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Australian Energy Market Commission

## CONSULTATION PAPER

# NATIONAL GAS AMENDMENT (DWGM IMPROVEMENT TO AMDQ REGIME) RULE 2019

### PROPONENT

Victorian Minister for Energy, Environment and Climate Change

14 MARCH 2019

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# RULE

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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 5 November 2018, the Australian Energy Market Commission (AEMC or Commission) received three rule change requests from the Victorian Minister for Energy Environment and Climate Change to amend the National Gas Rules (NGR).<sup>1</sup> The rule change requests proposed the following changes:

- introducing a clean and simple wholesale gas price for the Declared Wholesale Gas Market (DWGM) in Victoria
- establishing a forward trading exchange which will make it easier for buyers and sellers to trade gas and lock in a future price in the Victorian gas market
- improving the allocation and trading of pipeline capacity rights.

These requests were based on recommendations made by the AEMC in June 2017, as part of the Review of the Victorian declared wholesale gas market final report (*DWGM Review*).<sup>2</sup>

To address the issues related to the trading and allocation of pipeline capacity rights, the following changes are proposed in order to improve the existing authorised maximum daily quantity (AMDQ) regime in the DWGM, which will be discussed in this consultation paper:

1. introduce separate, tradable entry AMDQ rights and exit AMDQ rights
2. introduce an exchange to improve secondary trading of AMDQ rights (permanent transfer) and benefits (temporary transfer)
3. make AMDQ available for a range of different tenures.

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.

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

- *DWGM Simpler wholesale price*
- *DWGM Forward trading market*

In addition, AEMO on behalf of EnergyAustralia submitted a related rule change on the Application of constraints in the declared transmission system.<sup>3</sup> As the EnergyAustralia rule change request and the one on *DWGM Simpler wholesale price* are seeking to address similar

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1 Additional information regarding these rule change requests can be found on the respective project pages on the AEMC website. *DWGM Simpler wholesale price* at <https://www.aemc.gov.au/rule-changes/dwgm-simpler-wholesale-price> *DWGM Forward trading market* at <https://www.aemc.gov.au/rule-changes/dwgm-forward-trading-market>

2 AEMC, *Review of the Victorian declared wholesale gas market*, final report, 30 June 2017.

3 See project page for more details at <https://www.aemc.gov.au/rule-changes/application-of-constraints-in-the-declared-transmission-system>

issues the Commission has consolidated them under s.300 of the NGL. The consolidated rule change request is referred to as the *DWGM Simpler wholesale price* rule change request.

The Commission will assess these two related rule change requests (on *DWGM Simpler wholesale price* and *DWGM Forward trading market*) separately, but concurrently with the *DWGM Improvement to AMDQ regime* rule change request that is the subject of this consultation paper. The Commission will consider potential interactions between all three rule change requests.

Submissions on this consultation paper are due by **Friday 26 April 2019**. Details on how to lodge a submission are contained in chapter 6 of this consultation paper. A template is available to help stakeholders provide their views on the issues raised in the paper.<sup>4</sup>

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<sup>4</sup> <https://www.aemc.gov.au/rule-changes/dwgm-improvement-amdq-regime>

## 2 BACKGROUND

The context and background for this rule change request is detailed at the *Victorian DWGM Background Paper* (Background Paper) that has been published as a separate document to this consultation paper.<sup>5</sup>

This chapter provides additional background information that is specific to the rule change request discussed in this consultation paper.

### 2.1 Current arrangements

#### 2.1.1

##### **Non-firm capacity rights**

The Victorian DTS is the only gas transmission system operating under a market carriage model in eastern Australia.<sup>6</sup> Under the market carriage model, market participants utilising the DTS cannot contract for firm capacity on a pipeline and are instead implicitly allocated capacity through the DWGM when they bid or offer to buy or sell gas (or forecast their uncontrollable demand) in the DWGM.

Because market participants cannot secure firm capacity rights, they have limited incentive to underwrite capacity in the DTS, as other market participants may “free-ride” by gaining access to that capacity through the DWGM.<sup>7</sup> However, they may hold authorised MDQ or AMDQ cc (collectively known as AMDQ),<sup>8</sup> which provides some limited physical and financial rights.

The amount of AMDQ available is consistent with the physical capacity of the system, meaning that under normal operating conditions (that is, other than when there is transmission equipment failure or another significant issue on the network) the physical and financial rights provided by AMDQ can be honoured.

AMDQ are specific point-to-point rights, with the benefits only applying when market participants are injecting and withdrawing at specific locations.<sup>9</sup> Authorised MDQ refers to injections at Longford into the Longford to Melbourne pipeline. AMDQ cc is associated with a particular injection point and market participants nominate a quantity of AMDQ cc to the reference hub,<sup>10</sup> to specific customer sites or to a system withdrawal point at an interconnected facility.<sup>11</sup>

5 AEMC, *Victorian DWGM Background Paper*, 14 March 2019.

6 Market carriage in Victoria (and its difference to contract carriage elsewhere) is covered in detail in AEMC, *Victorian DWGM Background Paper*, 14 March 2019.

7 As access to the DTS is allocated on the basis of DWGM market outcomes, market participants cannot obtain exclusive access rights. The lack of such rights to use the DTS means that individual market participants have limited incentives to underwrite investments in the system. Other market participants would also benefit from a capacity expansion without having contributed to its costs, and may even be able to usurp the funding participant's ability to use it.

8 Authorised MDQ and AMDQ cc are collectively known as AMDQ. Throughout this chapter, the distinction between authorised MDQ and AMDQ cc is relevant. Consequently, this consultation paper will refer to authorised MDQ and AMDQ cc when referring to the specific right, and AMDQ when referring to the both authorised MDQ and AMDQ cc.

9 More on this is discussed in section 5.2.

10 The reference hub is a notional site within the DTS established for the purpose of valuing AMDQ and AMQD cc, also referred to as the Melbourne AMDQ node. See AEMO, *AMDQ transfer algorithms*, 3 April 2012, p. 4.

11 AEMO, *Wholesale Market AMDQ procedures (Victoria)*, 25 October 2016, pp.16-17.

AMDQ can also be re-allocated between locations and market participants under certain circumstances and following specific procedures.

### 2.1.2

#### Benefits associated with AMDQ

As noted in the *Background Paper*, there are two different types of right or benefit that are created by holding AMDQ:

- **Physical access rights:** holders of AMDQ receive pipeline access benefits above non-AMDQ holders during periods of pipeline congestion (injection tie-breaking rights; withdrawal tie-breaking rights and curtailment rights in emergencies).
- **Financial rights:** market participants can use part or all of their AMDQ to partially hedge against congestion uplift charges.<sup>12</sup>

This section provides a brief overview of tie breaking rights and congestion uplift hedge, which are more relevant to this rule change request, as the existing curtailment rights is not the subject of this rule change request and will not be affected in case a rule is made.

#### Injection and withdrawal tie breaking rights

The gross pool market design of the DWGM means that, each day, in order to gain access to the DTS, market participants are required to submit bids for controllable withdrawals, forecasts for uncontrollable withdrawals and offers for injections. AEMO matches supply with demand, and schedules the market based on the lowest price required to meet all demand. When there are equally priced bids, for gas injections or withdrawals, and only some of the combined total bid quantity at that price is required or can physically be delivered into or from the system, a participant holding AMDQ at that location will be scheduled in priority to a participant without AMDQ.

While tie breaking rights can be used at any price, they are most typically used at the floor and cap prices. This is because many market participants purchase gas outside of the DWGM/DTS and so seek to purchase their own gas off themselves for delivery within the DTS. To do this, they offer at the market floor price (\$0/GJ) and bid at the market price cap (\$800/GJ). As such, a lot of gas is bid/offered at these prices, and so tie breaking rights are used to determine access between gas at these prices (when it is necessary to do so) because not all the gas at this price can be/needs to be scheduled.

