

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

Issue Number	GSH IIR 010		
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	11 November 2016
Short Description of change(s)	Amendments to the Gas Supply Hub (GSH) Exchange Agreement, Settlements and Prudential Methodology, GSH Reports Guide, and GSH End of Day Benchmark Methodology to complete implementation of the Optional Hub Services model, in order to establish a single Wallumbilla product by March 2017.		
Procedure(s) or Documentation impacted	<ul style="list-style-type: none"> • GSH Exchange Agreement • GSH Settlements and Prudential Methodology • Gas Interface Protocol <ul style="list-style-type: none"> ○ Guide to Gas Supply Hub Reports • Gas Supply Hub End of Day Benchmark Methodology 		
Summary of the change(s)	<p>Amendment of the GSH Exchange Agreement for the inclusion of:</p> <ul style="list-style-type: none"> • New Wallumbilla (WAL) product <ul style="list-style-type: none"> ○ Trading location groups together delivery points at, and connecting to, the Wallumbilla gas hub. • New Delivery Matching concept: <ul style="list-style-type: none"> ○ Process of matching Trading Participants for the purpose of gas delivery. ○ Matching process prioritises buyers and sellers located at the same delivery point. ○ Where elected by a Trading Participant, the Delivery Matching process may prioritise matching within a defined set of delivery points (priority grouping). ○ Buy and sell positions that cannot be matched at a preferred delivery point (or priority group) will be matched at the default delivery point (Wallumbilla High Pressure Trade Point). • The ability for Trading Participants to update the delivery point associated with a transaction prior to gas delivery. • New South East Queensland (SEQ) product. <ul style="list-style-type: none"> ○ Transactions for delivery at the RBP In Pipe Trade Point. • New WAL – SEQ Spread Product. • Changes to the Balance of Day product - it will have a new name, and references to the product being traded in GJ / hr will be removed and it will now trade on a GJ/day basis like other products. 		

	<ul style="list-style-type: none"> • Moving delivery netting run time from D-2 5pm to D-1 1pm. • Adjusting delivery netting fall back timing. • New Low Pressure Settlement Adjustment concept. <p>Amendment of the GSH Settlements Methodology:</p> <ul style="list-style-type: none"> • Low Pressure Settlement Adjustment - Physical Gas transaction settlement amounts will be adjusted if delivery occurs at a low pressure location. <p>Amendment of the Guide to GSH Reports:</p> <ul style="list-style-type: none"> • A new report 'Delivery Netting Preferences Report'. <p>Amendment of Gas Supply Hub End of Day Benchmark Methodology:</p> <ul style="list-style-type: none"> • RBP, SWQP and QGP trading locations replaced with the WAL trading location. • The Wallumbilla benchmark price will be determined using transactions, bids and offers in the WAL product. 		
I&IR Prepared By	Darryl White	Approved By	Paul Austin
Date I&IR published	21 December 2016	Scheduled date for end of consultation under EA 3.3, 3.4 or 3.6	3 February 2017
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IMPACT & IMPLEMENTATION REPORT – DETAILED REPORT SECTION

