



INDEPENDENT
MARKET
OPERATOR

Gas Advisory Board

Agenda

Meeting No.	14
Location:	IMO Board Room Level 17, Governor Stirling Tower, 197 St Georges Terrace, Perth
Date:	Tuesday 18 th February 2014
Time:	3.00pm – 5.00pm

Item	Subject	Responsible	Time
1.	WELCOME	Chair	2 min
2.	MEETING APOLOGIES / ATTENDANCE	Chair	2 min
3.	MINUTES OF PREVIOUS MEETING	Chair	5 min
4.	ACTIONS ARISING	Chair	5 min
5.	GSI RULES		
	a) GPRC_2014_01: GSI Fee Arrangements	PUO	20 min
	b) GPRC_2014_02: Submission of Medium Term Capacity Outlook	IMO	10 min
6.	DEVELOPMENT OF A WA GAS MARKET	IMO	80 min
7.	GENERAL BUSINESS	IMO	5 min
8.	NEXT MEETING: Tuesday 20th May 2014		

Gas Advisory Board Minutes

Meeting No.	13
Location	IMO Board Room Level 17, Governor Stirling Tower, 197 St Georges Terrace, Perth
Date	Tuesday, 17 December 2013
Time	4.00pm – 5.00pm

Attendees	Class	Comment
Allan Dawson	Chair	
Kate Ryan	Independent Market Operator (IMO)	
John Jamieson	Pipeline Owner/Operator	
Mark Cooper	Pipeline Owner/Operator	4:15pm - 5:00pm
Nenad Ninkov	Large Gas User	
Mike Shaw	Large Gas User	
Pete Di Bona	Gas Producer	4:11pm - 5:00pm
Michael Brooks	Gas Producer	Proxy
Andrew Sutherland	Gas Shipper	
Bryon McLaughlin	Coordinator of Energy	Proxy
Aden Barker	Small End Users, Minister's Appointee	
Nerea Ugarte	Minister's Appointee – Observer	
Jeremy Cook	Economic Regulation Authority – Observer	Proxy
Joachim Tan	IMO	Presenter
Rebecca Denton	IMO	Presenter
Martin Maticka	IMO	Observer
Greg Ruthven	IMO	Observer
Courtney Roberts	IMO	Observer
Erin Stone	IMO	Minutes
Apologies	Class	Comment
Stewart Gallagher	Gas Producer	Proxy attended
Stan Reid	Gas Shipper	
Ray Challen	Coordinator of Energy	Proxy attended
Wana Yang	Economic Regulation Authority	Observer – Proxy attended

Item	Subject	Action
1.	<p>WELCOME</p> <p>The Chair opened the meeting at 4:00 PM and welcomed all members to the 13th Gas Advisory Board (GAB) meeting.</p>	
2.	<p>MEETING APOLOGIES / ATTENDANCE</p> <p>The following apologies were received:</p> <ul style="list-style-type: none"> • Ray Challen (Coordinator of Energy); • Stewart Gallagher (Gas Producer); • Stan Reid (Gas Shipper); and • Wana Yang (Economic Regulation Authority - Observer). <p>The following proxies were noted:</p> <ul style="list-style-type: none"> • Michael Brooks for Stewart Gallagher (Gas Producer) • Bryon McLaughlin for Ray Challen (Coordinator of Energy) • Jeremy Cook for Wana Yang (Economic Regulation Authority – Observer) 	
3.	<p>MINUTES OF PREVIOUS MEETING</p> <p>The minutes of GAB Meeting No. 11, held on 17 July 2013 and GAB Meeting No. 12, held on 15 October 2013 were circulated prior to the meeting.</p> <p>No comments were raised and the minutes of both meetings were accepted as a true record.</p>	
4.	<p>ACTIONS ARISING</p> <p>Ms Kate Ryan noted that all action points had been completed with the exception of Action Item 32 which will be covered at the GAB Meeting in February 2014.</p>	
5.	<p>EMERGENCY MANAGEMENT FACILITY TEST</p> <p>The Chair invited Ms Rebecca Denton to provide an overview of the process and outcomes of the recent Emergency Management Facility (EMF) Test.</p> <p>Ms Denton explained the planning of the test, activation of the EMF and the associated data requirements, and the areas for improvement.</p> <p>Mr Aden Barker queried whether in an actual disruption to supply event there was a downside risk of the lack of the provision of data as Ms Denton noted had occurred in the recent test. Mr Bryon McLaughlin noted that while this information is important, it only provides information for the crisis committee to consider and as such, it does not present any great risk. Mr McLaughlin noted that the first test had worked well and had identified areas that could be improved to further minimise manual data collation in the future.</p> <p>Mr Nenad Ninkov noted that the requests in the EMF needed to be more specific to assist Gas Market Participants in responding with the</p>	

Deleted: acknowledged that Alinta Energy's contact person was away during the test but noted that Alinta was reviewing its processes to ensure that this would not happen in the future. He further