#### Congestion uplift hedge

To recover ancillary payments caused by congestion on the DTS, congestion uplift is charged to market participants who have exceeded their allocation of AMDQ in a scheduling interval (that is, exceeded their Authorised Maximum Interval Quantity (AMIQ)).<sup>13</sup> Market participants who hold AMDQ can use part or all of their allocation to hedge against those congestion charges, up to their AMIQ.

<sup>12</sup> AEMC, *Victorian DWGM Background Paper*, 14 March 2019.

<sup>13</sup> Each market participant's AMDQ uplift hedge is converted to schedule interval quantities using their nominated AMIQ profile (that is, how much AMDQ that participant expects to use in each schedule interval) to effectively create a hedge generated on an interval basis.

## 2.2 Related projects

There are a number of rule changes and reviews undertaken by the Commission that have been completed in recent years which are related to this rule change request. A summary of each of the projects is set out in Appendix A. Where a project is directly relevant to an issue raised by the rule change request, this is discussed later in this consultation paper.



## 3 DETAILS OF THE RULE CHANGE REQUEST

This chapter provides an overview of the issues and proposed solution in the rule change request. The rule change request from the Victorian Minister for Energy Environment and Climate Change proposes to:

1. introduce separate, tradable entry AMDQ rights and exit AMDQ rights
2. introduce an exchange to improve secondary trading of AMDQ rights (permanent transfer) and benefits (temporary transfer)
3. make AMDQ available for a range of different tenures.

The proposed changes are expected to reduce the complexity of AMDQ regime and make it easier for participants to secure and trade AMDQ rights, as well as being a step towards providing better signals for capacity usage to help to facilitate market-led investment.

The proposed rule changes are based on the recommendations made by the AEMC in the final report of the *DWGM Review*.<sup>14</sup>

The proponent did not include a proposed rule. Copies of the rule change request may be found on the AEMC website, [www.aemc.gov.au](http://www.aemc.gov.au).

### 3.1 Issues

The proponent notes that the existing AMDQ regime is causing the following issues<sup>15</sup> for DWGM participants and potential new entrants:

- **AMDQ do not provide firm capacity rights** — this can reduce the incentive for market-led investment. For these reasons, most of the investment in the DTS occurs through the regulatory process:
  - Market led investment in DTS capacity to create new AMDQ is susceptible to free-riding, because the DWGM provides open access (subject to the tie-breaking and curtailment rights).
  - Participants may not be able to nominate newly acquired AMDQ to their preferred withdrawal point, even if they have underwritten the investment, should another participant nominate their AMDQ to that withdrawal point first.<sup>16</sup>
- **The AMDQ regime is complex** — these complexities are making it difficult for both existing DWGM participants and potential new entrants to understand and use AMDQ.
- **Restrictions on the ability of market participants to trade AMDQ** —
  - Authorised MDQ at Longford for tariff V customers (residential and business loads) is dynamically allocated to retailers based on customer numbers, and cannot be traded. Therefore, the participants with authorised MDQ rights may not have gas to inject at

<sup>14</sup> AEMC, *Review of the Victorian declared wholesale gas market*, final report, 30 June 2017.

<sup>15</sup> Victorian Minister for Energy, Environment and Climate Change, *DWGM Improvement to AMDQ regime*, rule change request (rule change request), pp. 3-4.

<sup>16</sup> The nomination process is first-come-first serve, with AEMO processing viable nomination requests in the order they receive them.

Longford (because they are sourcing their gas from another location) despite notionally holding capacity related to the Longford to Melbourne pipeline.

- The processing time for AMDQ trades is lengthy at around six business days. This is prohibitive for shorter term trades.
- Search and transaction costs are high. Participants must find each other bilaterally to trade.
- AMDQ are created or obtained as a point-to-point right between the injection point and the reference hub (Melbourne). Participants can then nominate a different withdrawal point, subject to locational and diversity factors.<sup>17</sup> A participant currently does not have any guarantee, when they obtain AMDQ, that it will be able to transfer the withdrawal tie-breaking rights to its preferred location.
- **AMDQ are conservatively calculated** — AMDQ are released for long periods of time (five years or in perpetuity) and are consistent with the physical capacity for the DTS. In order to guarantee that the physical rights provided by AMDQ can be honoured, under normal operating conditions, the maximum amount of AMDQ that can be released is conservatively calculated based on the forecasts of the lowest capacity available over the five-year period at peak load conditions.

## 3.2 Proposed solution

In order to address the issues related to the AMDQ regime in the DWGM, the rule change request<sup>18</sup> proposed the following changes, which are based on the AEMC's recommendation in its final report of the *DWGM Review*:

1. Introduce separate, tradable entry AMDQ rights and exit AMDQ rights.
2. Introduce an exchange to improve secondary trading of AMDQ rights (permanent transfer) and benefits (temporary transfer).
3. Make AMDQ available for a range of different tenures.

Each of these proposed changes are discussed in detail in chapter 5.

The proponent has also indicated that the proposed changes are expected to reduce the complexity of AMDQ regime and make it easier for participants to secure and trade AMDQ rights, as well as being a step towards providing better signals for capacity usage to help facilitate market-led investment.

In addition, according to the proponent<sup>19</sup>, the proposed changes would contribute to the national gas objective (NGO) in the following manner:

- Improving pipeline capacity rights allocation and improving capacity rights trading should better enable market participants to manage scheduling risk, and allow for the more efficient allocation of capacity rights between market participants.

<sup>17</sup> AEMO, *AMDQ transfer algorithms for the transfer of authorised MDQ and AMDQ credit certificates*, 3 April 2012.

<sup>18</sup> Rule change request, pp. 4-5.

<sup>19</sup> Rule change request, p. 11.

- It may also assist in signalling when further investment in pipeline infrastructure is needed, should scarcity arise in AMDQ rights. To the extent that this information can then be factored into investment decisions and timings around pipeline augmentation, this may also improve the dynamic efficiency of the Victorian gas sector.
- Finally, the proposed reforms will assist in contributing to the further development of the east coast gas market more broadly, which is guided by the COAG Energy Council's gas market vision statement and the reform "target model" set out by the AEMC in its *DWGM Review*.<sup>20</sup>

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<sup>20</sup> A summary of the recommended target model can be found on AEMC, *Victorian DWGM Background Paper*, 14 March 2019, p. 27.

## 4 ASSESSMENT FRAMEWORK

The Commission's assessment of this rule change request must consider whether the proposed rule meets the national gas objective (NGO) as set out in section 291(1) of the NGL.

### 4.1 Achieving the national gas objective

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 NGO.<sup>21</sup> This is the decision-making framework that the Commission must apply.

The NGO is:<sup>22</sup>

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

To determine whether the proposed rule would likely to promote the NGO, the Commission will assess the rule change request against an assessment framework. The framework may be refined during the rule change process.

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.
- **Signals and incentives for efficient investment in and operation and use of pipeline capacity** — whether investment in, operation of and use of the DTS will occur in an efficient and timely manner and options to strengthen the signals and incentives for efficient investment in, operation of and use of the DTS.<sup>23</sup>
- **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.

<sup>21</sup> Section 291(1) of the NGL.

<sup>22</sup> Section 23 of the NGL.

<sup>23</sup> The NGO is structured to encourage energy market development in a way that supports the: 1. efficient allocation of natural gas and transportation services to market participants who value them the most, typically through price signals that reflect underlying costs; 2. provision of, and investment in, physical gas and transportation services at lowest possible cost through employing the least-cost combination of inputs; 3. ability of the market to readily adapt to changing supply and demand conditions over the long-term by achieving outcomes 1 and 2 over time. These three outcomes are commonly referred to as allocative, productive and dynamic efficiency, respectively.

- **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 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 set out in chapter 4, a number of issues have been identified for initial consultation.

