



Australian Energy Market Commission

CONSULTATION PAPER

NATIONAL GAS AMENDMENT (DWGM FORWARD TRADING MARKET) RULE 2019

PROPONENT

Victorian Minister for Energy, Environment and Climate Change

14 MARCH 2019

RULE

INQUIRIES

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ABOUT THE AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

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1 INTRODUCTION

On 12 November 2018, the Victorian Minister for Energy, Environment and Climate Change submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) seeking to establish a forward trading market in the Victorian Declared Wholesale Gas Market (DWGM).

This consultation paper has been prepared to facilitate public consultation on the rule change request and to seek stakeholder submissions.

This paper:

- sets out a summary of, and a background to, the rule change request
- identifies a number of questions and issues to facilitate the consultation on this rule change request
- outlines the process for making submissions.

The Victorian Minister for Energy, Environment and Climate Change also submitted two other related rule change requests to the Commission on:

- *DWGM Improvement to AMDQ regime*¹
- *DWGM Simpler wholesale price*.²

Additionally, AEMO on behalf of EnergyAustralia submitted a related rule change request on the *Application of constraints in the declared transmission system*. The Commission has consolidated the EnergyAustralia rule change request with the DWGM Simpler wholesale price rule change request under s 300 of the NEL. The Commission will assess all three related rule change requests separately, but concurrently, and will consider potential interactions between all three rule change requests. The Commission has published three separate consultation papers and a background paper that refers to all three rule change requests.

¹ Victorian Minister for Energy, Environment and Climate Change, Rule Change Proposals for Declared wholesale Gas Markets, 29 October 2018.

² Ibid

2 BACKGROUND

This section provides an overview of the:

- existing contract markets for gas in the DWGM
- other gas capacity and commodity markets that operate on the east coast.

This rule change was derived from a recommendation in the final report of the AEMC's 2017 *Review of the Victorian declared wholesale gas market* (referred to as the 2017 Review).³ An overview of the DWGM and the 2017 Review is provided in the *Victorian Declared Wholesale Gas Market Background Paper*.⁴

2.1 Existing contract markets for gas in the DWGM

The DWGM operates as a gross pool wholesale market, similar to the national electricity market (NEM), where all gas traded over the Declared Transmission System (DTS) is cleared.

However, unlike in the NEM, the DWGM is two-sided, with sellers offering⁵ gas, and buyers either forecasting their demand (for uncontrollable withdrawals) or bidding (for controllable withdrawals).⁶ Commonly, a participant contracts for gas outside of the DWGM, and so tends to bid and offer gas at the market price cap and market floor price respectively, attempting to 'buy' its own gas from itself via the gross pool mechanism. When this occurs, the participant has a net position of zero (i.e. it is not net buying from or selling to the market). As a result, it is not exposed to the DWGM market price. This pre-contracted part of the market represents around 80 per cent of traded volumes in the DWGM. The remaining 20 per cent of the market is actively traded through the DWGM itself, and is where the visible price volatility in the market translates to participants.⁷

There are three broad tools used by participants currently to manage price risk in the DWGM:

- Gas Supply Agreements (GSAs) made between producers and shippers for the physical delivery of gas outside of the DTS/DWGM
- off-market secondary gas contracts made between shippers, for the physical delivery of gas outside of the DTS/DWGM
- Australian Securities Exchange (ASX) futures, which are financial derivatives.

Each tool has different characteristics, with GSAs and secondary contracts hedging price risk to create the passive (80 per cent), while future contracts may be used in the active (20 per cent) parts of the DWGM. This section explores the characteristics of each of these three price risk management tools. The benefits and drawbacks of each tool is summarised below in Table 2.1.

3 AEMC 2017, *Review of the Victorian declared wholesale gas market*, Final report, 30 June 2017, Sydney.

4 AEMC, *Victorian DWGM Background Paper*, Information paper, 14 March 2019.

5 Technically injectors in the DWGM make 'injection bids' which are actually offers, and 'withdrawal bids' which are actually bids in plain English. This consultation paper uses the plain English definitions.

6 While demand-side participants can bid into the NEM, it is uncommon as these participants need to be scheduled. In the DWGM forecasted demand is submitted by market participants to AEMO as part of the market clearing process.