	<p>correct information.</p> <p>Mr Andrew Sutherland questioned what was done with the data provided in the EMF test. Mr McLaughlin responded noting that the test was undertaken to assess the operation of the facility with respect to the effectiveness of communication, timeliness of information and general processes. He noted that because the test was not based on a scenario, the data collected was not used or analysed.</p> <p>Mr Ninkov questioned whether a report of findings and recommendations from the EMF test could be developed by the IMO to identify specific issues that Gas Market Participants could address. The Chair noted that the IMO had identified areas of improvements and would work with affected participants to resolve individual issues raised. The Chair also suggested that the IMO could brief a wider group of Gas Market Participants in the New Year to provide an opportunity for others to comment of the process and better understand outcomes of the activation of the EMF.</p> <p>The Chair thanked Mr McLaughlin and GAB members for their participation in the EMF test.</p> <p><i>Action items:</i></p> <ul style="list-style-type: none"> • <i>The IMO to work with affected participants to resolve individual issues raised through the EMF test.</i> • <i>The IMO to present the process and outcomes of the EMF test to a wider group of Gas Market Participants in early 2014.</i> 	<p>IMO</p> <p>IMO</p>
<p>7.</p>	<p>DECEMBER GAS STATEMENT OF OPPORTUNITIES: KEY ASSUMPTIONS</p> <p>The Chair introduced Mr Joachim Tan to provide an overview of the key assumptions underpinning the December Gas Statement of Opportunities (GSOO).</p> <p>Mr Tan provided the GAB with an overview of the supply and demand forecasts, price forecasts, major changes from the July GSOO, information on the North West Shelf (NWS) arrangements and data from the Gas Bulletin Board (GGB).</p> <p>With respect to the change in the price forecast in the December GSOO, Mr Ninkov questioned how the price elasticity assumptions were developed. Mr Tan noted that the IMO's external forecaster (NIEIR) developed these forecasts using an economic model. The Chair noted that, for the December GSOO these price elasticities were only applied to uncontracted supply and some volumetrically contracted supply that may be affected, where in the July GSOO, it was applied across the board.</p> <p>Mr Mark Cooper questioned whether alternatives to coal were considered with respect to the impact on the gas market. Mr Sutherland also questioned whether forecasts of wind and other fuel sources were included in developing forecasts. Mr Tan responded that the IMO had incorporated assumptions with respect to the energy mix in the SWIS.</p> <p>Mr Sutherland questioned what the reduction in 2015 reflected. Mr Tan responded that it was the fuel switch. Mr Barker questioned whether the IMO had developed a scenario without the Carbon Price. The Chair</p>	

	<p>noted that it was considered but ultimately not included given the uncertainty with regard to passing the legislation to finalise this change.</p> <p>Mr Ninkov questioned whether the GSOO was consistent with Electricity Statement of Opportunities (ESOO). The Chair and Mr Tan responded that it was informed by the information included in the ESOO but noted there would be some differences due to the timing difference.</p> <p>With respect to the supply forecasts, Mr Ninkov questioned whether the IMO had surveyed all producers. The Chair noted that the IMO had engaged with representatives from the NWS. Mr Ninkov questioned whether other producers were also contacted. Mr Tan responded that, given that other producers were almost fully contracted there was not much value in further engagement. Mr Ninkov questioned whether it was implicit in the IMO's assumptions that producers could continue producing at this rate. The Chair responded that production capacity and reserves are well above demand. This GSOO is attempting to quantify producers willingness to supply.</p> <p>With respect to the focus on the NWS, the Chair noted that all participants that provided feedback on the July 2013 GSOO raised the issue with NWS supply. Therefore, the IMO directly engaged NWS representatives to get further information. Mr Cooper questioned whether, if the NWS only meet its contracted position there would be a narrowing between supply and demand. The Chair agreed that this would be the case.</p> <p>Mr Mike Shaw questioned whether the end of the timeframe in the GSOO was the end of the time period under review or the end of the contracts. Mr Tan noted it was reflective of the period of the GSOO and that the NWS contracts extended to 2033.</p> <p>The Chair noted the GSOO is currently awaiting IMO Board approval and thanked GAB members for their contributions to the December GSOO.</p>	
<p>8.</p>	<p>GENERAL BUSINESS</p> <p>Ms Ryan noted the GAB Meeting dates for 2014 members and the Chair requested members to inform the IMO if any dates were inconvenient.</p>	
<p>CLOSED: The Chair declared the meeting closed at 5.00pm.</p>		

Gas Advisory Board (GAB) - Action Points

Legend:

Unshaded	Unshaded action points are still being progressed.
Shaded	Shaded action points are actions that have been completed
Missing	Action items missing from sequence have been completed from previous meeting and subsequently removed from the log.

#	Year	Action	Responsibility	Meeting arising	Status / progress
32	2013	The IMO to include an item on the development of gas and capacity spot market on the agenda for Meeting No. 14 due to be held in the first quarter of 2014.	IMO	October	Discussion scheduled in February 2014 Meeting No 14.
36	2013	The IMO to work with affected participants to resolve individual issues raised through the EMF test.	IMO	December	Underway.
37	2013	The IMO to present the process and outcomes of the EMF test to a wider group of Gas Market Participants in early 2014.	IMO	December	Update to be presented to stakeholders at next forum.