This chapter provides background information and poses questions in order to gain feedback from stakeholders on the proposed changes in the rule change request, specifically:

- Section 5.1 discusses the complexity of the current AMDQ regime and how to address it
- Section 5.2 discusses the introduction of measures to facilitate secondary trading of AMDQ
- Section 5.3 discusses how to make AMDQ available for a range of different tenures in order to maximise the utilisation of the DTS.

Stakeholders are encouraged to comment on these issues as well as any other aspect of the rule change request, this paper or any other issues they consider relevant to the rule change request.

### 5.1 The AMDQ regime is complex

#### 5.1.1 Issues with the current arrangements

The focus of AMDQ has historically been on meeting intrastate demand primarily in or around Melbourne, rather than to ship gas to or beyond the boundaries of the DTS. However, with the changing dynamics in the east coast gas market there is growing demand to be able to move gas from the DTS inter-state or into storage at Iona, to be used in the DTS at a later date.

All AMDQ cc are initially created as a point-to-point right between an injection point (for example Culcairn or Iona) and the reference hub at Melbourne. These rights are consistent with the underlying physical capacity of the system between the injection point and the reference hub.

Market participants are then required to nominate their AMDQ cc to a withdrawal point (which may be the reference hub or a different location).

In order to nominate AMDQ cc to a system withdrawal point at an interconnected facility (for example at Culcairn or Iona), the market participant must provide satisfactory evidence to AEMO that it, or a counter party, holds a corresponding quantity of firm capacity rights on that interconnected facility.<sup>24</sup> The nomination must also be consistent with the underlying physical capacity of the DTS, with AEMO applying locational factors to any nominations.<sup>25</sup>

The nomination process is first-come-first serve, with AEMO processing viable nomination requests in the order they receive them, which means that participants may not always be able to nominate newly acquired AMDQ cc to their preferred withdrawal point, even if they

<sup>24</sup> The need to provide evidence of firm capacity at an interconnected facility was introduced in 2014, after a procedure proposal request submitted by APA. See: AEMO, *Notice to participant of AEMO's decision on making the Wholesale Market AMDQ Procedures (Victoria)*, 10 June 2014.

<sup>25</sup> Please refer to Box 2 in section 5.2, *Restrictions of transfer quantities*, for more details on locational factors.

have underwritten the investment, should another participant nominate their AMDQ cc to that withdrawal point first.

At Culcairn, the amount of firm capacity available north of Culcairn is consistent with the capacity in the DTS south of Culcairn. Market participants that have a newly acquired firm contract north of Culcairn would have sufficient confidence that they (alone) will be able to nominate their AMDQ cc to withdraw at Culcairn. This is because other parties would be prohibited from doing so as they have insufficient firm capacity at the interconnected facility. Therefore, there may be an incentive to underwrite firm contract carriage capacity outside of the DTS north of Culcairn and capacity to Culcairn within the DTS, utilising any newly created capacity.<sup>26</sup>

However, at Iona the total amount of firm capacity on interconnected facilities outside of the DTS far exceeds the amount of capacity on the South West Pipeline from Melbourne to Iona. This is because there are multiple facilities interconnected at Iona which collectively have a capacity greater than the South West Pipeline (for example, the SEA Gas pipeline and the Iona gas storage facility). Were capacity to be underwritten by a market participant in order to create new AMDQ cc which could be nominated to Iona, the market participant would have no ability to ensure that existing AMDQ cc was not then nominated to Iona by a different market participant because it was first to make a nomination request after the capacity was created.

For the reasons explained above, this may be prohibiting the ability of AMDQ cc to be used as a signal for market-led investment in the DTS for withdrawal at certain interconnected capacity.

#### **BOX 1: CHARACTERISTICS OF THE DTS ENTRY AND EXIT POINTS**

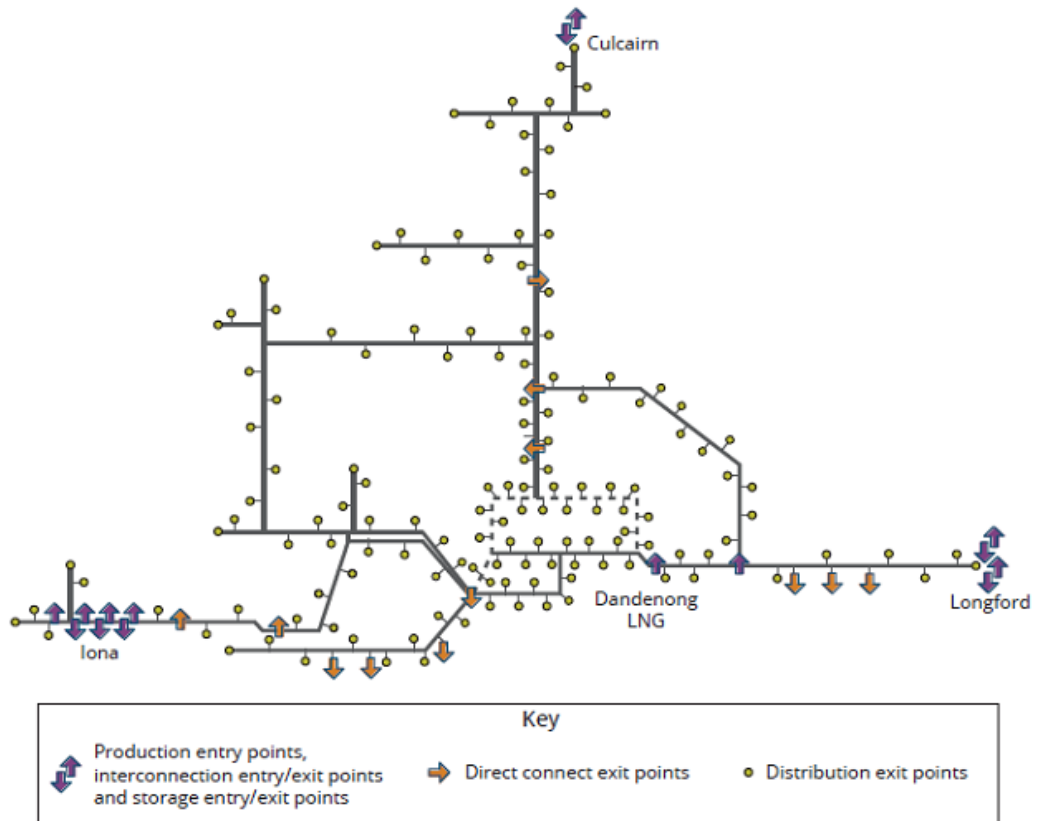
There are a number of points where gas can flow on-to and/or off-from the DTS currently. Specifically:

- 4 points where parties can control their injections of gas to, but cannot control gas withdrawals from, the DTS. These are production injection points and Dandenong storage.
- 123 points where parties can withdrawal gas from, but cannot control gas injections to, the DTS. These are large transmission connected customers and distribution networks.
- 5 points where parties can both inject and/or withdrawal gas to/from the DTS. These are interconnection points and Iona storage.

The figure below presents a stylised overview of the three broad categories of existing entry and exit points in the DTS.

<sup>26</sup> Under contract carriage arrangements, access to pipelines is provided to a shipper through a contract with a pipeline owner acquired in a capacity market separate to the commodity market. Market participants nominate their gross flows consistent with their capacity rights. Whether they are provided access to the capacity is determined under the terms of their contract with the pipeline owner, rather than on the basis of their bids and offers for gas.

**Figure 5.1: Existing entry and exit points to the DTS**



Source: Data provided by AEMO

Specifically:

- Purple denotes production entry points, interconnection entry/exit points and storage entry/exit points.
- Green denotes distribution exit points.
- Orange denotes direct connect exit points.

Please note that entry and exit point locations are only intended to be illustrative. For example, not all 111 distribution exit points have been represented in the figure above.

In addition, we note that many distribution exit points are grouped together and gas withdrawals are only measured at the aggregate grouped-level.