CRITICAL EXAMINATION OF PROPOSAL

<p>1. Description of change(s) and reasons for change(s)</p>	<p>The Wallumbilla trading location will group together the pipelines connecting at Wallumbilla pooling together buyers and sellers operating across different facilities. To transport and trade gas between pipelines, hub services (redirection and compression) are required. The Wallumbilla trading location will be delivered through the Optional Hub Services model. The Optional Hub Services model supports the efficient provision of hub services through:</p> <p>Matching and netting off-setting delivery obligations to minimise service requirements and delivery costs</p> <p>A new product to enable the secondary trading of hub services (implemented in October 2016)</p> <p>The use of a common (default) location for the commodity product to provide participants with greater certainty on the maximum service requirements for their transactions</p> <p>Reasons for the change include:</p> <ul style="list-style-type: none"> • Establish a Wallumbilla trading product to pool together buyers and sellers operating across Wallumbilla; • Facilitate participation in the Wallumbilla gas market by supporting the secondary trading of Wallumbilla hub services; • The model builds on the existing GSH framework and provides an opportunity for flexible development of the Wallumbilla gas trading hub and can be implemented within the short-term; • Its implementation presents a low regulatory and market impact, whereby it can be implemented within the existing regulatory framework without disrupting existing contractual arrangements. • It does not preclude further market development in the future (for example, a Single Trading Zone model). <p>The Optional Hub Services model was developed in conjunction with the Gas Supply Hub Reference Group during 2015. The Optional Hub Services model was presented to, and endorsed by, the December 2015 meeting of the COAG Energy Council.</p>
<p>2. Reference documentation</p> <ul style="list-style-type: none"> ▪ Exchange Agreement 	<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"> • Settlements and Prudential Methodology • GSH Benchmark Price Methodology 	<ul style="list-style-type: none"> • Amendments to section 12.5, 13.1.1, 13.2 to facilitate a transition from current suite of products to new suite products and market arrangements. • Amendments to section 14.7 to provide for concept of Delivery Matching, priority groupings, common delivery point for a trading location, and change delivery netting cut off times. • Amendments to section 17 for Low Pressure Settlement Adjustment concept. • Schedule 2 changes for new trading locations at Wallumbilla and SEQ • Schedule 4, 5, 6, 7, 8, 10, 11, 14, 17 specify the last trading date is 27 March 2017. • All references to 'Balance of Day' product in schedules changed to 'On-the-Day'. • Additional schedules 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 to facilitate trading at Wallumbilla and SEQ trading locations as well as a spread product to facilitate trading between Wallumbilla and SEQ. • Addition of an Appendix listing a summary of all products. <ul style="list-style-type: none"> • Addition of Low Pressure Settlement Adjustment • Removal of RBP, SWQP and QGP points in calculation, and change step 2 times from 14:00 EST to 13:00 EST
<p>3. The high level details of the change(s) of the change(s)</p> <p>including:</p> <ul style="list-style-type: none"> ▪ A comparison of the existing operation with changed operation ▪ A marked up version as amended (see section 1) 	<p><u>Current Operation (Balance of Day Product)</u></p> <p>Balance of Day Products are traded unit is GJ / hour</p> <p><u>Proposed Operation (On the Day Product)</u></p> <p>Balance of Day product is renamed the On the Day Product and the traded unit is GJ / day consistent with all other products.</p> <p><u>Current Operation (Delivery Matching)</u></p> <p>Seller led process where only the seller selects a delivery point at a location, and the buyer must receipt at the point specified by the seller (and communicated through the Delivery Obligation report).</p> <p><u>Proposed Operation (Delivery Matching)</u></p> <ul style="list-style-type: none"> • For the Wallumbilla and SEQ trading locations for which Delivery Matching applies, both buyers and sellers will now be able to nominate a preferred location for gas delivery for their traded quantity. All orders (both bids and offers) will require the trader to nominate a preferred gas delivery location at the time of placing the order.

- Traders will be able to update their preferred location(s) for gas delivery through a new Delivery Point web interface. This is an optional step.
- Traders' positions and preferred delivery location will be input into the delivery matching module. The module will take both buyers and sellers' nominated preferred delivery location and attempt to match delivery positions at preferred locations (or if selected, at a nearby location that reduces the cost associated with the delivery of a transaction – referred to as a priority group in this paper).
- Any trade position unable to be matched at a trader's preferred point (or in a priority group), will be matched at the common point for the hub (Wallumbilla High Pressure Trade Point).
- The location at which the positions have been matched will be specified in the Gas Delivery Obligations report.
- Traders make nominations to facility operators to effect delivery and title transfer
- Delivery Matching will not apply to the Moomba trading location

Current Operation (Trading Locations)

Wallumbilla Trading locations are RBP, QGP and SWQP, split into 3 distinct trading locations

Proposed Operation (Trading Locations)

- One trading location for gas trading at Wallumbilla (called 'Wallumbilla') will replace the RBP, QGP and SWQP trading locations.
- The default delivery for the Wallumbilla trading location is the Wallumbilla High Pressure Trade Point. Pricing of transactions would be based on delivery to the Wallumbilla High Pressure Trade Point.
- A new trading location, called 'SEQ' (South-East Queensland) will be available for trade, with a spread product between both locations (operating the same way as the existing Moomba and Wallumbilla Spread Product). The RBP IPT is the delivery point for this trading location.
- Moomba Trading Locations are unchanged.

Current Operation (Delivery netting timing)

- Delivery netting run occurs at 5pm D-2
- Fall back delivery netting run occurs at midnight D-2

Proposed Operation (Delivery netting timing)

- Delivery netting occurs at 1pm D-1

	<ul style="list-style-type: none"> • Fall back delivery netting timing occurs at 3pm D-1 <p><u>Current Operation (Low pressure settlement adjustment)</u> Low pressure settlement adjustment concept does not exist.</p> <p><u>Proposed Operation (Low pressure settlement adjustment)</u> To encourage the use of low pressure delivery locations by trading participants that have long-term firm compression contracts, a discount would be applied to transaction settlement amounts when gas delivery occurs at a low pressure location that reflects the seller's avoided hub service cost.</p> <p>The discount would be a fixed price struck between the firm and as-available tariffs. The discount would provide an upside for the buyer and seller to use the low pressure locations:</p> <ul style="list-style-type: none"> • For firm contract holders the discount applied to their purchase would exceed their compression cost, and • For trading participants using as-available services, the discount applied to their sale would be less than their avoided compression cost. <p>The low pressure delivery settlement adjustment will be applied to the participants' Physical Gas settlement amount.</p>
<p>4. Assessment of significant of change</p> <p>(e.g.: material, non-material or non-substantial)</p>	<p>The proposed amendment is a material change to current market operations.</p>