Gas Services Information Pre Rule Change Proposal

Pre Rule Change Proposal ID: *[to be filled in by the IMO]*
Date received: *[to be filled in by the IMO]*

Change requested by:

Name:	NATALIA KOSTECKI, A/Assistant Director Markets
Phone:	(08) 6551 4669
Fax:	(08) 6551 4766; (08) 6551 4765
Email:	Natalia.Kostecki@finance.wa.gov.au
Organisation:	PUBLIC UTILITIES OFFICE
Address:	Level 1, Albert Facey House, 469 Wellington St Perth WA 6000
Date submitted:	<29 January 2014 >
Urgency:	<3-high>
Change Proposal title:	GSI Fee arrangements – Inclusion of Registered Production Facility Operators
GSI Rule(s) affected:	GSI Rules (Part 7, Division 4) – R114 through R120.

Introduction

Market Rule 129 of the Gas Services Information (GSI) Rules provides that any person (including the IMO) may make a Rule Change Proposal by completing a Rule Change Proposal form that must be submitted to the Independent Market Operator.

This Change Proposal can be posted, faxed or emailed to:

Independent Market Operator

Attn: Group Manager, Development and Capacity
PO Box 7096
Cloisters Square, Perth, WA 6850
(08) 9254 4339
Email: market.development@imowa.com.au

The Independent Market Operator will assess the proposal and, within five business days of receiving this Rule Change Proposal form, will notify you whether the Rule Change Proposal will be further progressed.

In order for the proposal to be progressed, all fields below must be completed and the change proposal must explain how it will enable the GSI Rules to better contribute to the achievement of the GSI Objectives.

The objectives are to promote the long-term interests of consumers of natural gas in relation to:

- (a) the security, reliability and availability of the supply of natural gas in the State;
 - (b) the efficient operation and use of natural gas services in the State;
 - (c) the efficient investment in natural gas services in the State; and
 - (d) the facilitation of competition in the use of natural gas services in the State.
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Details of the Proposed Rule Change

1. Describe the concern with the existing GSI Rules that is to be addressed by the proposed rule change

The GSI Rules (Part 7, Division 4) currently provide for GSI Fees, which recover the IMO's costs of providing GSI Services (the Gas Bulletin Board and Gas Statement of Opportunities), to be charged to Registered Shippers. This arrangement does not recover GSI Fees from Registered Production Facility Operators who may also benefit from GSI Services.

The proposed Rule Change is to amend the GSI Fee arrangements so that fees and charges to be paid under the GSI Rules for the performance of the functions of the operator are also paid by Registered Production Facility Operators of natural gas in Western Australia.

It is considered that the amended GSI Fee arrangements should aim to:

- share the costs of providing the services more equitably across the gas market supply chain;
- recognise that both buyers and sellers of natural gas are likely to benefit from the information provided by the GSI Services established under the GSI Rules; and
- transparently identify the basis upon which the GSI Fee for Registered Production Facility Operators is calculated.

It is expected that the method of calculating the share of costs of the operator (in regard to the performance of its functions under the GSI Rules) that are apportioned to Registered Production Facility Operators will be determined in consultation with industry as part of the GSI Rule Change process.

2. Explain the reason for the degree of urgency

It would be convenient for market participants to have the amended GSI Fee arrangement start as of the next financial year (1 July 2014).

3. Provide any proposed specific changes to particular GSI Rules (for clarity, please use the current wording of the Rules and place a *strikethrough* where words are deleted and underline words added)

Specific changes

114 IMO may recover GSI Services costs

For each Financial Year, the IMO may recover from Registered Shippers on GBB Pipelines and *Registered Production Facility Operators* an amount equal to the Approved Annual Revenue for that Financial Year.

Recommended changes –

- Insert a new GSI Rule after R115 to require that Registered Production Facility Operators provide to the IMO information which is necessary for the IMO to calculate the GSI Fee for Registered Production Facility Operators.
- Insert a new GSI Rule after R116 to set out the basis for the calculation of the GSI Fee for Registered Production Facility Operators.
- Amend GSI Rules 117 through 120 to reference Registered Production Facility Operators in regard to, respectively: the issue of the GSI Invoice by the IMO; the obligation to pay GSI invoice; the review of GSI Fee calculation; and disputes regarding GSI invoices.
- Amend GSI Rules 117 through 120 to accommodate any references that are required to newly inserted GSI Rules (and sub-rules) under Part 7, Division 4.

4. Describe how the proposed GSI Rule change would allow the Rules to better address the GSI Objectives

The method of calculating GSI Fees assumes the ultimate beneficiaries of the GSI Services are gas consumers. In the absence of an effective way of directly charging all consumers, fees were charged as close as possible to end-users to minimise the absorption of costs by other parties along the supply chain. Shippers are either end-users themselves or sell gas to end-use customers (retailers).