### 5.1.2 Description of the proposed solution

Under the proposed solution, AMDQ would no longer be point-to-point rights, but entry rights that refer to a specific physical injection point to the reference hub (the DTS), and exit rights that refer to a specific physical withdrawal point from the reference hub (the DTS).

To the extent that separating AMDQ into entry and exit rights better facilitates market participants securing (non-firm) capacity rights to interconnected facilities, this may allow for improved trading between the DWGM and those facilities.

In addition, enhanced transparency and certainty in the ability of market participants to nominate exit AMDQ to their preferred location could promote competition and reduce barriers to entry for new market participants.

The proposed solution may also improve the ability of market participants to obtain AMDQ and hence improve their ability to manage congestion related risk in the DWGM. However, this will be subject to the outcome of the *DWGM Simpler wholesale price* rule change request, as discussed in section 5.1.3 below.

Table 5.1 below provides a summary of the key benefits that would be attached to each of the AMDQ products:

**Table 5.1: Benefits attached to entry and exit AMDQ**

BENEFIT	ENTRY AMDQ	EXIT AMDQ
Injection tie-breaking right	yes	no
Withdrawal tie-breaking right	no	yes
Curtailement protection	no	yes
Congestion uplift hedge <sup>1</sup>	to be confirmed	to be confirmed

Note: <sup>1</sup> The congestion uplift hedge would be abolished under the proposed rule change on *DWGM Simpler wholesale price*.

### Impacts and implementation

The proposed changes are expected to provide the following benefits:

- Clarify the role and value of AMDQ as a non-firm capacity right.
- Improved pipeline capacity rights allocation should better enable market participants to manage scheduling risk, and allow for the more efficient allocation of capacity rights between market participants.<sup>27</sup>
- It may also assist in signalling when further investment in pipeline infrastructure is needed, should scarcity arise in AMDQ rights. To the extent that this information can then be factored into investment decisions and timings around pipeline augmentation, this may also improve the dynamic efficiency of the Victorian gas sector.<sup>28</sup>

<sup>27</sup> Rule change request, p. 11.

<sup>28</sup> Rule change request, pp. 11-12.

Those currently holding AMDQ would have these rights converted into separate entry and exit AMDQ. The entry AMDQ and exit AMDQ that would result from the separation of AMDQ would not be firm rights with respect to scheduling. In addition, the ability to nominate entry AMDQ to an exit point would no longer be possible.

The DWGM would remain as market carriage: physical access to the DTS would be determined through the DWGM scheduling process, subject to the non-firm physical benefits of AMDQ.

Injection tie-breaking rights would continue to be associated with entry AMDQ whereas withdrawal tie-breaking and curtailment rights would be associated with exit AMDQ.

Table 5.2 below provides a few examples on how entry and exit AMDQ would work in practice:

**Table 5.2: Entry and exit AMDQ in practice**

<b>EXAMPLE</b>	<b>ENTRY AND EXIT AMDQ IN PRACTICE</b>
Example 1	<ul style="list-style-type: none"> <li>A tariff D customer (i.e. large industry) who holds entry and exit AMDQ is planning to shut down its factory for a month.</li> <li>It could choose to offer its entry and exit AMDQ on the trading platform and temporarily trade it with another participant.</li> </ul>
Example 2	<ul style="list-style-type: none"> <li>A new entrant market participant has entered into a forward contract through the exchange to sell gas.</li> <li>To give it more confidence that it will be able to access the DTS on the day, it buys temporary entry AMDQ benefits from another participant.</li> </ul>
Example 3	<ul style="list-style-type: none"> <li>A tariff D customer who holds entry and exit AMDQ decides to enter into a supply contract through the forward trading exchange.</li> <li>As delivery is at the DTS, it does not need the entry AMDQ any more (although its counter party may value them). Therefore, it decides to permanently sell the entry AMDQ.</li> </ul>
Example 4	<ul style="list-style-type: none"> <li>A retailer wishes to refill the Iona gas storage facility over summer, in preparation for upcoming winter demand.</li> <li>It purchases a quantity of exit AMDQ for the summer period for exit at Iona.</li> <li>This provides it with exit tie-breaking rights to withdraw gas from the DTS at Iona for the summer period.</li> </ul>

Note: The examples provided above reflect not only the separation of entry and exit AMDQ, but also includes examples on how the secondary trading of AMDQ and AMDQ of different tenures would work in practice.

Going forward, new entry and exit AMDQ cc could be created in the same ways AMDQ cc can currently be created:

- *Through the regulatory process:* where an investment in the DTS is part of the regulatory process and leads to greater capacity in the system, new entry and/or exit AMDQ cc could be created and auctioned to participants. AEMO might also decide that additional entry and/or exit AMDQ could be created as a result of having AMDQ for different tenures, to reflect seasonal demand (discussed in section 5.3).
- *Through market led investment:* if a participant underwrites investment in the DTS outside the regulatory led investment process and this leads to additional capacity in the system, the DTS service provider can allocate entry and/or exit AMDQ cc to that participant.

#### **QUESTION 1: SEPARATE ENTRY AND EXIT AMDQ RIGHTS**

##### **Benefits**

1. How and to what extent would the proposed rule change help to improve the investment signal in the DTS?
2. Is AMDQ(cc) firm enough to inform the regulatory investment decision-making process?
3. To what extent would the proposed rule change reduce the free-rider effect, if any?
4. Would participants have interest in acquiring exit AMDQ cc? Would it help participants to manage scheduling risks?
5. Will the proposed rule change improve:
  - a. Trading of gas between jurisdictions?
  - b. Upstream or downstream competition?
6. Any other benefits?

##### **Implementation**

1. How should existing AMDQ and AMDQ cc be converted into entry and exit AMDQ?
2. What are the costs associated with the implementation of the proposed rule change?
3. If separate entry and exit AMDQ rights are implemented, how much time would be required for market bodies and participants to prepare for the introduction of the improved AMDQ regime?
4. Are there any unintended consequences?

### 5.1.3

#### Other considerations

##### Interactions with rule change requests on DWGM Simpler wholesale price

As noted in the introduction of this consultation paper, this rule change request is being considered in the context of other potential changes in the DWGM. The Commission also received a rule change request from the Victorian Government that seeks to introduce a simple wholesale gas price for the DWGM in Victoria (*DWGM Simpler wholesale price*).<sup>29</sup>

The *DWGM Simpler wholesale price* rule change request proposes that congestion uplift charges be 'socialised' or 'spread' across market participants. In socialising congestion uplift, congestion uplift could be recovered using a pro rata method (for example in the way that common uplift is recovered) or through another method to be defined.

In addition, AEMO on behalf of EnergyAustralia submitted a related rule change on the *Application of constraints in the declared transmission system*.<sup>30</sup>

There is potential for overlap between the proposed solutions of:

- introducing separate entry and exit AMDQ rights, as proposed in this consultation paper
- socialising congestion uplift across market participants, and
- internalising withdrawal constraints in the pricing schedule, as proposed by AEMO (on behalf of EnergyAustralia) and explained in a separate consultation paper, available on the AEMC's website.

The Commission would like to get stakeholders' view on the interaction of the solution proposed in the rule change request mentioned above in introducing separate entry and exit AMDQ rights and the potential introduction of the proposed solutions in the *DWGM Simpler wholesale price*, described above.

#### QUESTION 2: INTERACTION WITH RULE CHANGE REQUESTS ON DWGM SIMPLER WHOLESAL PRICE

##### Socialise congestion uplift

1. Would entry and exit AMDQ still be valuable to market participants in case the congestion uplift hedge benefit were no longer associated with AMDQ, as proposed in the *DWGM Simpler wholesale price* rule change request?
2. Are there any unintended consequences?

##### Internalising withdrawal constraints in the pricing schedule

1. If separate exit AMDQ rights were introduced, would it still be worthwhile implementing the proposal to internalise withdrawal constraints in the pricing schedule, as proposed in the *DWGM Simpler wholesale price* rule change requests? Please elaborate.