7 AEMC 2017, *Review of the Victorian declared wholesale gas market*, Final report, 30 June 2017, Sydney, p. 14.

Table 2.1: Gas price risk management tools in the DWGM

OPTION	BENEFITS	DRAWBACKS
GSA	<ul style="list-style-type: none"> Ensures long term price security of gas. 	<ul style="list-style-type: none"> Typically not flexible—difficult for smaller consumers, with efficiency affected by accuracy of demand forecasts. Limited visibility of prices High search and transaction costs.
Off-market secondary gas contract	<ul style="list-style-type: none"> Shorter term flexible products 	<ul style="list-style-type: none"> Limited visibility of prices High search and transaction costs Potential issues around counterparty risk
ASX future	<ul style="list-style-type: none"> Visibility of prices Shorter term flexible products 	<ul style="list-style-type: none"> Limited liquidity in market Transaction costs, such as margining requirements, can be prohibitive for smaller participants

Additionally, the effectiveness of these tools may be affected by the other non-price risks that participants face in the market, notably:

- delivery risk—even if a participant has a GSA, they may be unable to inject into the DTS due to tied bids and limited pipeline capacity
- uplift and ancillary payments—a participant could fully hedge against the DWGM spot price, but then incur significant uplift charges from a surprise event.

These risks are partially explored in the *Simpler wholesale price* and *Improvements to the AMDQ regime* rule changes.

2.1.1

Gas Supply Agreements

Historically, the majority of natural gas in Victoria has been traded through long-term bilateral GSAs. These contracts have traditionally covered periods of 10 to 20 years in order to underwrite investments in capital intensive, long-lived assets. These GSAs largely make up the passive part of the DWGM gross market,⁸ and are generally take-or-pay contracts.⁹

Gas supplied under long-term GSAs was historically priced using a cost-plus formula, in which the contract price paid for gas by users was calculated based on the cost of production and escalated with inflation.¹⁰ However, between 2014 and 2016 gas demand on the east coast increased three-fold, largely driven by the commencement of an LNG export industry in Queensland.¹¹ Further, this period of volatility coincided with the expiry of many domestic

⁸ As noted above, gas bought through long-term GSAs which are bid/offered at the market price cap/floor in order that gas physically delivered outside of the market can get access to the DTS for delivery inside the DTS .

⁹ Under a take-or-pay contract, the recipient either takes the product from the supplier or pays the supplier a penalty.

¹⁰ ACCC, Inquiry into the east coast gas market, April 2016, p. 29.

long-term GSAs.¹² Additionally, there had been minimal visibility of GSA prices and availability, however recently:

- the Australian Government directed the ACCC to conduct an ongoing inquiry into the east coast gas markets, and through its information gathering powers, the ACCC has begun publishing some price data on GSAs
- the ABS has published a domestic gas price index for the east coast.

2.1.2 Secondary trading of gas contracts

As noted above, GSAs have set conditions such as the take-or-pay, and any changes have to be bilaterally negotiated between parties. If a participant does not wish to consume all the gas they have contracted for on a gas day, they can either sell the surplus gas on the DWGM daily spot market or on-sell the unutilised gas through a shorter-term, bilateral gas contract. These secondary gas contracts play an important role in the market, namely they:

- provide flexibility to participants with existing GSA contracts
- enable smaller participants that do not wish to enter into a long-term GSA to hedge against price fluctuations on the spot market.

However, feedback received during the 2017 Review suggested these contracts are quite bespoke and trade in these secondary gas contracts was limited.¹³ This could be due to the high search and transaction costs of these contracts, or the potential for higher counterparty risk on these contracts.

2.1.3 Financial products on the ASX

The products discussed in section 2.1.1 and section 2.1.2 help participants manage their spot price risk through securing a physical gas position. However, participants can also hedge this risk through securing a financial position. Financial hedges allow counterparties to agree today to a fixed price for a financial transaction in the future based on the price of an underlying asset or commodity, such as the DWGM market price. As the value of the financial product is *derived* from the value of the underlying asset, these products are called 'derivatives'. While a market participant may be physically out of balance (a net seller/buyer in the DWGM) and hence owe money to/receive money from the DWGM spot market, their spot price exposure is hedged through this financial instrument. Similar to the DWGM, the NEM is a spot market for wholesale trading of electricity. An active financial derivatives market has emerged as a 'side market' to the NEM, which provides market participants considerable flexibility in the way they manage spot market price risk.