There are currently 37 Registered Shippers to whom costs may be charged under the GSI Rules. GSI Fees are calculated on a pro-rata basis determined by each Registered Shipper's share of total gas deliveries by all Gas Bulletin Board Pipelines.

This GSI Rule change proposal reinforces the objective given at (d) above – the facilitation of competition in the use of natural gas services. Of the two GSI Services, the Gas Bulletin Board aims to identify current opportunities for gas trades, which benefits both buyers and sellers of gas.

The sharing of costs between Registered Shippers and Registered Production Facility Operators will promote equity between producers and consumers across the gas market supply chain.

GSI Fee

The GSI Fee paid by each Registered Shipper, as a portion of the total cost of the operator for the performance of its functions, will reduce as the consequence of Registered Production Facility Operators contributing to the recovery of the total cost. The exact amount of the reductions cannot be identified in advance of the development of the method for calculating the GSI Fee to be paid by Registered Production Facility Operators.

There are currently five Registered Production Facility Operators which will be affected by the amendments recommended in this GSI Rules Change Proposal.

Due to the limited number of Registered Production Facility Operators, there is unlikely to be a material impact on the IMO's cost of administering the amended GSI Fee arrangements. The total cost of providing the GSI Services by the IMO is therefore unlikely to be materially affected by this proposed GSI Rule Change leading to minimal additional costs for industry participants.

Compliance costs

It is preferable that the method of calculating the share of the operator's costs to be apportioned to Registered Production Facility Operators is either directly based on, or derived from, information already collected from Registered Production Facility Operators by the IMO. This will ensure that the cost of providing information in is kept to a minimum.

The contravention of GSI Rule 115 (Provision of Aggregated Shipper Delivery Quantities) results in a civil penalty of \$10,000 (plus \$2,000 daily penalty).

Consequently, the failure of a Registered Production Facility Operator to provide information to the IMO necessary for calculating the GSI Fee attributable to each Registered Production Facility Operator should incur the same level of civil penalty (that is, an amount consistent with the contravention of GSI Rule 115).



INDEPENDENT
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Gas Services Information Pre Rule Change Proposal

Rule Change Proposal ID: GPRC_2014_02
Date received: TBA

Change requested by:

Name:	Kate Ryan
Phone:	9254 4357
Fax:	9254 4399
Email:	kate.ryan@imowa.com.au
Organisation:	IMO
Address:	Level 17, 197 St Georges Terrace
Date submitted:	TBA
Urgency:	Medium
Change Proposal title:	Submission of Medium Term Capacity Outlook
GSI Rule(s) affected:	Subrules 56(1), 64(1) and 71(1)

Introduction

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Independent Market Operator

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Fax: (08) 9254 4339
Email: market.development@imowa.com.au

The IMO will assess the proposal and, within 5 Business Days of receiving this Rule Change Proposal form, will notify you whether the Rule Change Proposal will be further progressed.



In order for the proposal to be progressed, all fields below must be completed and the change proposal must explain how it will enable the GSI Rules to better contribute to the achievement of the GSI Objectives.

The objectives are to promote the long term interests of consumers of natural gas in relation to:

- (a) the security, reliability and availability of the supply of natural gas in the State;
- (b) the efficient operation and use of natural gas services in the State;
- (c) the efficient investment in natural gas services in the State; and
- (d) the facilitation of competition in the use of natural gas services in the State.

Details of the Proposed Rule Change

1. Describe the concern with the existing GSI Rules that is to be addressed by the proposed rule change:

The IMO identified an inconsistency between the GSI Rules and the Gas Services Information Procedure for Operation of the Gas Bulletin Board and the Emergency Management Facility (GSI Procedure) with respect to the time by which a Gas Market Participant must submit a Medium Term Capacity Outlook to the IMO.

Subrules 56(1), 64(1) and 71(1) require Gas Market Participants to submit a Medium Term Capacity Outlook to the IMO “by the start of each calendar month”. The IMO considers that these subrules could be interpreted to require a Medium Term Capacity Outlook to be submitted before 12:00 AM on the first day of each calendar month.

However, step 2.4.12 of the GSI Procedure states that a Medium Term Capacity Outlook must be submitted “[b]y 6PM on the last day of the calendar month M”.

This inconsistency may raise a compliance investigation, where a Medium Term Capacity Outlook is submitted after 6:00 PM, but before 12:00 AM on the last day of the calendar month.

As the GSI Rules prevail over the steps in the GSI Procedure, currently, a Gas Market Participant may submit after 6:00 PM and before 12:00 AM on the last day of the calendar month and is not in breach of the GSI Rules. However, the IMO considers that this inconsistency should be removed to ensure that the obligations on Gas Market Participants are clear.

The IMO proposes to amend subrules 56(1), 64(1) and 71(1) to reflect the obligations in the GSI Procedure. The IMO considers that this would allow Gas Market Participants an adequate timeframe in which to submit a Medium Term Capacity Outlook and that it is consistent with the intention that the operation of the Gas Bulletin Board is within business hours.

In addition, the IMO has taken the opportunity to correct a typographical error in subrule 130(2).

