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Mr John Pierce  
Chair  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

10 May 2017

Dear Mr Pierce

**Re: AER submission to the Australian Energy Market Commission – Assessment of Alternative Market Designs. AEMC project number GPR0002.**

Thank you for the opportunity to comment and contribute to the review of the Victorian Declared Wholesale Gas Market.

Please find our submission attached. The AER looks forward to assisting the AEMC in further developing the reform package in any way it considers helpful.

Should you wish to discuss any aspect of this submission, please do not hesitate to contact Sarah Ogilvie on (03) 9290 1464, [sarah.ogilvie@er.gov.au](mailto:sarah.ogilvie@er.gov.au).

Yours sincerely

A handwritten signature in black ink, appearing to read 'C. Cifuentes', with a long horizontal flourish extending to the right.

Cristina Cifuentes  
AER Board Member  
Australian Energy Regulator



**AER submission**

**Assessment of Alternative  
Market Designs**

Review of the Victorian Declared Wholesale Gas  
Market

May 2017

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# 1. Introduction

In 2015 the AEMC was requested by the COAG Energy Council and the Victorian Government to review the Victorian Declared Wholesale Gas Market (DWGM).

As part of this review on 30 March 2017 the AEMC released its Assessment of Alternative Market Designs paper (the paper). The paper is intended to facilitate further discussion of the options for gas market development in the DWGM, in particular options that have been raised by stakeholders in recent consultation. This paper follows an extension granted by the Victorian Government to enable the AEMC to further consult with stakeholders on a range of options to improve the DWGM.

We are supportive of the AEMC reviewing and seeking further stakeholder feedback on reform options and commend the AEMC on developing this paper. The paper presents a thorough analysis of 15 options to either improve the operation of the current DWGM or to implement more significant reform options. We look forward to continuing to work with the AEMC on these reforms.

We have previously provided comments and submissions on the AEMC's draft model.<sup>1</sup> This submission does not comment specifically on the efficacy of the draft model. Rather we respond directly to the Assessment of Alternative Market Designs paper.

## 2. Reform context

The East Coast Gas Market (ECGM) is undergoing significant change.

Firstly, on the demand side, the changes have largely occurred in response to the development of LNG facilities in Queensland, higher and more volatile gas prices and, to a degree, changed conditions in the National Electricity Market (NEM).<sup>2</sup>

The supply side of the market has also experienced a number of changes as a result of:

- the dedication of a large number of reserves to the LNG projects,
- declining reserves in some established basins,
- government restrictions on new gas exploration and developments in some states and territories,<sup>3</sup> and
- lower oil prices.<sup>4</sup>

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<sup>1</sup> In October 2016 the AEMC released its draft final report, which recommended a draft model to reforming the DWGM. AER, *Submission to the draft final report on the review of the Victorian Declared Wholesale Gas Market*, 29 November 2016.

<sup>2</sup> ACCC, *Inquiry into the East Coast Gas Market*, April 2016, page 2.

<sup>3</sup> For example, Victoria, New South Wales and the Northern Territory.

<sup>4</sup> ACCC, *Inquiry into the East Coast Gas Market*, April 2016, page 2.

In response, a number of gas market participants are now looking for greater cost-effectiveness and flexibility in their pipeline transportation contracts. Over the past three years there has been significant investment in gas infrastructure with a number of major pipelines now connected and capable of being operated on a bi-directional basis. These investments have largely been made to enable participants to send gas north, primarily to supply LNG exports. However, they also increase the connectedness of the east coast gas market and increase its ability to respond to market outcomes.

The Victorian gas industry has traditionally been isolated from rest of the ECGM. The DWGM was established in 1999 by the Victorian Government, with the objectives of supporting full retail contestability, and encouraging diversity of gas supply and upstream competition.<sup>5</sup>

Market participants have stated in submissions the following strengths of the current DWGM design:

- the gross pool market design, encouraging transparency of market information,
- combining commodity, capacity and balancing to pool liquidity and simplify trading arrangements, and
- Open access provided by market carriage<sup>6</sup>

However, as supply and demand tightens the Victorian gas market will become more integrated with the ECGM. Improving the trading arrangements within Victoria, and between Victoria and other jurisdictions, will facilitate gas flows between markets, allowing gas to flow where it is valued most.