The ASX offer both quarterly and yearly ('strip') products for Victorian Gas. While these products have been listed for several years, no material trade occurred on these products,

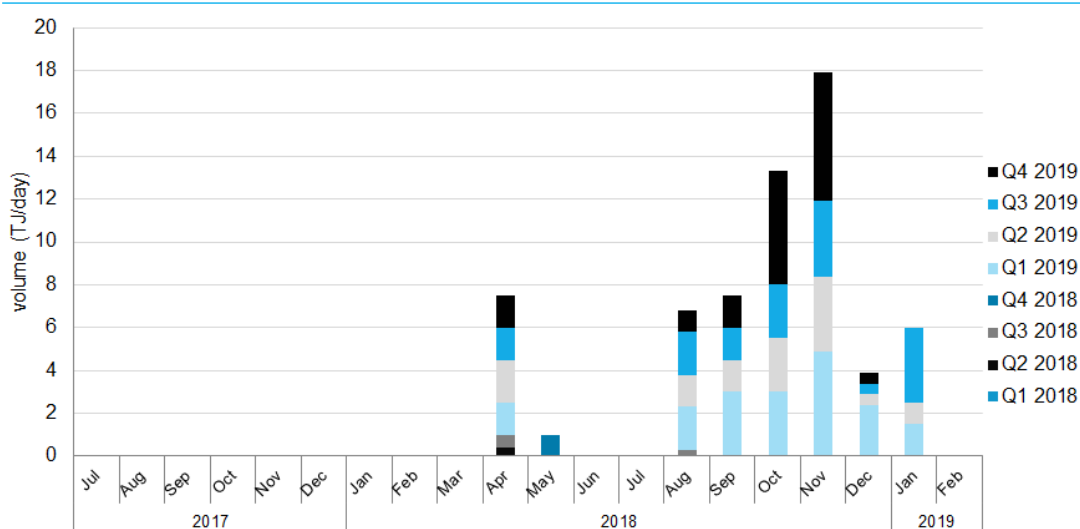
11 AEMO, National gas forecasting report, 2015.

12 Department of Industry, Innovation and Science, Gas Market Report 2015, p. 40.

13 AEMC 2017, Review of the Victorian Declared Wholesale Gas Market, Final Report, p. 23.

until 2018. Between May and February 2019, 669 quarterly and 70 strip contracts were traded, amounting to approximately 8657 TJ of gas.¹⁴ Figure 2.1 shows the daily trade of ASX quarterly products over 2018.

Figure 2.1: Trades of ASX Victorian gas quarterly products



Source: AEMC analysis of ASX data

Note: Figure sums data of quarterly trades between 1/07/2017 and 5/02/2019

In the scale of the DWGM, which has daily consumption of around 645TJ,¹⁵ this emerging derivative trading makes up around three per cent of demand,¹⁶ which could either be a sign that the Victorian gas futures are maturing or could be a temporary change. Open interest in the market has also increased considerably, and the bid-ask spreads have notably reduced.¹⁷

2.2 East coast gas markets

Outside of the DTS, there are several facilitated gas commodity and pipeline capacity markets that operate on the East Coast of Australia. These include the:

- Gas Supply Hubs
- Pipeline Capacity Trading Market
- Short Term Trading Markets.

Unlike the DTS, the rest of gas markets on the east coast operate on a contract carriage basis, by which contracts are used by shippers to establish rights to transport gas through each pipeline.

¹⁴ AEMC analysis based on ASX data between 1 May 2018 and 28 February 2019.

¹⁵ Estimated withdrawals calculated as average daily withdrawals for 12 months to 11/2/2019 based on AEMO data.

¹⁶ The first contract with significant trade was 2019 Q1, assuming demand in Q1 2019 is similar to Q1 2018, traded quarterlies and strips make up around 3.6 per cent of demand.

¹⁷ ACCC, Gas Inquiry 2017-2020, Interim report December 2018, p. 97.