2. Explain the reason for the degree of urgency:

This pre Rule Change Proposal will remove the current ambiguity around the timeframes for providing a Medium Term Capacity Outlook and will improve the integrity of the GSI Rules. The IMO therefore considers that the proposed changes should be progressed as a medium priority under the Standard Rule Change Process.

3. Provide any proposed specific changes to particular GSI Rules: *(for clarity, please use the current wording of the Rules and place a ~~strikethrough~~ where words are deleted and underline words added)*

56(1) A Registered Pipeline Operator must submit a Medium Term Capacity Outlook to the IMO for each of its GBB Pipelines by ~~the start of each calendar month~~ 6:00 PM on the last day of each calendar month, and that outlook must cover the period of 12 months from the start of ~~that month~~ the next calendar month.

...

64(1) A Registered Storage Facility Operator must submit a Medium Term Capacity Outlook to the IMO for each of its GBB Storage Facilities by ~~the start of each calendar month~~ 6:00 PM on the last day of each calendar month, and that outlook must cover the period of 12 months from the start of ~~that month~~ the next calendar month.

...

71(1) A Registered Production Facility Operator must submit a Medium Term Capacity Outlook to the IMO for each of its GBB Production Facilities by ~~the start of each calendar month~~ 6:00 PM on the last day of each calendar month, and that outlook must cover the period of 12 months from the start of ~~that month~~ the next calendar month.

...

130(2) The form must include:
(a) contact details for proposing ~~R~~rule changes; and

...

...

4. Describe how the proposed GSI Rule change would allow the Rules to better address the GSI Objectives:

The IMO considers that the proposed changes will remove the current ambiguity with respect to the time by which a Gas Market Participant must submit a Medium Term Capacity Outlook to the IMO. In addition, the correction of the typographical error will improve the integrity of the GSI Rules.

The IMO therefore considers that the Amending Rules in this pre Rule Change Proposal better achieve GSI Objective (b) on the basis that it would be economically inefficient, from an administrative perspective, if the Gas Bulletin Board operates under GSI Rules that are ambiguous.

The proposed changes are consistent with the remaining GSI Objectives.

5. Provide any identifiable costs and benefits of the change:

Costs

It is not anticipated this change will result in any additional expenses to the IMO or Gas Market Participants.

Benefits

Improved clarity with respect to Gas Market Participants' obligations will ensure that no unnecessary compliance investigations arise because of the inconsistency.

Western Australia - Gas Market Design Considerations

1. Introduction

This paper presents the key issues which the Gas Advisory Board (GAB) should consider in thinking about the need for and the design of a gas spot market and pipeline capacity trading arrangements in Western Australia (WA).

Characteristics of the WA domestic gas market include:

- the main gas supply source is geographically distant from the main domestic gas demand locations,
- the commercial and operational arrangements on gas transmission pipelines are managed by a number of different companies under their own commercial arrangements, and
- the bulk of demand is industrial and power generation and is served directly from transmission pipelines rather than distribution networks.

There are a range of different gas market models that could be applied to WA:

- A *gas trading hub* (or supply hub) is a market for the wholesale trading of natural gas. A trading hub is typically a location with a significant concentration of supply or a major trans-shipment point. The key design considerations outlined in this paper are discussed in the context of a gas trading hub.
- A *demand hub*, like the Short-Term Trading Market (STTM) in Sydney, Adelaide and Brisbane, allows gas users and shippers to trade transmission pipeline delivered gas at the point of delivery to a distribution network. Demand hubs are discussed briefly in section 4.
- A *market carriage model*, like the Victorian Gas Market, uses a much more sophisticated scheduling arrangement where bids and offers at different locations are used to centrally schedule all injections and withdrawals into the network. This differs from the more common *contract carriage model* where gas is scheduled separately with each pipeline operator. We do not focus on the Victorian gas market design in this paper as the context of that market is very much removed from the context of WA¹.

This paper also considers issues relevant to pipeline capacity trading arrangements.

2. Why Implement a Gas Spot Market and Pipeline Capacity Trading Arrangements?

This section considers reasons for the development of a gas spot market and pipeline capacity trading arrangements.

Efficiency and Transparency

Trading gas through a market process allows potential buyers and sellers to be easily matched. Trading through such a market increases economic efficiency with the market providing a mechanism for competition between buyers and sellers and for the efficient allocation of the commodity between participants in that market. The market also provides a signal for the efficient production and use of gas as well as efficient utilisation and investment in infrastructure.

A market can provide a public spot price, enhancing price transparency across industry. Providing industry with information about the wholesale price of gas allows participants to make more informed decisions about their business.

¹ In particular, the Victorian market is designed to overlay a network with a different funding regime to that of the traditional shipper – pipeline contract arrangements that are prevalent in WA.

Portfolio Management

A spot market allows participants to resolve surpluses and shortfalls in their long term contract positions over short periods such as a day.

Creating the ability to on-sell gas and pipeline capacity reduces the risks associated with long term contracts and investments. Such risks can act as a barrier for new entrants.

