

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

Issue Number	GSH IIR 003		
Impacted Jurisdiction (s)	Queensland All GSH Trading Locations		
Proponent		Company	Australian Energy Market Operator
Affected Gas Markets(s) <ul style="list-style-type: none"> ▪ Retail ▪ Wholesale ▪ Bulletin Board ▪ STTM 	Gas Supply Hub	Consultation process (Ordinary or Expedited)	Ordinary
Industry Consultative forum(s) used	GSH Reference Group	Date Industry Consultative forum(s)consultation concluded	29 th July 2014 30 th October 2014 27 th November 2014
Short Description of change(s)	Amendments to the Gas Supply Hub Exchange Agreement to provide for the inclusion of a calendar month product.		
Procedure(s) or Documentation impacted	GSH Exchange Agreement – additional Schedule to include the monthly product specification. GSH Exchange Fees – inclusion of a monthly product exchange fee GSH Reallocation Procedure – extend days for the End Date GSH Settlements and Prudential Methodology – extend days for Forward amount per Reallocation. GSH Interface Protocol – updating the reference to the Guide to Gas Supply Hub reports document Guide to Gas Supply Hub Reports – inclusion of monthly product data		
Summary of the change(s)	Amendment of the Exchange Agreement for the inclusion of an additional Schedule for the ‘Product Specification for Monthly Gas’. Amendment to GSH Exchange Fees for the inclusion of a monthly product ‘Variable Transaction Fee’. Amendments to the GSH Reallocation Procedure and GSH Settlements and Prudential Methodology to account for longer dated contracts in forward Reallocation. Amendments to the GSH Interface Protocol to update the version reference of the Guide to Gas Supply Hub Reports document. Amendments to the Guide to Gas Supply Hub Reports to include monthly product data.		
I&IR Prepared By	Angelo Mantsio	Approved By	Peter Geers
Date I&IR published	18 March 2015	Scheduled date for end of consultation under EA 3.3, 3.4 or 3.6	17 April 2015
Email address for responses	Hub_Reference@aemo.com.au		
AEMO contact for enquiries	Angelo Mantsio – 07 3347 3035		

IMPACT & IMPLEMENTATION REPORT – DETAILED REPORT SECTION

CRITICAL EXAMINATION OF PROPOSAL

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

The ability to buy or sell physical gas on a monthly basis would provide industry with an additional tool for managing physical gas portfolio requirements, in response to short term supply, production or customer demand variations. Trading in monthly products would also provide industry additional transparency and a longer dated forward curve.

The development of a liquid forward physical market would allow buyers and sellers the option to replace a component of their long term gas requirements with forward-dated products that are transacted on a short to medium-term basis. For energy retailers, forward-dated products could be used to build up their supply portfolio to match seasonal variations in demand and would also provide the flexibility to adjust their supply portfolio in response to retail customer churn and energy market conditions.

The tenor of a monthly product also better aligns with domestic and international exchange traded energy markets, allowing for greater facilitation of cross-commodity trades, and fuel hedging. With the impending launch of the ASX monthly GSH Futures contract, the availability of a physical monthly product will allow trading participants to transition a financial position to a physical position with minimal basis risk.

Product Schedule

The Delivery Period of a monthly product will be the gas days in a calendar month. It is proposed that the general terms and conditions of monthly products will be consistent with GSH daily and weekly products. This will allow participants to open and close trading positions using any combination of the different trading products, allow delivery positions to be netted across different products and in general simplify the implementation of the products. A monthly product would therefore require uniform delivery of the transacted quantity of gas each day during the calendar month.

It is proposed that the trading of the monthly products will close two days prior to the first delivery gas day of the contract, and that three separate monthly products be listed at all times. There will be no listed monthly product for a month once the Delivery Period for that month has commenced.

GSH Exchange Fees

Monthly products, as a new GSH product, will require an amendment to the Gas Supply Hub – Exchange Fees, for the inclusion of a new Variable Transaction Fee for the monthly product. In accordance with Part 22 of the National Gas Rules,