<sup>29</sup> See the project page on *DWGM Simpler wholesale price* at <https://www.aemc.gov.au/rule-changes/dwgm-simpler-wholesale-price>

<sup>30</sup> See the project page at <https://www.aemc.gov.au/rule-changes/application-of-constraints-in-the-declared-transmi>

## 5.2 Restrictions on the ability of market participants to trade AMDQ

### 5.2.1 Issues with the current arrangements

AMDQ are, in some circumstances, tradable capacity rights:

- AMDQ cc are held by market participants and can be traded among themselves
- Authorised MDQ (tariff D) are primarily held by large industrial consumers and can be traded among themselves and to other market participants<sup>31</sup>
- Authorised MDQ (tariff V) are automatically and dynamically allocated to market participants in proportion to their retail load and therefore cannot be traded
- Authorised MDQ (tariff D and tariff V) are primarily held by end consumers and retailers supplying these consumers cannot trade these rights, but can transfer some associated benefits.

Box 2 below briefly describes the current process that market participants need to go through for the transfer (trade) of AMDQ, and the transfer of benefits associated with these rights.

#### **BOX 2: AMDQ TRANSFERS**

##### **Permitted transfers of authorised MDQ**

Transfers of authorised MDQ can only be undertaken between:

- two tariff D withdrawal points
- a tariff D withdrawal point and the reference hub (or vice-versa), or
- two parties at the reference hub.

Site to site authorised MDQ transfers involve two steps: first from the originating site to reference hub, and then from reference hub to the destination site.

Site to reference hub, reference hub to site, or reference hub to reference hub transfers are simpler, each being a single step.

##### **Permitted transfers of AMDQ cc**

Transfers of AMDQ cc can only be undertaken between market participants at the reference hub. However, AMDQ cc must then be nominated by the new holder, either to the reference hub or to a different location.

##### **Restrictions of transfer quantities**

Not all transfers of authorised MDQ are consistent with the physical capacity of the DTS. Consequently, AEMO applies diversity and locational factors to account for the effect of pipeline network dynamics on the value of authorised MDQ when transferred.<sup>a</sup> Necessarily, transfers of AMDQ cc are consistent with the physical capacity of the DTS because they

<sup>31</sup> A limited amount of authorised MDQ has been purchased from the original large industrial consumers by retailers and are therefore no longer held by a large industrial consumer.

happen between two market participants both at the same location — the reference hub. A subsequent nomination of AMDQ cc to other locations is subject to locational factors to ensure the nomination is consistent with the physical capacity of the system.

#### **Initiating a transfer or nomination process**

Market participants need to submit a form to AEMO no less than five business days in advance of the required start date for a transfer to take effect.

#### **Processing time**

AEMO will use reasonable endeavours to process transfers within six business days of AEMO receiving a form.

#### **Publication on market information bulletin board (MIBB)**

AEMO publishes the aggregate amount of AMDQ transferred on each gas day on the market information bulletin board, and the indicative amount of available spare capacity at selected locations within the DTS.

#### **Agency injection hedge**

Because retailers do not own the large majority of authorised MDQ (which are owned by end customers), they are unable to transfer these rights. Nevertheless, retailers are able to transfer some associated benefits of authorised MDQ to other market participants.

This is undertaken by a retailer allocating a quantity of its scheduled injection to be used as an agency injection hedge nomination (AIHN) for one or multiple recipient market participants at a close proximity injection point. The recipient market participant receives the congestion uplift hedge created by injecting gas at the close proximity point, while the retailer continues to receive the injection tie breaking rights.

Note: Unless otherwise stated, the information in this box references: AEMO, *Wholesale Market AMDQ Procedures (Victoria)*, 25 October 2016.

<sup>a</sup> AEMO, *AMDQ transfer algorithms for the transfer of authorised MDQ and AMDQ credit certificates*, 3 April 2012.

There are a number of issues that may be restricting the ability of market participants to trade AMDQ (or to allocate the associated benefits of authorised MDQ) efficiently. Some issues are highlighted below:

- *Allocation of authorised MDQ at Longford.* Authorised MDQ associated with Longford is allocated for tariff V customers between market participants based on their customer base. This may give rise to a situation where a market participant has been allocated more authorised MDQ than it has contracted injection capacity at Longford. Since authorised MDQ allocated to tariff V customers cannot be transferred, it is effectively stranded.
- *Allocation of AMDQ cc.* AMDQ cc is released through the AEMO auction in tranches, often for five years in line with APA's access arrangement period,<sup>32</sup> which means that new

<sup>32</sup> APA is the owner of the DTS, responsible for building and maintaining the network, while AEMO is responsible for its operation.

entrants within the five-year period are unable to obtain AMDQ cc if the full allocation has been sold, no additional capacity is created through the APA led process (that is, with associated costs not included in the regulated asset base), and no other market participant is willing to sell.

- *Lengthy processing time for transfers.* Market participants have little ability to trade short-term AMDQs as it can take six business days to complete the transfer.<sup>33</sup> This is particularly problematic when supply and demand change at short notice, for example, due to abrupt weather events or due to LNG terminal outage, even if these are outside the DTS.<sup>34</sup>
- *Complex process to acquire market benefits.* It can be a confusing process to obtain AMDQ rights (or the associated benefits of authorised MDQ). Complicating factors include the diversity and locational factors which determine the value of AMDQ transferred or nominated to other locations, and the agency injection hedge process.<sup>35</sup>
- *Search and transaction costs.* As market participants have to bilaterally find one another to enter into a trade (or to allocate the associated benefits of authorised MDQ), there may be considerable search and transaction costs, which may deter otherwise efficient trades and be time-consuming and costly. In absence of an organised exchange, participants have to manage counter party risks and settlements themselves.<sup>36</sup>

In 2013-14, the AEMC considered a rule change request submitted by AEMO seeking to introduce a trading platform mechanism that would facilitate market participants transferring all or part of their portfolio of financial benefits associated with holding AMDQ to other market participants operating in the DWGM.<sup>37</sup> Due to circumstances at the time (namely a significant revision by AEMO of the costs and timeframes for implementation, and the fact that the Commission was about to undertake a comprehensive review of the Victorian DWGM) the Commission decided not to make a rule in its final determination.<sup>38</sup>

## 5.2.2

### Description of the proposed solution

The rule change request proposes to introduce an electronic trading platform operated by AEMO where market participants could anonymously post bids and offers to transfer all or part of their portfolio of financial and/or physical benefits associated with holding AMDQ to other market participants operating in the DWGM.

The mechanism would allow for the transfer of benefits, not of the rights themselves, because authorised MDQ are primarily owned by end consumers, not their retailers.

Alternatively, AMDQ cc ownership could be fully transferred to other market participants through the trading platform, as could authorised MDQ when the seller is the rights holder (most likely an incumbent tariff D customer). However, in the case that the seller is a retailer

33 The Commission understands this is due to AEMO having to undertake flow modelling to make sure the transfer is possible; validating that the applicant is the rightful owner of the AMDQ; and having to make manual database changes.

34 Rule change request, p. 2.

35 Agency Injection Hedge Nomination is complex to setup and the limitations are complex to manage.

36 Rule change request, p. 2.

37 See: <http://www.aemc.gov.au/rule-changes/portfolio-rights-trading>.

38 AEMC, *Portfolio Rights Trading*, final determination, 27 November 2014.

supplying the authorised MDQ holder, the platform would be limited to trading only the rights associated with authorised MDQ.