A liquid and transparent spot market provides industry with a platform for the development of forward contracts for better matching needs into the future.

Reduced Transaction Time and Costs

Finding a trading counterpart, negotiating, documenting and settling a transaction take time to complete and incur cost. A market reduces transaction times and costs by pooling together potential buyers and sellers and through the standardisation of products.

Transaction costs can be a relatively high portion of the trade value while faster processes facilitate a more dynamic response (for example, responding to an event in the electricity market). Reducing transaction times and costs therefore improves the feasibility of short-term trading opportunities.

Facilitate Pipeline Capacity Trading

The development of short-term trading arrangements for pipeline capacity provides an opportunity for trading participants located across WA to deliver gas to and take gas away from a trading hub or to move gas between trading hubs in situations where they may not have shipping contracts in place to facilitate this. An efficient and transparent trading arrangement increases the opportunity for trade and improves economic outcomes by allowing the lowest cost gas supplies to be transported to the highest value users.

3. The Key Requirements for a Successful Gas Spot Market

This section outlines some of the key requirements for a successful gas market.

Maximise Liquidity

Liquidity is the ability to conveniently enter or liquidate a position in a defined product. The liquidity of a market is a measure of its transactional efficiency and its ability to generate a representative price. Factors affecting liquidity include level of participation, efficiency of trading, delivery and settlement arrangements, simplicity of market arrangements and transaction costs. Many of these items are discussed further below.

Maximise Participation

The more participants that can access and participate in the trading hub the more likely it is that the market will deliver on its objectives.

Potential trading participants include gas producers, gas powered generators (GPGs), large industrial users, gas retailers and financial institutions. The market must meet the needs of these trading participants if they are to participate. For example, GPGs are more likely to use the market if its timing is consistent with electricity market processes and if it provides flexibility in responding to changing situations in the electricity market.

Financial institutions do not have a natural position in the market but their participation can add valuable liquidity to the market. Financial institutions may trade forward markets with the intention of closing out any trading positions prior to the commencement of the gas delivery period. Financial institutions could also participate in the spot market if they can access flexible transport or storage services, either on a pipeline or at dedicated storage facilities.

Anonymous trading, where the identity of bids and offers are not revealed, can enhance market participation as transactions are not visible to parties that the participant may be negotiating deals with. If centralised, rather than bilateral, market arrangements are used for settlement and gas delivery then transactions can remain anonymous.

Pipeline Capacity Trading Arrangements

Access to flexible transportation arrangements is critical to the success of a trading hub. The provision of short-term transportation and storage services by operators and the facilitation of secondary trading of pipeline services between shippers will allow participants located remote from a hub to benefit from trading at that hub, hence increasing market participation.

Pipeline capacity trading arrangements should be compatible with those developed for gas trading; products should be easy to trade, settle, and to use (e.g. nominations).

Minimise Transaction Costs

A spot market can reduce the end-to-end transaction costs through the following features:

- *Trading mechanism:* an exchange pools together potential buyers and sellers.
- *Negotiation of a transaction:* All terms and conditions, except price and quantity, are agreed to upfront as part of the registration process.
- *Trade Documentation:* transactions are confirmed immediately by the exchange trading system and all transactions are in accordance with the standard terms and conditions of the product.
- *Settlement/Prudential:* Market settlement reduces administrative costs by allowing a single net invoice for all transactions across a billing period. Market settlement allows trading participants to lodge collateral with the exchange operator matching their expected trading exposure rather than maintain bilateral guarantees with all of their potential trading counterparties.
- *Gas Delivery:* The streamlined process of the market can be extended to the delivery of gas with the exchange operator providing transaction details directly to the system operator (e.g. pipeline operator) avoiding the need for trading participants to make nominations and allowing counterparts to remain anonymous throughout the entire transaction process.

Maximise Reliability of Delivery

Long-term gas sale agreements are generally non-firm in nature as the transaction quantity is adjusted to match the actual quantity of gas produced by the seller. However, the trading of non-firm products would dilute many of the benefits associated with the creation of the market. Certainty of delivery is important for gas users and enhances the tradability (on-selling) of products. Balancing arrangements, discussed below, can facilitate the trading of firm products.

4. Key Design Components

This section describes options that could be taken to in relation to key design components of a gas trading hub.

Definition of Operator Roles

The key roles in the market will be:

- *Exchange operator.* Is responsible for developing, implementing, and running the market, including settlement and compliance. This would be a new role.
- *System operators.* Run the pipelines and storage facilities and schedule gas deliveries to fulfil obligations created by the market. These would be the pipeline and storage facility operators.
- *Hub operators.* Depending on the design, a hub operator may be required to coordinate the scheduling of gas deliveries, manage transfers and balancing of gas across a hub as well as allocate deliveries and validate transfer of title from sellers to buyers. A hub operator might operate under an agreement with the exchange operator and the pipeline asset owners at the hub.