2.2.1

Gas supply hubs

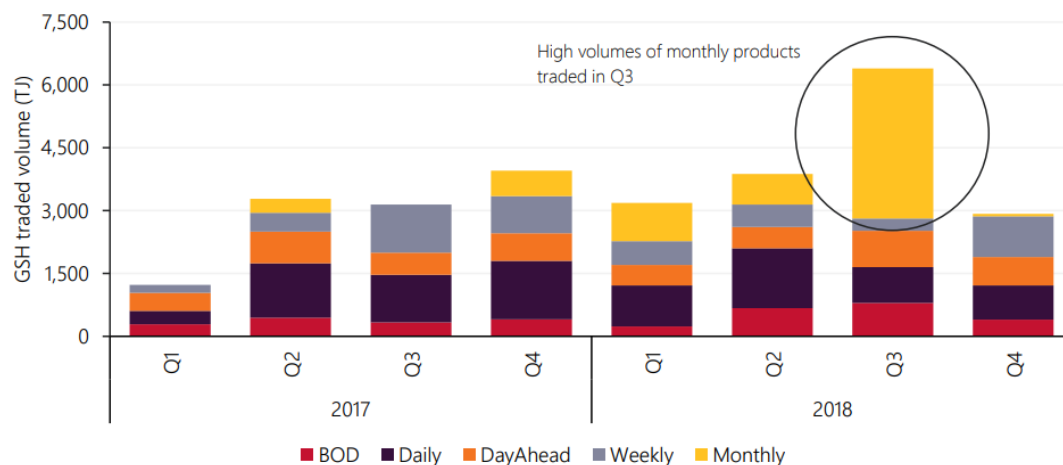
The Gas Supply Hubs (GSHs) are a gas trading exchange for trading natural gas and related services including a pipeline capacity listing service. There are two GSHs operating on the east coast, one at Wallumbilla established in March 2014 and one at Moomba established in June 2016. The GSH operates a voluntary net-pool trading exchange, through which participants can trade standardised short-term physical gas products on an electronic platform called Trayport. AEMO centrally settles transactions on Trayport, manages prudential requirements and produces reports which assist participants in managing their portfolio and gas delivery obligations. Participants are responsible for the delivery of gas traded to the location of the hub. The Wallumbilla hub consists of three foundation pipelines - Roma-Brisbane, South West Queensland, and Queensland Gas Pipeline - and the Moomba has two foundation pipelines - Moomba Adelaide, and Moomba Sydney.

The GSHs list the following products:

- balance-of-day
- day-ahead
- daily
- weekly
- monthly.

Currently, the two hubs have different levels of liquidity. The Moomba exchange has had very low levels of trading, whereas the Wallumbilla exchange is actively used by participants.¹⁸ Figure 2.2 below illustrates the spread of products traded on the Wallumbilla exchange in 2017 and 2018.

Figure 2.2: GSH traded volume by product



Source: AEMO, Quarterly Energy Dynamics - Q4 2018, p. 26.

¹⁸ In June 2018, the AEMC released its *Biennial review into liquidity in wholesale gas and pipeline trading markets*, which examines liquidity on the GSHs, DWGM and Short Term Trading Markets in greater detail using both quantitative and qualitative metrics. Please see for more information.

2.2.2 Pipeline capacity trading

The pipeline capacity trading reform package was implemented on 1 March 2019 to enable participants to obtain more flexible and competitive pipeline capacity between the GSHs by developing a market for secondary trading of pipeline capacity.

The reform package included:

- the introduction of a day-ahead auction of contracted, but un-nominated pipeline capacity to be conducted shortly after nomination cut-off
- standardised provisions in capacity agreements to make capacity more fungible and allow shippers greater receipt and delivery point flexibility
- the development of a pipeline capacity trading platform (CTP) through which shippers could trade secondary capacity ahead of the auction
- the requirement to publish information on secondary trades of capacity and hub services.

The CTP also operates on Trayport, which enables participants to streamline their purchase of both gas commodity and pipeline capacity in the market, potentially driving increased utilisation of both.

2.2.3 Short Term Trading Market

The Short Term Trading Market (STTM) is a mandatory market-based wholesale gas balancing market operated at the Sydney, Adelaide and Brisbane city gate hubs. AEMO runs the market once a day, on a day ahead basis, using bids, offers and forecasts submitted by participants, and pipeline capacities to determine the schedules for deliveries from the originating pipeline to the transmission users and hubs. In Adelaide and Sydney the hubs are low pressure networks. While AEMO operates the STTM, it does not operate the physical pipeline or network assets, which are under the control of the pipeline operators.

3 DETAILS OF THE RULE CHANGE REQUEST

This section outlines the:

- problem as identified in the rule change request
- proposed solution
- potential costs and benefits of implementing the proposed solution, as identified in the rule change request.