## 2.1 DWGM review

In response to these changes, the Victorian Government and COAG EC initiated a review of the DWGM in 2015. The Terms of Reference for the review required the AEMC to consider:

- the ability of market participants to manage price and volume risk in the DWGM and options to increase the effectiveness of risk management activities.
- Whether market signals and regulatory incentives are providing for efficient use of, and efficient and timely investment in, pipeline capacity in the DTS.
- If, and to what extent, the current DWGM arrangements inhibit trading of gas between the DTS and interconnected facilities and pipelines.

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<sup>5</sup> AEMC, *Discussion paper: Review of the Victorian Declared Wholesale Gas Market*, 10 September 2015, page 8.  
<sup>6</sup> Origin, *Submission to the AEMC on Review of Victorian DWGM - Draft Final Report*, 2 December 2016, page 1. Seed Advisory, *Declared Wholesale Gas Market Review; Report for Victorian Gas Market Participants*, 2 December 2016, page 38. AGL, *Discussion Paper - Victorian Declared Wholesale Gas Market*, page 2, 7 December 2016.

- Whether the DWGM arrangements continue to facilitate market entry and promote competition in upstream and downstream markets and how this could be improved.

As the AEMC has emphasised, the options to reform the DWGM need to be assessed having regard to broader changes to the ECGM and to the market and physical characteristics of the DTS. Within this context, we consider the following features of the DTS are relevant to DWGM reform:

- The DTS has a large number of entry and exit points, and bi-directional capabilities.
- There are significant time lags between injection and withdrawals.
- The Victorian gas demand is peaky and uncertain.
- There is currently one major gas producer in Victoria and three major retailers operating in the market, with other smaller retailers and gas users also using the DWGM.

The review should pursue the objectives for reform whilst maintaining rational expectations of what a Victorian gas market can achieve. Submissions on this review from stakeholders have directly, and indirectly, suggested a range of objectives for reforming the DWGM, including:

- Maintaining security of supply,
- Promoting competition in the production and retailing of gas,
- Maximising the efficiency of the DTS,
- Minimising risks and barriers to trading gas within Victoria, from it and to it,
- Simplifying the design to make it easier for participants to use, and
- Promoting an efficient reference price for gas and a liquid wholesale gas market.

These objectives are desirable, but there are inherent trade-offs that need to be made. In communicating and developing a market design for the DWGM, we encourage the AEMC to explicitly consider and assess these trade-offs and work with industry, governments and the market institutions to identify the appropriate balance.

In addition, market participants need to acknowledge that all their objectives may not be achieved through one particular market design, and that implementation of a particular end market design may best be achieved in an incremental way.

### 3. Reform approach

Given the changing dynamics of the ECGM, the broad range of objectives and the unique features of the DTS, we strongly recommend reform of the DWGM be incremental. To this end, we consider that it may be appropriate that the complexity of the reform task be recognised through the development in the AEMC's final report of short and long term reform options. This would appropriately allow flexibility and refinements of the desired model going forward.

We consider there are options in the paper, that when developed and integrated into a package could progress the achievement of the COAG Energy Council Vision. This

package of options could be considered as the first stage of implementation and focus on necessary improvements to the current market structure as a pre-cursor to potentially more fundamental changes to the market structure. After this first stage is evaluated the merits of more complex market reform, such as the AEMC draft model, could be assessed.

Before we present what we consider to be a viable first stage of reform package, we have elaborated, below, on our concerns relating to options to increase the firmness of capacity rights. These concerns stem from our experience and expertise on investment related decisions in the DTS.

## 4. Capacity rights

Many of the options in the alternative market design paper aim to increase the firmness of capacity rights to ultimately incentivise market-led investment.