The platform would automatically match bids and offers and execute the trade. This trading platform could be similar to that recommended by the Commission in the east coast review stage 2 final report with regard to the trading of point-to-point capacity outside of the DTS and which is currently being implemented by AEMO using Trayport.<sup>39</sup> For example, AMDQ trading could occur through standardised products on Trayport.<sup>40</sup>

Trades between different locations would still be subject to the transfer algorithm, to ensure that the trade was consistent with the underlying physical capacity of the system. The transfer algorithm could be integrated into the trading platform, depending on the cost and complexity of doing so. Alternatively, trades could be conducted exclusively at the reference hub, with transfers/nominations to other locations taking place through a separate step outside of the platform. This issue is further discussed in section 5.2.3.

The proposed trading mechanism would:

- allow for the transfer of entitlement to the benefits associated with AMDQ between market participants in a timelier manner than the current transfer procedures
- facilitate liquidity in trading of the benefits associated with AMDQ
- improve price discovery by market participants
- protect the identity of market participants which might have concerns around confidential or commercially sensitive information when trading bilaterally.

The Commission, in the *DWGM Review*, has taken into account how each of the different types of AMDQ holders interact with their AMDQ rights, and how they would use entry or exit capacity, in determining their ability to trade. For example:

- *Exit capacity* is inextricably linked with the end-use customer, whether that is a tariff V customer (such as households) or a large direct connect user that is also a market participant. Exit capacity must remain linked with the relevant customer.
- *Entry capacity* is not specific to the end-use customer. A market participant can supply its customers (or itself) by injecting gas from any point into the DTS.

To address these complexities, the different classes of AMDQ holders would have slightly different trading rights. To the extent possible, the Commission is seeking to maximise the number of participants with entry AMDQ and exit AMDQ that can be traded, but without affecting the rights of end users to that AMDQ. Noting that the specifics of entry and exit AMDQ trading would need to be consulted on through the rule change process, the Commission envisages trading could occur in the following ways:

- *Tariff V customers:* as discussed above, access to the withdrawal point would be dynamically allocated to retailers, therefore exit AMDQ benefits are not relevant for tariff V customers. On the other hand, the entry AMDQ benefits, if dynamically allocated to

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39 Refer to Recommendation 7 at AEMC, *East Coast Wholesale Gas Markets and Pipeline Frameworks Review*, stage two final report, 23 May 2016, Sydney.

40 AEMO, submissions to the AEMC, *Assessment of alternative market designs*, appendix A, p. 9.



retailers, should be tradable. This would allow retailers to on-sell the entry AMDQ benefits at Longford if they are unable to use it themselves because they are not injecting gas to service their customers' demand from Longford. In each case the tariff V customers remain the owner of the rights.

- *Tariff D customers:*
  - If the tariff D customer is not a market participant and the entry and exit AMDQ rights are allocated to a retailer, similar to tariff V customers, that retailer could on-sell the entry AMDQ benefits, but not the exit AMDQ benefits. This is because the retailer would require the withdrawal tie breaking right to deliver gas to the customer, and the curtailment right is untradeable because it remains with the tariff D customer. For example, a retailer for a tariff D customer may not have a contract at Longford, where the entry AMDQ is located. Therefore, it could trade this benefit for a short period of time, while it remained the retailer of the tariff D customer. The tariff D customer remains the owner of the rights.
  - If the tariff D customer is a market participant, it would have the ability to trade its entry AMDQ or exit AMDQ permanently, or trade the benefits for a short period of time. Essentially, tariff D customers that are market participants should have the same trading rights and abilities as other market participants.
- *Market participants:* would have the ability to trade entry AMDQ or exit AMDQ permanently, or trade the benefits for a short period of time.

Table 5.3 provides a summary of the ability to trade AMDQ by type of rights' holder.

**Table 5.3: Summary of the ability to trade AMDQ**

TYPE OF RIGHTS HOLDER	ENTRY AMDQ	EXIT AMDQ
Tariff V customer (residential and small business)	<ul style="list-style-type: none"> <li>• Rule change to decide whether entry AMDQ is dynamically allocated to retailers or excised from tariff V customers</li> <li>• If dynamically allocated to retailers, retailers can trade benefits</li> </ul>	<p>N/A</p> <ul style="list-style-type: none"> <li>• Tie-breaking rights are <u>not</u> required at uncontrollable withdrawal points (where all tariff V customers are)</li> </ul>
Tariff D customer that is not a market participant	<ul style="list-style-type: none"> <li>• Allocated to the retailer</li> <li>• Retailer can trade benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Allocated to the retailer</li> <li>• Benefits <u>cannot</u> be traded</li> </ul>
Tariff D customer that is a market participant	<ul style="list-style-type: none"> <li>• Permanent trade of rights</li> <li>• Temporary trade of benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent trade of rights</li> <li>• Temporary trade of benefits</li> </ul>
Market participants	<ul style="list-style-type: none"> <li>• Permanent trade of rights</li> <li>• Temporary trade of benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent trade of rights</li> <li>• Temporary trade of benefits</li> </ul>

## Impacts and implementation

If market participants were better able to access underutilised uplift hedge or tie-breaking rights, for example through improved secondary trading of AMDQ, this may improve:

- the ability of market participants to manage the risk of uplift hedges or physical congestion
- the quality of decisions to invest in the DTS, because market participants would have better information and opportunities to trade existing AMDQ rather than seeking investment capacity to create new AMDQ.

It is important to note that, if a rule is made in relation to the rule change request on *DWGM Simpler wholesale price*, then the rights associated with congestion uplift hedge will cease to exist.

While the *Portfolio Rights Trading* rule change<sup>41</sup> was not implemented because the cost benefit analysis indicated that the change would not be consistent with the NGO, it is likely that the marginal costs of the proposed solution would be lower than at the time of the rule change decision. At this point we envisage that a trading platform could be implemented relatively quickly given the capacity trading platform recently introduced by AEMO as a result of the capacity trading reforms recommended in the East Coast Wholesale Gas Market Review, as noted in Box 3 below. In addition, the recommendation seeks to improve trading of not just benefits, but of the rights themselves. This is expected to result in more liquid trading and is more likely to meet the NGO than the *Portfolio Rights Trading* rule change.

### BOX 3: EAST COAST CAPACITY TRADING REFORMS

In May 2016 the AEMC provided the COAG Energy Council with its stage 2 final report on the *East Coast Wholesale Gas Markets and Pipeline Frameworks Review*.<sup>1</sup> The reforms relate to transmission pipeline and compression services (jointly referred to as Transportation Services) outside the Victorian DTS.

The Commission made a number of recommendations in that report to improve pipeline capacity arrangements to allow market participants more flexible access to transportation capacity:

- **Day-ahead auction:** the introduction of a daily, day-ahead capacity auction for contracted but un-nominated pipeline capacity and hub services which happens shortly after nomination cut-off time. This auction is to have a reserve price of zero dollars, with compressor fuel provided by shippers in-kind. It will offer at least all contracted but un-nominated capacity and accommodate nominations or renominations by incumbent shippers after the auction is conducted.

<sup>41</sup> Please refer to section 3 in Appendix A.

- **Capacity trading platform:** the creation of capacity trading platform(s) which will include electronic anonymous exchange based trading for commonly traded products in addition to a capacity listing service.
- **Standardisation of key contract terms:** the standardisation of key primary and secondary capacity contractual terms for pipeline and for hub services. Standards to be developed are for key operational, prudential and other contractual provisions in Gas Transportation Agreements (GTAs), Capacity Transportation Agreements (CTAs) and Operational GTAs, and provisions in contracts used for exchange based trading on the capacity trading platform.
- **Reporting framework for secondary trades:** the publication of information on all secondary trades of pipeline capacity and hub services. The information to be published is the price of the trade and any other information that might reasonably influence that price.

#### **The GMRG and the final recommendations for the reforms**

The Gas Market Reform Group (GMRG) was established by the COAG Energy Council in August 2016 to lead the design, development and implementation of the capacity trading reforms in addition to other wholesale market reforms from the east coast review.