The rule change request did not include a proposed rule. A copy of the rule change request may be found on the AEMC website, www.aemc.gov.au.

3.1 Problem statement

In the rule change request, the Victorian Minister for Energy, Environment and Climate Change provides the rationale for the rule change.

As the structure of market has changed with increasing exposure to international LNG and oil prices, the price risk management instruments in the market need to adapt to better support increased spot price volatility. Additionally, increased price volatility is likely to provide participants with commercial opportunity to arbitrage gas prices between trading markets on the east coast or between their bilateral contract price and the DWGM spot price.

As noted in section 2.1.1, the use of long term GSAs to manage spot price risk may be limited in an increasingly flexible and sophisticated market. The proponent identified the following limitations with GSAs:

- GSAs are typically for relatively large quantities of gas and are less suitable for new entrants, smaller market participants, or a market participant who may only occasionally want to participate in the market
- GSAs struck with producers are becoming increasingly inflexible and have more restrictive terms and conditions (reduced flexibility). Increasing flexibility comes at a cost that may not be 'acceptable' to market participants
- GSAs are negotiated bilaterally and are bespoke. This means that they are not readily tradable and are generally considered commercial-in-confidence
- due to the tightening of the supply and demand balance, GSA contract prices have increased compared to historic levels.¹⁹

Instead, shorter-term flexible agreements are better placed to support spot price risk management in an increasingly volatile spot market. As such, the secondary gas contracts have an important role. However, currently these contracts have no formalised trading platform, high search and transaction costs, and require time to negotiate, which may be prohibitive to higher uptake. Further, these trades are bilaterally negotiated and not reported, so do not reveal a transparent reference price, again creating a potential barrier for less sophisticated participants.

¹⁹ Victorian Minister for Energy, Environment and Climate Change, Forward Trading Market rule change proposal, pp.2-3.

3.2 Proposed solution

The rule change request proposes to establish a forward trading market (FTM) over the DTS that would be settled similar to the current GSH settlement arrangements and operated by AEMO. The forward market is proposed to be a voluntary, anonymous gas trading exchange for participants to trade standardised forward contracts for gas, assisting participants to manage their spot price risk by securing a fixed forward price for gas without being exposed to spot market variability.

The rule change request proposes the following changes to the National Gas Rules (NGR):

- DWGM gas products traded on the FTM are to be for delivery and receipt of gas on the DTS
- FTM trades are to be considered in the DWGM settlement calculations so that they are not settled twice
- variance between traded and scheduled quantities for forward products are settled in the DWGM at the 6 AM DWGM price on the gas delivery day specified in the DWGM forward product
- settlement and prudential methodology to address requirements as a result of the FTM (e.g. the treatment of delivery variances for these products)
- potential changes to the minimum content of exchange agreement and the products to be traded at the FTM
- potential changes in relation to market participation, market conduct, trading and information provisioning.²⁰

Settlements in the FTM would need to be accounted for in the DWGM, so they are not settled twice. The rule change request presents the following example:

A participant who has a net buy position of 10 TJ of gas for the gas day at a price of \$5/GJ would be settled for \$50,000 in the FTM settlement. The participant would then bid to withdraw 10 TJ on the gas day from the DWGM. The DWGM's settlement calculations would need to be adjusted to reflect that this 10 TJ was traded and settled ahead of time in the FTM and does not need to be settled through the DWGM. If the participant withdraws 10 TJ of gas (in accordance with its forward market trade) its settlement exposure to the DWGM would be \$0 while its settlement exposure to the FTM would be -\$50,000.²¹

The rule change request also proposes that if a participant does not inject or withdraw in accordance with their net forward position, the DWGM would schedule the net forward position as per the standard scheduling arrangements at the 6AM schedule. For settlement purposes, the net forward position would be treated similarly to how delivery variances are treated for a participant under the GSH Agreement. This delivery variance would be automatically settled at the 6am DWGM market price on the day that the delivery variance occurred. The proponent proposes that the settlement of delivery variances should occur as

²⁰ Victorian Minister for Energy, Environment and Climate Change, DWGM Forward Trading Market rule change proposal, p. 4.

²¹ Victorian Minister for Energy, Environment and Climate change, DWGM Forward Trading Market rule change proposal, p. 5.

part of DWGM settlement, while the settlement of forward trades would occur as part of the forward trading market settlement.