	<p>AEMO is required to consult with gas trading exchange members on the structure, introduction and determination of exchange fees. AEMO is proposing a Variable Transaction Fee of \$0.01/GJ for the monthly product. In accordance with Part 22 of the National gas Rules, the exchange fee for the monthly product was determined on the basis of being sufficient to cover AEMO's budgeted costs of establishing, operating and administering the gas trading exchange for the monthly product, while attempting to minimise transaction costs to participants and assist market liquidity.</p> <p><u>GSH Reallocation Procedure</u></p> <p>AEMO are proposing to extend the End Date for Reallocations from 3 months to 180 days from the submission date, to account for the longer dated forward products.</p> <p><u>GSH Settlements and Prudential Methodology</u></p> <p>AEMO are proposing to extend the assessment window for Forward amount per Reallocation to account for the longer dated forward products.</p> <p><u>GSH Interface Protocol</u></p> <p>AEMO are proposing to update the version reference of the 'Guide to Gas Supply Hub Reports' document</p> <p><u>Guide to Gas Supply Hub Reports</u></p> <p>AEMO are proposing amendments to the 'Guide to Gas Supply Hub Reports', to include monthly product transaction data.</p>
<p>2. Reference documentation</p> <ul style="list-style-type: none"> ▪ Exchange Agreement ▪ Other 	<p><u>Exchange Agreement</u></p> <p>Proposal: Inclusion of a new 'Schedule 7: Product Specification for Monthly Gas' (see Attachment A)</p> <p><i>Other documentation</i> (see Attachment B)</p> <p><u>GSH Exchange Fees</u></p> <p>Proposal: Inclusion of a 'Variable Transaction Fee' for monthly products</p> <p><u>GSH Reallocation Procedure</u></p> <p>Proposal: Extend the End Date for Reallocations from 3 month to 180 days from the submission date</p> <p><u>GSH Settlements and Prudential Methodology</u></p> <p>Proposal: Extend assessment window for Forward amount per Reallocation to account for longer dated forward products</p> <p><u>GSH Interface Protocol</u></p> <p>Proposal: Update the version reference of the 'Guide to Gas</p>

	<p>Supply Hub Reports' from '1.2' to '2.0'</p> <p><u>Guide to Gas Supply Hub Reports</u></p> <p>Proposal: Inclusion of monthly product transaction data in the 'Guide to Gas Supply Hub Reports'</p>
<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 ▪ A marked up version as amended (see section 1) 	<p><u>Current Operation</u></p> <p>The current products listed on the Gas Supply Hub at any time are a single Balance of Day and Day Ahead product, six Daily and four Weekly products for the three trading locations. The Variable Transaction Fee for these products are \$0.03/GJ for daily products and \$0.02/GJ for weekly products.</p> <p><u>Proposed Operation</u></p> <p>Under the proposed amendment three additional monthly products are to be listed, with a Variable Transactions Fee of \$0.01/GJ for monthly products. The general terms and conditions of the monthly products will be consistent with GSH Daily and Weekly contracts with no impact on existing products. To account for longer dated listing of the monthly products, the End Date for Reallocations is to be extended from 3 months to 180 days from the submission date, and the assessment window for Forward amount per Reallocation is to be extended to account for the new products.</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 with no impact on existing products. The inclusion of the additional monthly products will however extend the forward trading period, assisting participants in forward contracting, and providing a longer dated forward curve and increased price transparency.</p>

ASSESSMENT OF LIKELY EFFECT OF PROPOSAL	
<p>5. Overall Industry Cost / benefit (tangible / intangible / risk) analysis and/or cost estimates</p>	<p>AEMO anticipated costs to gas trading exchange members in implementing this proposal are minimal.</p> <p>AEMO estimates its costs at implementing the proposal to be in the order of \$40,000 including development, testing and implementation.</p> <p>Business Analyst</p> <ul style="list-style-type: none"> • Requirements Description: 8d <p>Development</p> <ul style="list-style-type: none"> • Analysis and design: 2d • Script for proposed Configuration changers: 2d • Test Support: 7d

	<ul style="list-style-type: none"> • Implementation: 1d <p>Testing</p> <ul style="list-style-type: none"> • Test Plan: 5d • Test Execution: 10d • Test Leading and Reporting: 3d • UAT Support and Environment: 5d <p>Pre – Production</p> <ul style="list-style-type: none"> • Support: 2d <p>Production</p> <ul style="list-style-type: none"> • Implementation: 2d <p>Benefits of the proposal are as follows:</p> <ul style="list-style-type: none"> • The listing of monthly products on the GSH will provide industry the option to replace a component of their long term gas requirements with forward-dated products that are transacted on a short to medium-term basis. • Trading in monthly products would provide industry additional transparency and a longer dated forward curve. • The tenor of a monthly product better aligns with domestic and international exchange traded energy markets, allowing for greater facilitation of cross-commodity trades, and fuel hedging. • With the impending launch of the ASX monthly GSH Futures contract, the availability of a physical monthly product will allow trading participants to transition a financial position to a physical position with minimal basis risk.
<p>6. The likely implementation effect of the change(s) on stakeholders (e.g. Industry or end-users)</p>	<p>Incorporated in section 5 above</p> <p>The proposed amendment will have no impact on existing products and operations, with no anticipated functional changes to existing participant system interfaces and reports (data for monthly transactions will be published in existing reports).</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:</p> <ul style="list-style-type: none"> - consistency with NGL and NGR, - appropriate with regard 	<p><u>Consistency with NGL and NGR</u></p> <p>The NGR specifically provides for a gas trading exchange for the buying and selling of natural gas or related goods or services, including pipeline capacity, but otherwise does not limit the products that may be traded on the exchange. As such, AEMO believes that the monthly product is consistent with the NGL and NGR.</p>

