Monthly Gas (Wallumbilla)
- Schedule 10: Product Specifications for Day Ahead Gas (Moomba)
- Schedule 12: Product Specifications for Weekly Gas (Moomba)
- Schedule 13: Product Specifications for Monthly Gas (Moomba)

Each Product Specification will be amended as shown below:

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|----------------|---|
| Product Limits | Minimum Price: \$0 -100/GJ Maximum Price \$999/GJ Maximum Quantity 3250 ,000 GJ (3250 TJ) |
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In Schedules 5, 7 and 8, the 'Pre-matched Trades' definition will be amended as follows:

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| Pre-matched Trades | <p>Permitted.</p> <p>Trading Participants may specify that Delivery Netting is not to apply to a Pre-matched Trade (see clause 13.2(a2) of this agreement).</p> <p>If the Trading Participants have specified that Delivery Netting is not to apply to the Pre-matched Trade, the Trading Participants may also specify that the delivery point for the Pre-matched Trade is a delivery point agreed between the Trading Participants that is not specified in a Product Specification (alternate delivery point).</p> <p>If the Trading Participants have specified that Delivery Netting is not to apply to the Pre-matched Trade, the Parcel Size and the Minimum Transaction Quantity is 100GJ.</p> |
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