The proposed design of the FTM is aligned with the long term goals of developing the target model.²²

3.3 Potential benefits

The rule change proponent suggests the introduction of the FTM is expected to give participants more options to manage price risk and hedge their positions ahead of the gas day. Other benefits cited by the proponent include:

- Exchange trades would be transparent, which would allow for the development of a forward reference price. Over time this reference price could form the basis of operational, production and consumption investment decisions.
- The introduction of standardised short term contracts which may be traded up to a day ahead may encourage new entrants who are currently discouraged by the risk involved in trading on the spot market to participate in the market. For example if a participant from outside the DTS wanted to occasionally participate in the DWGM, the introduction of the FTM may enable them to participate with relative ease. Further this may reduce the search and transaction costs for participants, and the cost of managing counterparty risk.
- Having greater consistency in trading markets in the east coast will help to reduce the complexity and costs that may have been discouraging greater participation in the DWGM. Having similar products listed on the same Trayport platform in both the GSH and FTM may reduce barriers for trade between these markets and result in gas being transported more easily between regions where it is most valued.
- Improving risk management options for participants is expected to place downward pressure on the costs of providing and using gas, which, if this reduces costs for participants, could reduce costs to consumers.²³

3.4 Potential costs and risks

Implementing this market in the DWGM would also have several costs and risks associated with it. Notably, some costs that could be incurred include:

- System upgrade costs for both participants and AEMO to establish and operate the exchange. Depending on how similar the design of the FTM is to the existing GSHs, there may be some reduction in these costs by replicating some procedures and the exchange platforms that have already been established for those markets.
- System upgrade costs for AEMO to integrate the exchange into existing settlement, scheduling and pricing systems. Again, the level of integration with AEMO's existing systems will depend on the final policy design of the exchange. Both the exchange set up

²² The target model is discussed in Box 2 in section 5.3 of the *Victorian DWGM Background Paper*.

²³ Victorian Minister for Energy, Environment and Climate Change, DWGM Forward Trading Market rule change proposal, pp. 6-7.

costs, and the costs associated with integration into existing systems would need to be recovered from participants.²⁴

²⁴ Victorian Minister for Energy, Environment and Climate Change, DWGM Forward Trading Market rule change proposal, p. 7.

4 ASSESSMENT FRAMEWORK

To determine whether the proposed rule will or is likely to promote the National Gas Objective (NGO), the Commission will assess the rule change request against an assessment framework. The framework may be refined during the rule change process.

4.1 Achieving the NGO

The Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national gas objective (NGO).²⁵ This is the decision-making framework that the Commission must apply.

The NGO is:²⁶

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, safety, reliability and security of supply of natural gas.

4.2 Proposed assessment framework

At this stage, the Commission is seeking stakeholder views on its proposed assessment framework which includes the following criteria:

- **Effective risk management in the DWGM** — whether market participants are able to manage price and volume risk and options to improve the effectiveness of risk management activities.
- **Trading between the DWGM and interconnected pipelines** — whether the current DWGM arrangements inhibit trading of gas between the DTS and interconnected facilities and pipelines, and options to allow producers and shippers to effectively operate across gas trading hubs on the east coast without incurring substantial transaction costs.
- **Promoting competition in upstream and downstream markets** — whether the DWGM continues to encourage the introduction of new gas supplies to the market and promote competition among retailers for the sale of gas, and the extent to which the design of the DWGM may be a deterrent to large users participating in the market.
- **Regulatory and administrative burden** — whether the cost of implementing the proposed solutions is proportional to the costs of managing the issues it is trying to resolve.

4.3 Making a more preferable rule

Under s. 296 of the NGL, the Commission may make a rule that is different (including materially different) to a proposed rule (a more preferable rule) if it is satisfied that, having

²⁵ Section 291(1) of the NGL.

²⁶ Section 23 of the NGL.

regard to the issue or issues raised in the rule change request, the more preferable rule will or is likely to better contribute to the achievement of the NGO.

5 ISSUES FOR CONSULTATION

Taking into consideration the assessment framework, a number of issues have been identified for initial consultation. Stakeholders are encouraged to comment on these issues as well as any other aspect of the rule change request or this paper, including the proposed assessment framework.

This chapter outlines:

- the current risk management products available to DWGM participants
- design elements of a forward trading market in the DWGM
- the rule change environment.