We appreciate that market-led investment can be encouraged by defining and allocating exclusive pipeline capacity rights and that market-led investment can lead to efficient investment outcomes. This is the main advantage of the contract carriage pipeline model or other models that seek to define exclusive capacity rights. However, allocating exclusive capacity rights may not necessarily lead to efficient investment outcomes. For example, if defining exclusive capacity rights creates an inaccurate representation of physical capacity, investment decisions may not be efficient. Efficiency gains of this model are also dependent on whether a shipper or pipeline owner has appropriate incentives to sell-on spare capacity and whether the type of capacity sold in a secondary capacity market fits the needs of the prospective capacity buyers (i.e. if only 'as available' capacity is being offered, will that meet the needs of shippers who require firm capacity).<sup>7</sup>

The opposite of a model that allocates capacity rights is the market carriage model - currently utilised in the DWGM. Key advantages of the market carriage model include open access which minimises barriers to entry for gas retailers and the efficient utilisation of pipeline capacity. However, the market carriage model will lead most investment to be incentivised through the regulatory process and this has its potential disadvantages, including information asymmetries and the socialisation of inefficient investment decisions by the service provider.<sup>8</sup>

Given that both the market carriage model and models which allocate exclusive property rights have advantages and disadvantages, we consider that there are two necessary pre-conditions for undertaking reforms in this area:

- there should be a clear and material problem that needs addressing, and
- the benefits of the proposed solution to any identified problem outweigh the costs of reform, having regard to the existing market design.

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<sup>7</sup> K Lowe Consulting, *Gas Market Scoping Study: A Report for the AEMC*, July 2013.

<sup>8</sup> AEMC, *Assessment of Alternative Market Designs*, March 2017, page i

## 4.1. Problem definition

The terms of reference ask the AEMC to investigate whether market signals and the regulatory framework support efficient investment in, and use of, the DTS now and in the future.

Regardless of how the DWGM is redesigned or whether firm capacity rights are defined, the DTS will likely still be classified as a natural monopoly, likely be fully regulated and subject to a regulatory regime.

Given this, it is appropriate to ask whether the current regulatory approach is providing appropriate incentives and signals for service providers (APA in this case) to invest efficiently.

## 4.2. Regulatory regime

The DTS is a fully regulated pipeline under the National Gas Rules. The National Gas Objective (NGO) is the central feature of the National Gas Law (NGL) and National Gas Rules (NGR). The NGO is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to prices, quality, safety, reliability and security of supply of natural gas.<sup>9</sup>

### Incentive based regulation

Consistent with all fully regulated gas pipelines, the AER approves the access arrangement for the DTS, including terms and conditions of access and the reference tariff(s), typically every five years.

While we undertake a capital expenditure assessment as part of our review, the final decisions regarding what assets to invest in and whether to invest at all rests solely with the service provider. This is consistent with an incentive based regulation regime.

We employ the building block approach to determine total revenue—that is, we base the total revenue on our estimate of the efficient costs that the service provider is likely to incur in providing gas services.

The building block costs include:<sup>10</sup>

- return on the projected capital base (return on capital)
- depreciation of the projected capital base (return of capital)
- the estimated cost of corporate income tax
- forecast opex.

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<sup>9</sup> NGL, s. 23

<sup>10</sup> NGR, r. 76.



Our assessment of capex directly affects the size of the capital base and therefore, the revenue generated from the return on capital and depreciation components of the building blocks. This total revenue is then translated into a reference tariff(s) reflecting demand forecasts.

### **Provisions in the NGR**

Rules 79 -86 outline our process for determining service provider's capital expenditure requirements.

Rule 79 requires that the proposed expenditure is justifiable according to:

1. the overall economic value of the expenditure (rule 79(2)(a))
2. a positive net present value (rule 79(2)(b))
3. expenditure is necessary to maintain system security (rule 79(2)(c))

Even though access arrangements are approved typically every five years, investment does not need to be restricted to these five yearly time periods. Service providers are able to present business cases for investment during an access arrangement period, and we can make an advance determination with regard to the capital project. The intra-period determination is binding for the next access arrangement decision. (rule 80). Reference tariffs that enable the service provider to recover this investment will not be changed until the next access arrangement, however, if this was material the service provider could seek a variation to its access arrangement (rule 65) or an acceleration of the review submission date (under rule 51).