Work on the capacity trading reforms commenced in February 2017. In late 2017 the GMRG released its final recommendations for the reforms.<sup>2</sup> The full package of reforms commenced on 1 March 2019.

Note: <sup>1</sup> AEMC, *East Coast Wholesale Gas Markets and Pipeline Frameworks Review*, stage 2 final report, 23 May 2016.

<sup>2</sup> GMRG, *Design of the day-ahead auction of contracted but un-nominated capacity*, final recommendations, December 2017; GRMG, *Capacity Trading Reform Package (Standardisation, capacity trading platform and reporting framework for secondary trades)*, final recommendations, November 2017.

The Commission would like to get stakeholders' view on the impact of the solution proposed in the rule change request mentioned above in the secondary trading of AMDQ and associated rights.

### **QUESTION 3: IMPROVED TRADING OF AMDQ RIGHTS AND BENEFITS**

#### **Benefits**

1. Will the proposed rule change improve the ability for participants to manage the risk of uplift hedges or physical congestion, assuming that trading is liquid? It is important to note that, if a rule is made in relation to the rule change request on *DWGM Simpler wholesale price*, then the rights associated with congestion uplift hedge will cease to exist.
2. Will a trading platform (that provides better risk management, reduced complexity and reduced transaction costs) help to encourage new entrants?

3. Will the proposed rule change improve participant's access to AMDQ and/or their ability to trade AMDQ they cannot use?
4. Will the proposed rule change provide for more efficient allocation of AMDQ between market participants? I.e. will participants find the exchange useful?
5. Will the proposed rule change improve the quality of decisions to invest in the DTS?
6. Will the proposed rule change improve:
  - a. Trading of gas between jurisdictions?
  - b. Upstream or downstream competition?
7. Any other benefits?

#### **Implementation**

1. Would participants be interested in secondary AMDQ trades? Buyers and sellers?
2. What design features of the newly introduced capacity trading platform in the east coast could be applicable / desirable for the secondary trading platform of AMDQ?
3. What are the costs associated with the implementation of the proposed rule change?
4. How much time would be required for market bodies and participants to prepare for the introduction of an operational electronic platform for the secondary trading of AMDQ?
5. Are there any unintended consequences?

### **5.2.3**

#### **Other considerations**

At the moment, AMDQ trades are linked with a close proximity injection point (such as the Longford close proximity point) and withdrawal at the reference hub. The injection point cannot be transferred, but the nominated withdrawal point can be transferred subject to a transfer algorithm which allows trades that are consistent with the physical capacity of the system.

Therefore, the rule change process will need to determine where trades for entry and exit AMDQ should occur, and under what circumstances they could be transferred to other points.

For example, trades for exit AMDQ could occur at the reference hub, with transfers or nominations to other locations taking place through a separate step. This would maximise liquidity of trades, however there is a risk for the participant that they then cannot transfer the AMDQ to their preferred location.

Another option is to limit the trading to similar locations (close proximity points). This may reduce liquidity, but any participant would be free to buy AMDQ rights at one location and transfer it to another location. They would take on the risk by choosing to trade at a different close proximity point. The transfer algorithm could be integrated into the trading platform, depending on the cost and complexity of doing so.

#### QUESTION 4: OTHER CONSIDERATIONS

1. Should the transfer algorithm be integrated into the trading platform? Or should the trades be conducted exclusively at the reference hub, with transfers/nominations to other locations taking place through a separate step outside of the platform?

#### **Interactions with rule change request on DWGM Forward trading market**

As noted in the introduction of this consultation paper, this rule change request is being considered in the context of other potential changes in the DWGM. The Commission also received a rule change request from the Victorian Government that seeks to establish a forward trading exchange which will make it easier for buyers and sellers to trade gas and lock in a future price in the Victorian gas market (*DWGM Forward trading market*).

The Commission would like to get stakeholders' view on the interaction of the solution proposed in the rule change request mentioned above in the secondary trading of AMDQ and associated rights and the potential establishment of a commodity forward trading market in the DWGM.

For example, if the establishment of a forward trading market could be seen as complementary to the establishment of a secondary market for entry and exit rights, particularly if both commodity and capacity trading use the same platform (similar to the Gas Supply Hubs and the and pipeline capacity trading mechanism).

#### QUESTION 5: INTERACTION WITH RULE CHANGE REQUEST ON DWGM FORWARD TRADING MARKET

1. How will the *DWGM Forward trading market* rule change, if a rule is made, affect the case for a secondary trading market for AMDQ? Does it make it more attractive or reduce the need for a facilitated market for AMDQ transfer and secondary trading?

## 5.3 AMDQ are conservatively calculated

### 5.3.1 Issues with the current arrangements

The DTS is a complex, meshed network. Consequently, the amount of capacity physically available at each entry and exit point varies on a day-to-day basis, in response to a number of factors, such as: pipeline infrastructure, system wide and local linepack, operating considerations, such as maintenance and outages, and demand location and the profile of demand.

The nature of many of these factors means that it is difficult to accurately forecast, well in advance, the amount of capacity that would be physically available. For example, demand for gas in the DTS is a function of the weather. Consequently, even though the amount of capacity available can be forecast with reasonable certainty immediately before the gas day, the further ahead the capacity level is forecast, the greater the uncertainty.

#### **Calculation of the amount of AMDQ to be released**

Currently, the total amount of AMDQ in the market is consistent with the physical capacity of the system, meaning that under normal operating conditions (that is, other than when there is transmission equipment failure or another significant issue on the network) the physical and financial rights provided by AMDQ can be honoured.

The availability of AMDQ is determined by AEMO and agreed to by APA, with the aid of load flow modelling software, taking a probabilistic assessment of whether capacity will be available. The capacity is calculated and released with a probability that it could not be met one day in every twenty years.<sup>42</sup>

In addition, AMDQ are released for long periods of time (five years or in perpetuity), so to guarantee the system can support the AMDQ under normal operating conditions, the maximum that can be released will necessarily relate to forecasts of the lowest capacity available over the five-year period at peak load conditions. Therefore, the current availability, tenure and form of AMDQ may be hindering some shippers' ability to transport gas to storage or to export gas from Victoria via the DTS.

This presents an issue where a participant may only want AMDQ for a single year or a single quarter (and is uncertain about its future requirements) but has to subscribe and pay for a full five years' worth of AMDQ.

### 5.3.2 Description of the proposed solution

Under the rule change proposal, entry and exit AMDQ would be made available for shorter periods than the current five-year period. The total amount of AMDQ available over the DTS access period would be allocated in tranches.<sup>43</sup>

42 The Victorian Gas Planning Report (VGPR) defines the 1-in-20 peak day demand projection (for severe weather conditions) as one that has a 5% probability of exceedance (POE) in a given year. This is expected, on average, to be exceeded once in 20 years. The total AMDQ available must be within these limits during the period of validity of AMDQ.

43 This would not apply to existing Authorised MDQs which have been allocated in perpetuity.

For example, 50 per cent could be allocated for the five-year period in a single auction (similar to how all AMDQ cc is auctioned now). The remainder could be allocated in smaller tenures throughout the access period, such as yearly and quarterly.

In addition, a one day in twenty-year summer event is likely to have different load flow characteristics than a one day in twenty-year winter event. This way, it is likely that additional summer capacity might be able to be released which would not be consistent with the physical capacity of the system in winter and vice versa.<sup>44</sup>

### **Impacts and implementation**

The rationale for introducing AMDQ of different tenures is threefold:

- It facilitates the seasonal or monthly determination of the amount of entry AMDQ and exit AMDQ, given changing system demand, in order to maximise the amount of AMDQ that is made available to participants.
- It gives participants greater flexibility to decide what tenure of entry AMDQ or exit AMDQ to buy. For example, a participant would not need to commit to 5 years of AMDQ if they only need it for (for example) 3 months.
- It allows new market participants who were not in the market at the time of the five yearly AMDQ auction to more readily obtain AMDQ (this would also be facilitated through the AMDQ electronic exchange described in section 5.2.2).