<p>to national gas objective - appropriate with regard to likely compliance costs for Operator or Members</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 listing of monthly products in the Gas Supply Hub will provide industry with an additional tool for managing physical gas portfolio requirements, in response to short term supply, production or customer demand variations. Trading in monthly products would also provide industry additional price transparency and a longer dated forward curve. As such, AEMO believes that the monthly product is appropriate with regard to the national gas objective.</p> <p><u>Potential compliance costs</u></p> <p>AEMO believes the costs to gas trading exchange members in implementing this proposal are minimal. AEMO does not believe there will be any ongoing costs to gas trading exchange members to comply with this proposal.</p> <p>AEMO estimates its costs for implementing the proposal to be in the order of \$40,000 including development, testing and implementation. AEMO estimates that ongoing costs to AEMO to comply with this proposal will not be material.</p> <p><u>Exchange Fees</u></p> <p>In accordance with the National Gas Rules Part 22, 534(3), AEMO is required to consult with gas trading exchange members on the structure, introduction and determination of exchange fees. AEMO are proposing a Variable Transaction Fee of \$0.01/GJ monthly product fee. The exchange fee was determined on the basis of being sufficient to cover AEMO's budgeted costs of establishing, operating and administering the trading exchange for the monthly product, while attempting to minimise transaction costs to participants and assist market liquidity.</p>
<p>9. Consultation Forum Outcomes (e.g. the conclusions made on the change(s) whether there was unanimous approval, any dissenting views)</p>	<p>The proposal has been discussed at the Gas Supply Reference Group on 29 July 2014, 30 October 2014 and 27 November 2014.</p> <p>The proposal to list monthly products on the Gas Supply Hub was broadly supported by members of the Gas Supply Hub Reference Group with a monthly product seen as the next step in the evolution of the Gas Supply Hub. There was broad agreement to maintain the general terms and conditions as per daily and weekly products.</p>

RECOMMENDATION(S)

10. Should the proposed changes be made, (with or without amendments)?	AEMO recommends that the proposal should be implemented.
11. If applicable, a proposed effective date for the proposed change(s) to take effect and justification for that timeline.	Proposed implementation date is the end of May 2015, this coincides with the AEMO mid-year software release, minimising the implementation cost.

ATTACHMENT A

Schedule 7: Product Specifications for Monthly Gas

1 RBP Trading Location

Product Specification for Weekly Physical Gas for Delivery at the RBP Trading Location	
Commodity	Gas complying with the Gas Specification.
Gas Day commencement	8:00am AEST
Delivery Period	Calendar month consecutive Gas Days, beginning at 8:00 on the first day of the calendar month and ending at 8:00 on the first day of the immediately following calendar month.
Delivery Point	The RBP Trading Location, at the Delivery Point specified in the Order, being one of the following: <ul style="list-style-type: none"> - Run 3 - Run 4 - Run 7 - RBP In Pipe Trade Point, as defined in schedule 2 for the RBP Trading Location.
Trading Window	For a Delivery Period commencing on Gas Day D, Trading Hours on each Gas Day commencing 3 calendar months and 1 calendar day prior to the calendar month in which Gas Day D falls and ending on D-2 prior the commencement of the calendar month in which Gas Day D falls.
Parcel Size	1000 GJ (1 TJ) for each Gas Day in the Delivery Period
Price	The price is to be expressed in dollars per GJ.
Product Limits	Minimum Price: \$0/GJ Maximum Price \$999/GJ Maximum Quantity 32,000 GJ (32 TJ)
Unit	GJ
Admission to trade	Automatic
Gas Specification	The gas specification applicable to the Delivery Point as determined in accordance with schedule 2.
Flow Rate	Even flow rate through each Gas Day in the Delivery Period.
Pressure	The pressure range applicable to the Delivery Point as determined in accordance with schedule 2.
Partial acceptance of Orders	Permitted if specified in the Order.