ASSESSMENT OF LIKELY EFFECT OF PROPOSAL	
<p>5. Overall Industry Cost / benefit (tangible / intangible / risk) analysis and/or cost estimates</p>	<p>Costs for gas trading exchange members associated with the implementation is dependent on whether participants choose to update their trading processes and systems for the new products and utilise the optional delivery preference system. There is one additional report to be published.</p> <p>The main cost for members is associated with training in the new Wallumbilla product and Delivery Matching process. Participation in the Gas Supply Hub is voluntary and use of the new Delivery Matching process¹, Delivery Point web interface and Low Pressure Settlement Adjustments are effectively optional.</p> <p>AEMO estimates its costs for implementing the entire Optional Hub Services model to be in the order of \$400,000 to \$419,000 including development, testing and implementation. This</p>

¹ In accordance with the Delivery Matching process, a Trading Participant that specifies the use of the Wallumbilla High Pressure Trade Point is guaranteed to be matched at that delivery point.

	<p>component represents approximately 60% of the total cost of the project.</p> <p>Benefits of the proposal include:</p> <ul style="list-style-type: none"> • Hub services underpin gas trading at the Wallumbilla hub – which is a key link in facilitating trading between northern and southern gas markets. The proposal develops standard terms for the trading of hub services (compression) and facilitates competition between hub service providers; • The new Delivery Matching process has the potential to reduce hub service requirements and transaction delivery costs for Trading Participants; • The new Delivery Point interface will provide Trading Participants with the ability to update their preferred delivery location ahead of the delivery gas day; • The Wallumbilla product creates a standard location for the delivery of forward physical transactions. It has the potential to increase liquidity benefits of pooling together trading participants operating across Wallumbilla; • A spread product between Wallumbilla and SEQ will support trading, and efficient allocation of gas, between the two key trading locations. • The Wallumbilla benchmark price is the reference price for the ASX Wallumbilla gas futures contract. Under the proposal the benchmark price will be based on transactions and orders in the new Wallumbilla product only. The new methodology eliminates basis risk associated with the current methodology that is based on the average of transaction prices across SWQP, RBP and QGP.
<p>6. The likely implementation effect of the change(s) on stakeholders (e.g. Industry or end-users)</p>	<p>The implementation of the changes will allow trading to occur at the new Wallumbilla and SEQ locations through the GSH exchange. Implementation will occur outside of market trading hours, and as such is not expected to impact on existing operations. To ensure a smooth transition, any participant orders in the system at market close the night prior to the go live date will be deleted.</p>
<p>7. Testing requirements</p>	<p>Incorporated in Section 5 above.</p>
<p>8. AEMO's preliminary assessment of the proposal's compliance with rule 540(1) NGR: - consistency with NGL and NGR, - appropriate with regard to national gas objective</p>	<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>- appropriate with regard to likely compliance costs for Operator or Members</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>
<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 proposed changes were discussed at the Gas Supply Reference Group (GSHRG) on 25 May 2016, 23 June 2016, 2 August 2016, 8 September 2016 and 18 October 2016.</p> <p>The proposed changes were broadly supported by GSHRG members.</p> <p>Summary of concerns raised by GSHRG members:</p> <ul style="list-style-type: none"> • The new Delivery Matching process, Delivery Point interface and Low Pressure Settlement Adjustment add complexity to trading operations. <p>AEMO response: Use of the new features of the Wallumbilla product are effectively optional for Trading Participants. Trading Participants can make use of these new features as and when it benefits their trading operational processes.</p> <ul style="list-style-type: none"> • The location for the delivery of Wallumbilla transactions, and hence delivery costs, are uncertain at the time of a transaction. <p>AEMO response: The default delivery point for the Wallumbilla product is the Wallumbilla High Pressure Trade Point. As such, pricing of transactions would be based on delivery to the Wallumbilla High Pressure Trade Point. The Delivery Matching process may allow AEMO to match buyers and sellers for delivery at a preferred location that reduces their hub service requirements.</p>

RECOMMENDATION(S)	
<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 28 March 2017.</p> <p>The proposed implementation date coincides with the proposed implementation date for Wallumbilla Product release.</p>
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ATTACHMENT A

Documentation Changes

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

1. See draft Exchange Agreement V9.0 with amendments as specified above (section 2)
2. Gas Supply Hub Interface Protocol

FORM OF DOCUMENTATION	DOCUMENT	VERSION
Reports	Guide to Gas Supply Hub Reports Purpose: specify all of the reports published by the Operator on its Gas Hub Direct System (to trading participants and the public).	1.7

3. See draft GSH Benchmark Price Methodology V2.0 with amendments as specified above (section 2)
4. See draft Settlements and Prudential methodology V4.0 with amendments as specified above (section 2)