5.1 Current risk management products

In assessing the potential improvements that the FTM could make to the DWGM, it is pertinent to first understand the current risk management options being utilised by industry to hedge against gas spot price volatility.

As noted in section 2.1, some risk management options are available to market participants in the DWGM to manage price risk for gas. Each of these options have different characteristics and applications, which are summarised in Table 2.1.

The drawbacks identified in the table could:

- act as a barrier to entry for new retailers or industrial consumers and to the expansion of existing participants operating outside the DWGM, impeding competition and growth in the market
- lead to inefficient operation of, investment in, and use of gas in the market for DWGM participants
- add to the administrative burden of participants, adding to the search and transaction costs.

The introduction of the FTM has the potential to address some of these issues. It would also affect the operation of each of the existing markets differently. For example, the FTM would remove some risk around entering into a GSA, by providing an avenue to on-sell additional gas. It may also replace some off-market secondary gas contracts, by effectively bringing them on-market. Finally, it could also split liquidity in or crowd the ASX future market as it begins to mature. Alternatively, the FTM could operate well alongside the ASX market as is the case in the Wallumbilla GSH.

QUESTION 1: CURRENT ARRANGEMENTS

1a) How do participants currently manage their DWGM spot price risk for gas? How effective are the current options for managing risk?

1b) How accessible and competitive are GSAs and off-market secondary gas contracts?

1c) What reasons, if any exist, have limited participants' use of ASX products to date? Is the recent small increase in trading a sign that the market is beginning to mature? Are the transaction costs, such as margining requirements, a barrier to trading ASX futures?

1d) Do the existing gas commodity contracting options act as a barrier to entry or expansion in the DWGM?

1e) Would the introduction of the FTM in the DWGM be beneficial to participants? How would the FTM affect the existing risk management products?

1f) Are there any other mechanisms that could be introduced to better manage gas commodity price risk in the DWGM, other than the FTM?

5.2 Design elements of a forward trading market

Several of the benefits identified in the rule change proposal are dependent on the various design elements and operation of the FTM.

In the rule change request, the proponent suggested the FTM adopt a framework similar to the GSH operating in Wallumbilla and Moomba. The structure and experience of these markets are discussed in section 2.2.1.

An issue that the Moomba GSH is currently experiencing, is a lack of liquidity with minimal trades on the hub.²⁷ If a similar issue were to arise in the FTM it may result in temporary or permanent costs being borne by participants, with little corresponding benefit. Therefore, the design of the market should attempt to maximise the probability of ensuring there is sufficient liquidity in the market.

One option, not raised in the rule change request, to improve liquidity would be to open participation in the FTM to both physical gas participants and financial institutions. This would encourage non-traditional participants, such as financial intermediaries, to enter the market, providing additional capital and demand for products. This additional demand for products would provide greater incentive for participants to offer products on the market, reducing costs for physical participants. Alternatively, the additional demand could increase costs for physical participants as they compete for products with financial participants. This design choice may have consequences for AEMO's ability to operate such an exchange, as there is a question over whether operating a financial market would fall within its statutory powers under the NGL. It would also have consequences for existing participants, who may require an Australian Financial Services Licence (AFSL) or AFSL exemption if financial participants are able to participate, which may be costly.

Offering a range of products valued by participants is also important for ensuring sufficient liquidity. As noted above the GSHs host balance-of-day, day-ahead, daily, weekly and monthly

²⁷ In 2017 there were 2 trades (12 TJ); in 2018 there were 10 trades (76TJ); and in January 2019 there were 3 trades (30TJ) on the Moomba GSH.

products, and the demand for each product varies from quarter to quarter as illustrated in Figure 2.2.

The rule change request suggested the listing of day-ahead, daily, weekly, monthly and seasonal products, noting that the introduction of a seasonal product would make the FTM directly competitive with ASX quarterly products. Additionally, having similar products and market characteristics across both the FTM and GSHs should lower transaction costs and complexity for traders operating across both hubs, encouraging greater participation and trade across the wider east coast market. The alignment of products between the GSH and FTM complies with the development of the target model in the long term.