Minimum Transaction Quantity	1000 GJ (1 TJ) per Gas Day in the Delivery Period unless a larger number is specified in the Order.
Expiry Time	Unless an earlier time is specified in the Order, an Order for a Delivery Period commencing on Gas Day D expires at the end of the Trading Window.
Automatic withdrawal	Applicable to open Orders at the end of each trading day after 5:00pm.
Order Quantity to be displayed	The whole of the Order Quantity will be displayed unless otherwise specified in the Order.
Delivery Netting	Applicable
Special conditions	Each Trading Participant who submits an Order in relation to this Product represents and warrants for the purposes of this agreement that the Trading Participant has all necessary rights under agreements with the Gas Transporter at the Delivery Point (as identified in Schedule 4) to deliver (in the case of the Seller) or accept (in the case of the Buyer) the Transaction Quantity.

2 QGP Trading Location

Product Specification for Monthly Physical Gas for Delivery at the QGP Trading Location	
Delivery Point	The QGP Trading Location, at the Delivery Point specified in the Order, being one of the following: <ul style="list-style-type: none"> - Run 3 - Run 10 as defined in schedule 2 for the QGP Trading Location.
All other terms	Except for the Delivery Point, this Product Specification is the same as the Product Specification for Monthly Physical Gas for Delivery at the RBP Trading Location in item 1 of this schedule.

3 SWQP Trading Location

Product Specification for Monthly Physical Gas for Delivery at the SWQP Trading Location	
Delivery Point	The SWQP Trading Location, at the Delivery Point specified in the Order, being one of the following: <ul style="list-style-type: none"> - Fairview - Wallumbilla Notional Point - SWQP In Pipe Trade Point as defined in schedule 2 for the SWQP Trading Location.
All other terms	Except for the Delivery Point, this Product Specification is the same as the Product Specification for Monthly Physical Gas for Delivery at the RBP Trading Location in item 1 of this schedule.

ATTACHMENT B

Documentation Changes

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

1. GSH Settlements and Prudential Methodology

5.3.2 Forward amount per Reallocation

(a) Forward estimate for Dollar Reallocation r where Market Participant p is the Debit Participant: $FDRD(p,r) = \sum d (DA(r,d))$

Where $pd \leq d \leq pd + 44131$ days.

(b) Forward estimate for Dollar Reallocation r where Market Participant p is the Credit Participant: $FDRC(p,r) = \sum d (DA(r,d) \times -1)$

Where $pd \leq d \leq pd + 34124$ days.

(c) Forward estimate for Energy Reallocation r where Market Participant p is the Debit Participant: $FERD(p,r) = \sum d (GQ(r,d,l) \times RAP(pd-1,l) \times dm)$

Where $pd \leq d \leq pd + 44131$ days.

(d) Forward estimate for Energy Reallocation r where Market Participant p is the Credit Participant: $FERC(p,r) = \sum d (GQ(r,d,l) \times RAP(pd-1,l) \times cm \times -1)$

Where $pd \leq d \leq pd + 34124$ days.

Note: A Reallocation is considered over a longer potential period for the Debit Participant as it may take a period of time to deregister a Reallocation if a Default Event occurs.

2. GSH Reallocation Procedure

4.3.2 Validation on submission of Reallocation Request

VALIDATION	INFORMATION VALIDATED	DESCRIPTION OF VALIDATION
Gas Dates	End Date	The End Date of a Reallocation Request must not be later than three months 180 days from the submission date.

3. Gas Supply Hub – Exchange Fees

1. Exchange Fees

The fees set out below relate to Section 5.5 (Participation Fees) of the AEMO Gas Supply Hub Exchange Agreement.

These fees are current as per the date of this document and can be amended by AEMO at any point in future.

PARTICIPANT TYPE	FEE TYPE	RATE
Trading Participants	Fixed Fee – One user account licence	\$14,500 p.a. licence fee
	Fixed Fee – additional user account licences	\$5,500 p.a. licence fee
	Variable Transaction Fee	\$0.03/GJ daily product fee;

		\$0.02/GJ weekly product fee; \$0.01/GJ monthly product fee
Reallocation Participants	Fixed Fee	\$9,000 p.a.
Viewing Participants	Fixed Fee	\$5,500 p.a. licence fee

4. Gas Supply Hub Interface Protocol

4. GSH Interface Protocol Artefacts

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).	1.1 1.2