The tenure of AMDQ and the timing of their allocation should allow new or small participants with increasing portfolios to access capacity at regular intervals.

The trading platform together with making AMDQ available for different tenure could also be used to make previously unsold AMDQ available to market participants, further increasing the ease of access and trading of AMDQ.

It is important to note that the benefits of introducing shorter tenures of AMDQ cannot be fully realised until the next allocation of AMDQ cc in five years, as an AMDQ cc auction occurred in August 2018.<sup>45</sup> However, shorter tenures of AMDQ could be created immediately to reflect seasonal system capacity, or if additional capacity in the system is created through investment. This issue will be dealt with in the transitionals section of the draft rule.

Careful consideration will need to be given to the choice of tenure range and percentage allocated to them. Long term tenures may increase market power as smaller or new market participants would have to then buy from those market participants able to access these longer tenures. However, a higher percentage allocated to shorter tenures may inhibit use of the trading platform.

The specifics of this proposed solution would not necessarily need to be determined in the rule change process, but could instead be determined in consultation with industry during implementation through AEMO procedures.

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<sup>44</sup> As a result of the related rule change proposal on creating separate entry and exit AMDQ, the seasonal availability of entry and exit AMDQ may differ from each other as well. That is, the available entry AMDQ may be different from the available exit AMDQ.

<sup>45</sup> See <http://www.aemo.com.au/-/media/Files/Gas/DWGM/2018/AMDQ-CC-Auction-completion-Notice-2018.pdf>

The Commission would like to get stakeholders' view on the impact of the solution proposed in the rule change request mentioned above with regard to making AMDQ available for a range of different tenures.

#### **QUESTION 6: MAKING AMDQ AVAILABLE FOR A RANGE OF DIFFERENT TENURES**

##### **Benefits**

1. How and to what extent would the proposed rule change help to improve the investment signal in the DTS?
2. Would participants have interest in acquiring AMDQ of different tenures? Would it help participants manage their gas portfolio?
3. Will the proposed rule change improve:
  - a. Trading of gas between jurisdictions?
  - b. Upstream or downstream competition?
4. Will this encourage new entrants, in particular smaller new entrants, that don't have the resources to commit to five years of AMDQ?
5. Any other benefits?

##### **Implementation**

1. Please provide examples on the various AMDQ tenures that would be useful for market participants.
  - a. Would the tenures need to be different for entry and exit AMDQ?
2. What are the key issues that would have to be considered during the transition period? I.e. Prior to the next AMDQ cc auction / next access arrangement period.
3. Should the different tenures be determined during the rule change process or should it be determined in consultation with industry during implementation during AEMO procedures?
4. What are the costs associated with the implementation of the proposed rule change?
5. How much time would be required for market bodies and participants to prepare for the introduction of AMDQ of a range of different tenures?
6. Are there any unintended consequences?



## 6 LODGING A SUBMISSION

Written submissions on the rule change request must be lodged with Commission by **Friday 26 April 2019** online via the Commission's website, [www.aemc.gov.au](http://www.aemc.gov.au), using the "lodge a submission" function and selecting the project reference code **GRC0051**.

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.<sup>46</sup> The Commission publishes all submissions on its website, subject to a claim of confidentiality.

All enquiries on this project should be addressed to Daniela Moraes on (02) 8296 0607 or [daniela.moraes@aemc.gov.au](mailto:daniela.moraes@aemc.gov.au).

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<sup>46</sup> This guideline is available on the Commission's website [www.aemc.gov.au](http://www.aemc.gov.au).

## ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AMDQ	authorised maximum daily quantity
AMDQ cc	AMDQ credit certificates
AMIQ	authorised maximum interval quantity
Background Paper	Victorian DWGM Background Paper
COAG Energy Council	Council of Australian Governments' Energy Council
Commission	See AEMC
DTS	Declared Transmission System
DWGM	Declared Wholesale Gas Market
DWGM Review	Review of the Victorian declared wholesale gas market
NGL	National Gas Law
NGO	National gas objective
NGR	National Gas Rules

## A SUMMARY OF RELATED PROJECTS

### A.1 Review of the Victorian Declared Wholesale Gas Market

On 14 July 2017 the Commission published its final recommendations to reform the Victorian declared wholesale gas market (DWGM).<sup>47</sup>

The Commission recommended that in the short term the DWGM be improved in the following ways:

1. Provide a cleaner wholesale market price by including the costs currently intended to be recovered by common and congestion uplift in the market price, while retaining separate pricing of temporal constraints.
2. Establish a forward trading exchange over the Victorian declared transmission system (DTS) while retaining the existing daily DWGM.
3. Improve pipeline capacity allocation and introduce capacity rights trading by:
  - introducing separate, tradable entry AMDQ rights and exit AMDQ rights
  - introducing an exchange to improve secondary trading of AMDQ rights (permanent transfer) and benefits (temporary transfer)
  - making AMDQ available for a range of different tenures.

However, over the longer term, the Commission recommended further assessment of whether more significant market reform to the Commission's target model is necessary to more fulsomely meet the objectives of the review.

### A.2 East Coast Wholesale Gas Market and Pipeline Frameworks Review

On 28 July 2016, the AEMC released a package of 15 key recommended reforms to remove roadblocks to faster and more efficient gas trading and access to pipeline transportation along the east coast of Australia.<sup>48</sup>

Key recommendations included:

- Concentrating wholesale gas trading at two hubs — a Northern Hub at Wallumbilla in Queensland and a Southern Hub in Victoria, with improved trading arrangements and price discovery in Victoria. This will reduce market complexity and concentrate trading at key points of demand and supply on the East Coast, allowing for increased liquidity and more risk management options for gas users.
- Facilitating short-term pipeline capacity trading markets, including a short-term auction for unused capacity and improved capacity trading platforms. Access to pipeline capacity is a key enabler of wholesale market trading.
- Improving information provided through the Gas Bulletin Board to enable market participants to make better-informed decisions about trading, investing in, or using gas.

<sup>47</sup> AEMC, *Review of the Victorian declared wholesale gas market*, final report, 30 June 2017.

<sup>48</sup> AEMC, *East Coast Wholesale Gas Markets and Pipeline Frameworks Review*, stage 2 final report, 23 May 2016.

### A.3 Portfolio rights trading

On 27 November 2014, the AEMC published a final rule determination in respect of the rule change request from the Australian Energy Market Operator in relation to portfolio rights trading in the Victorian declared wholesale gas market.<sup>49</sup>

In the draft rule determination for this rule change request, the Commission considered that there were potential benefits associated with implementing the proposed rule submitted by the Australian Energy Market Operator (AEMO). However, a number of matters arose between making the draft and the final rule determination.

In October 2014, AEMO announced revised costs and a new timeframe for its proposed implementation of a new portfolio rights trading (PRT) mechanism for the Victorian declared wholesale gas market. As a result, the Commission was unable to conclude with certainty that the potential benefits of making AEMO's proposed rule would outweigh the potential costs of doing so. As a result, the Commission determined not to make a final rule.

### A.4 DWGM — AMDQ allocation

On 24 March 2016, the AEMC made a more preferable final rule which improves the operation of the Victorian declared wholesale gas market (Victorian DWGM) in relation to the allocation process for authorised MDQ and AMDQ cc.

The final rule clarified the type of market benefit instruments created when an augmentation of the gas transmission network is completed. It also clarified who is responsible for undertaking the allocation process for market benefit instruments.

The final rule provided that AEMO must offset the costs of operating the Victorian DWGM with any proceeds received from its allocation process and that it must provide a minimum of twenty business days' notice prior to undertaking the allocation process.

The AEMC considered that the final rule will promote regulatory certainty, increase timely provision of information and promote an efficient allocation process.

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<sup>49</sup> AEMC, *Portfolio rights trading*, final report, 27 November 2014.