If a service provider receives a capital contribution for an investment project that relates to a reference service, rule 82 details that the value of the capital contribution should be subtracted from the amount to be included in the capital base. This rule is likely to be more important if there is more market-led investment on the DTS.

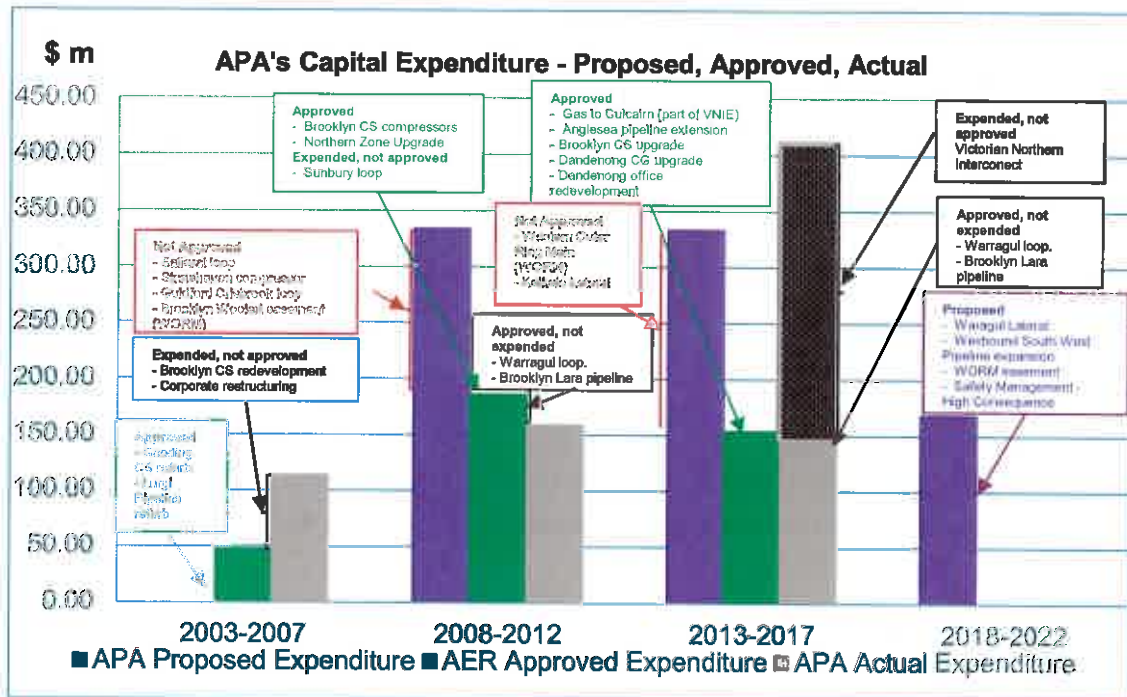
If the service provider undertakes an investment that is not considered to meet the requirements of rule 79 and has not received any capital contributions (rule 82) or surcharges (rule 83) to pay for it, the service provider can request that the amount be added to a speculative expenditure account (rule 84). If at a later point in time that investment is considered to be conforming (that is, it satisfies the requirements of rule 79) it may be rolled into the capital base at the start of the next access arrangement period.

Finally, rules 85 and 86 relate to redundant assets. If at any time the asset ceases to contribute in any way to the delivery of pipeline services the value of this asset may be removed from the capital base (rule 85). Conversely, if that asset is later deemed to contribute to the delivery of pipeline services, the assets may be treated as new capital expenditure and be added to the capital base (rule 86).

The regulatory process provides for stakeholder engagement by the AER and encourages the service provider to undertake stakeholder consultation in developing its proposal. The Consumer Challenge Panel also provides advice to the AER on the effectiveness of network businesses stakeholder engagement processes.<sup>11</sup> This consultation should provide the service provider with a good understanding of the long term interests of consumers. The consultation process is also an important avenue for the AER to gather stakeholder views on forward investment needs (see comments below on our current review of APA VTS).

### History of investment in the DTS

Over the past 14 years there has been significant investment in the DTS.