Trading Mechanism

There are different options for the role of the market in forming transactions including:

- *Matching service:* The market simply provides a facility to match potential buyers and sellers. Once trading participants have been matched it is their responsibility to document and carry out the obligations of the transaction.
- *Auction:* An auction could be run periodically, for example once a day, to match and form transactions between bids and offers.
- *Continuous automated trading/exchange trading:* As for a stock exchange, bids and offers (orders) are matched to form transactions throughout the opening hours of the market.

An exchange trading mechanism can be complemented by allowing 'off-market' trades to be registered and settled through the market.

Pipeline Capacity Trading Arrangements

To facilitate movement of traded gas a straight-forward process for accessing short-term pipeline capacity² is desirable, recognising that different pipeline operators are involved. A key challenge is achieving a level of standardisation of terms and conditions required to support short-term trading. The market should, at a minimum, provide a platform to bring together potential buyers and sellers (including operators) of pipeline transportation services. Arrangements should be consistent with the gas commodity products. The tenor /delivery period of the pipeline capacity services need to match those of the products traded in the market. Traded capacity should be to and from the trading hub.

The secondary trading of pipeline capacity has historically taken the form of a bare transfer (shipper-to-shipper). Under a bare-transfer the pipeline operator is informed of the secondary trade (or sub-allocation) but all operational arrangements (e.g. nominations) and financial obligations continue to be carried out by the selling shipper. Services can be provided by the system operators to make it easier to trade and to improve operations associated with secondary trades. Such services include:

- *Operational transfer:* The pipeline operator exchanges nominations and scheduling information directly with the buying shipper. Settlement remains the obligation of the contracted shipper.
- *Contractual transfer:* The underlying pipeline capacity contract is transferred from the seller to the buyer for the period of the transaction.

Pipeline Capacity Release

Participation of shippers in pipeline capacity trading can be voluntary or regulations can be put in place to encourage and facilitate the release of unused pipeline capacity. An example of regulation is the Congestion Management Procedures (CMP) in Europe which includes use-it-or-lose-it (UIOLI) rules to encourage shippers to make unused pipeline capacity available for sale.

Products

The market at a trading hub must facilitate the trade of one or more products. These would include gas commodity products and could potentially include pipeline capacity products. A product has standard terms and conditions to facilitate liquid trade. Significant consultation with industry stakeholders is required to ensure the set of products are relevant to industry. Standard terms of a product include:

- The delivery location.
- Gas quality and pressure specification.

² Arrangements could also be used for the trading of storage and other pipeline related services.

- Tenor / delivery period:
 - On-the-day and day-ahead spot products.
 - Daily and weekly products could also be listed for the short-term forward period.
 - Monthly and Quarterly forward products. Where such products are offered a clearing house is normally involved.³
- Price and quantity parameters.

Delivery Mechanism

There are two general approaches to gas delivery:

- *Bilateral gas delivery*: The exchange operator provides the matched buying and selling parties with the details of their delivery obligation. Both parties make nominations to the relevant system operator(s) to facilitate the delivery of gas. The seller and buyer need to know who the other is.
- *Multi-lateral delivery*: The exchange operator provides transaction details or net deliveries directly to the relevant system operator(s). Each system operator schedules delivery of gas, measures and allocates gas deliveries for settlement purposes. The seller and buyer need not know who the other is.

Location and Definition of Hubs

Liquidity is maximised by pooling together all of the potential trading participants at one trading location or hub. The creation of multiple hubs (and hence more products) may increase the range of participants who can trade but can split potential buyers and sellers across different hubs making it more difficult to form transactions and to grow liquidity. Initially there might be just one or two hubs, with more hubs developed as the level of market trade and liquidity grows.

A hub could be physical or virtual. A physical hub is a market for the trading of gas for delivery to, and receipt from, a specific physical location. Examples are the Henry Hub in Louisiana, Wallumbilla Gas Supply Hub in Queensland and the Frankley Road Hub in New Zealand. A virtual hub does not correspond to any one physical point; rather gas is sold at an entry point and purchased at an exit point of the transmission system. Central coordination is required to ensure that gas can be physically delivered (and corrective action when it cannot be), so virtual hubs tend to operate within centrally managed networks. Virtual hubs are a dominant market structure in Europe; examples include the National Balancing Point (NBP) in the UK and the Title Transfer Facility (TTF) in the Netherlands. The Victorian Gas Market effectively operates as a single virtual hub.

The main benefit of a virtual hub is that gas can be traded anywhere across the transmission network without the reliance on capacity trading arrangements.⁴ However, the implementation of such a market in WA is likely to require significant structural and commercial change.

In the WA context, hubs at different locations might have different dynamics. For example:

- A hub established at (or close to) the connection points between the gas fields in the Carnarvon basin and the origin of the main transmission pipelines would facilitate direct participation of producers. Note that it may take several days to ship gas from this hub to the point of use.

³ A clearing house reassesses collateral requirements each day until the forward contract matures by determining/estimating the current value of the transaction (mark-to-market), and requires that sufficient collateral be maintained based on the updated daily value.

⁴ In practice there is normally some congestion and additional market costs associated with resolving conflicts between scheduled flows and the physical capacity.