The process for adding and removing products would also need to be established. The rule change proposal also suggests that variances between traded and scheduled quantities are settled in the DWGM at the 6am daily price, which would be a simple way to incorporate the products into scheduling, however would not hedge against any intra-day price volatility.²⁸

Finally, the cost of implementing the FTM could ultimately determine its success. The cost could be affected by the use of Trayport or another platform for trading. The cost to participants would also be affected by the way AEMO manages its credit risk. For example, prudentials could be leveraged across the GSH and pipeline capacity trading platforms or could be leveraged across DWGM prudentials.²⁹ Another variable which would affect implementation costs is the degree of integration of trades into scheduling, as it would affect AEMO's IT implementation costs.

QUESTION 2: DESIGN ELEMENTS OF A FORWARD TRADING MARKET

2a) How similar should the design of the FTM be to the existing GSH?

2b) What are the important elements for this market to have?

2c) How could liquidity in the FTM be encouraged and maintained?

2d) What participants should operate in the FTM? Should financial intermediaries be allowed to participate?

2e) What products should be offered on the market? Should there be seasonal products? What should be the process for adding/removing products?

2f) Should variances in delivery and scheduling be settled on the 6am daily price?

2g) How significant would the costs of implementing the FTM be? Should the FTM operate on the Trayport system or another platform? How should prudentials be treated? What level of integration should there be between the FTM and the DWGM scheduling system?

²⁸ Noting that none of the existing risk management products hedge against intra-day volatility.

²⁹ Noting the introduction of the FTM would create some additional risk that would need to be treated appropriately.

5.3 Rule change environment

This rule change request is being considered in the context of other potential changes in the DWGM. As noted in chapter 1, this rule change is one of three³⁰ being considered simultaneously by the Commission seeking improvements in the DWGM. The interaction between these rule changes could also affect the effectiveness of the FTM.

For example, the rule change on *Simpler Wholesale Price* considers the potential to spread congestion uplift costs across participants, reduces potential volatility in uplift payments—an element of price risk that could not be hedged using standard GSA, ASX or secondary trading contracts. This may change the attractiveness of these contracts in addition to FTM contracts.

Additionally, *Improvement to the AMDQ regime* rule change considers the option of separating AMDQ/AMDQ cc into separate entry and exit rights, and additionally establishing a market for secondary trading these rights. Again the establishment of a secondary market for entry and exit rights may be complementary to the establishment of the FTM, particularly if both commodity and transport use the same platform (similar to the GSH and CTP).

The ASX has recently gone out to tender for a voluntary market maker in the east coast electricity markets, and may consider entering a similar arrangement for the Victorian DWGM. If the ASX were to proceed with this idea, it would ensure sufficient liquidity on the Victorian gas products on the ASX, which may in turn affect the benefits of introducing the FTM.

QUESTION 3: RULE CHANGE ENVIRONMENT

3a) How will the *Simpler Wholesale Price* and *Improvements to the AMDQ regime* rule changes impact on the need or usefulness of the FTM? Does it improve the attractiveness of the FTM over the existing price risk management options or reduce it?

3b) If the ASX were to introduce a market maker for its Victorian gas product, how is the value proposition of the FTM affected? Would the introduction of the FTM still be of benefit to the market?

3c) If the FTM were to be implemented, what operational and implementation issues may arise? How much time is required for market bodies and participants to prepare for the introduction of an operational FTM?

³⁰ One of the rule changes is a consolidation of two separate rule change requests.

6 LODGING A SUBMISSION

Written submissions on the rule change request must be lodged with Commission by 26 April 2019 online via the Commission's website, www.aemc.gov.au, using the 'lodge a submission' function and selecting the project reference code GRC0050.

The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions on rule change requests.³¹ The Commission publishes all submissions on its website, subject to a claim of confidentiality.

All enquiries on this project should be addressed to Prabpreet Calais on (02) 8296 0605 or Prabpreet.Calais@aemc.gov.au.

³¹ This guideline is available on the Commission's website www.aemc.gov.au.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AFSL	Australian Financial Services Licence
AMDQ	Authorised Minimum Daily Quantity
ASX	Australian Securities Exchange
Commission	See AEMC
CTP	Capacity Trading Platform
DTS	Declared Transmission System
DWGM	Declared Wholesale Gas Market
FTM	Forward Trading Market
GSA	Gas Supply Agreement
GSH	Gas Supply Hub
MCE	Ministerial Council on Energy
NEM	National Electricity Market
NEO	National electricity objective
NGL	National Gas Law
NGO	National gas objective
STTM	Short Term Trading Market