- A hub at the intersection of the Mondarra Storage Facility, the Dampier to Bunbury Natural Gas Pipeline and the Parmelia Gas Pipeline could benefit from the availability of storage services.

Hub Services

The efficient operation of a trading hub is generally supported by hub services. Hub services include:

- Intra-hub transfer services to facilitate movement of gas across a hub. E.g. where a shipper on one pipeline sells gas to a shipper on another pipeline, the intra-hub transfer service will manage the physical delivery of the gas across the hub.
- Balancing services to ensure firmness of transactions.⁵ This service physically corrects imbalances caused by under/over delivery by participants. Separate balancing arrangements can exist for each pipeline / storage facility with the system operator providing the service (via contracts with shippers) or a central party can hold all of these contracts.⁶
- Storage and park and loan services can provide an additional source of liquidity to the trading hub. Storage services can also be utilised to provide balancing to the hub.

Transfer of Title

The mechanism for the legal transfer of title to gas from the seller to the buyer must be considered. Transfer of title must be considered in the conjunction with the gas delivery mechanism and the hub services provided to the market. Any change to title transfer arrangements are likely to require new contractual agreements to be put in place.

Gas Demand Hubs

A gas trading hub (or supply hub) is primarily for the wholesale trading of gas between producers and shippers. Retailers and end users can purchase gas from the hub and then ship that gas to their demand location. A demand hub differs in that it tends to serve consumers on a distribution network. As such, additional design considerations in relation to a demand hub include:

- a distribution network can have multiple entry points and there can be limitations in moving gas within a distribution network.
- The contractual arrangements for distribution customers typically differ from point-to-point contracts on transmission pipelines.
- At a demand hub there is a dependency between pipeline allocation processes and distribution network allocation processes which favours making participation compulsory for shippers and users so that all data is captured.

Information for Participants

The exchange operator, system operator and hub operator (if used) will need to provide trading participants with information to support their trading operations. The information required includes confirmation that orders have been received and confirmation of trades, acknowledgement of actual gas deliveries, settlement statements/invoices and supporting information (where the exchange operator is involved in settlement).

Aggregate details of market prices and quantities should be made available to the public for use by trading participants, the IMO (e.g. for the GSOO), and other government stakeholders.

⁵ A balancing service is desirable but not essential. For example, the Wallumbilla hub in Queensland has no physical balancing service associated with hub transactions with imbalances cashed out financially.

⁶ The option also exists for the exchange operator to act in the latter role by procuring these services from those holding the contracts on behalf of those who need the service.

Interactions with other Processes

Interactions of the gas market design with other processes should be considered. Specifically:

- *Wholesale Electricity Market:* Considerations include the firmness of products, pipeline trading arrangements, trading hours of the market, scheduling requirements in the WEM and day type definitions.
- *Existing bilateral gas contracts:* The spot market should not need to result in changes in existing gas sale agreements between shippers and gas producers. To maximise the benefits in implementing a spot market, and depending on the hub definition, some degree of change to transportation and storage contracts may be required.
- *Security of Supply:* Where the market operates independently of system operation then the exchange operator has no ability to ensure security of supply and should have not ultimately be responsible for security of supply. The market can, however, provide a tool to support industry in the signalling and management of periods of tight demand and supply.
- *Retail gas markets:* A hub at the boundary of a distribution network would be a demand hub and some additional recognition of the contractual context of distribution network users would be required. If the hub is elsewhere the only impact on gas retailers and end users participating in the wholesale gas market will be the ability to source or trade gas at the hub like other participants supplied via the gas transmission network.

Settlements and Prudential

While bilateral settlement and prudential arrangements could be used if already well established, market based settlement reduces transaction costs through the netting of settlement amounts and the processing of a single invoice for the financial settlement of all transactions in a billing period.

Centralised prudential processes can also deliver benefits to industry as it allows a participant to lodge credit support with the market rather than the duplicate credit support and monitoring processes with their potential counterparties.

If the IMO were to be the exchange operator then integration with the settlement and prudential arrangements of the electricity market could provide further efficiencies to participants operating in the gas and electricity markets. We understand that this would require some changes in the statutory instruments that govern the IMO.

Funding the Market

Costs will be incurred through the establishment and operation of the market. Options for funding the market include:

- A compulsory fee on shippers (e.g. in proportion to some measure of gas system usage). This is a low risk option for funding the market but may not be aligned with usage of the market.
- A membership fee and transaction fee on market participants. This would recover the costs from those who use the market. The level of participation would therefore be important in ensuring revenue recovery.
- Sponsorship of the market establishment by industry participants. Sponsorship could take the form of upfront payment of transaction fees.

Rules and Governance

The rules of the gas market could be embodied in a suite of regulatory instruments including an Act, Regulations and Rules of a similar nature to the electricity market rules and governed in much the same way. The Victorian Gas Market and the STTM employ this approach. Alternatively, basic statutory changes could be made to empower the exchange operator and regulatory oversight, with the rest of the market design reflected in commercial agreements rather than via rules. This approach is used for Wallumbilla Gas Supply Hub.