The chart above shows that APA tends to follow a pattern of pursuing investment where it considers it is most desirable, rather than directly linked to AER's approved capex amount. This is how the framework is designed so that the pipeline can undertake priorities and determine efficient investments in real time.

APA appears to be willing to invest when there is a need/opportunity — as evidenced by their \$340 million investment in the VNI despite only \$85 million approved by AER, as well as \$17.5 million in the Brooklyn CS redevelopment (2003-07) and \$13.5 million for the Sunbury loop (2008-12).

We are currently undertaking a review of the APA VTS access arrangement. APA submitted its proposal in January 2017. Subsequently, AEMO released its 2017 Gas

<sup>11</sup> The Consumer challenge panel was established as part of the AER's Better regulation program. See the AER webpage for more detail <https://www.aer.gov.au/about-us/consumer-challenge-panel>.

Statement of Opportunities (GSOO) and the 2017 Victorian Gas Planning Report – both important sources of demand information for APA to assess its capital expenditure priorities. We have also received 11 submissions, including one from AEMO, commenting on the desirability of APA's capital expenditure proposal. APA is responding to the demand information and has proposed a revised capital expenditure business case. We consider the consultation process for this access arrangement review is providing a supportive environment for APA, stakeholders and ourselves to understand the capex requirements of the DTS, which is ultimately beneficial for the long term interests of consumers.

In conclusion, we have not been presented with any evidence to suggest that the regulatory framework is not providing for efficient and timely investment in the DWGM. We also note that the AEMC also stated in its discussion paper in September 2015 that there is no evidence to suggest that the regulatory approach is not providing for efficient investment decisions.<sup>12</sup>

Given this lack of evidence of an investment problem we consider that it would be an appropriate first step for the AEMC to further investigate incentives for investment in the DTS. This review could clearly identify any current or potential problems with the existing framework before any significant reform changes to capacity rights are recommended. Such 'significant' reform options relating to capacity rights include options set out in chapter 6 of the paper and the AEMC draft model.

## 5. Package of options to reform the DWGM

In response to the AEMC seeking feedback on the options in its paper, we present a package of options from the paper that we consider could help to achieve the COAG Gas Vision.

We recommend the AEMC further consider this package with market participants and undertake a rigorous assessment of the options in comparison to the existing situation. The value of market participant input into the likely benefits and implementation issues related to these options cannot be underestimated.

This package of options could be considered as the first stage of implementation. The options focus on necessary improvements to the current market structure, rather than more complex and broad ranging market reform, and could be implemented immediately.

We consider that it would be appropriate for the AEMC to:

- **investigate options to review constraints and uplift management (linked to option 3.2).**

We released a significant price variation report in December 2016 regarding the Longford facility outage on 1 October 2016. In that report we noted that some

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<sup>12</sup> AEMC, *Discussion paper. Review of the Victorian Declared Wholesale Gas Market*, September 2015.

participants raised concerns relating to the ancillary and uplift settlement outcomes, questioning whether these outcomes adequately reflected 'cost to cause'.<sup>13</sup>

Similarly, the Seed Advisory submission to the AEMC also commented on the need to improve the implementation of the causer pays principles for uplift charges.

We understand AEMO may examine whether there is scope for improving the allocation of uplift payments, and we encourage this examination.<sup>14</sup>

- **Recommend establishing a forward trading platform (option 4.3).** This trading platform would be available before the gas day (that is trading would be possible days, weeks or months in advance) and integrated into the DWGM.

We consider establishing a forward trading platform will support market participants to take forward trading positions and manage their price risk. Having a trading platform, transposed from the Wallumbilla gas supply hub for example, will improve the ease and flexibility of short term trading. The Seed Advisory submission states "there is a clear need to improve the ease and flexibility in short term trading".<sup>15</sup>

This type of forward trading can potentially be done now, but participants have commented that there are a number of process barriers which mean the costs of executing a trade can outweigh the benefits.<sup>16</sup> Currently, it is also unclear how any forward physical gas trading would interact with the DWGM on the gas day.<sup>17</sup>

We consider there are benefits in integrating this forward trading platform with the DWGM, particularly as part of an incremental approach to reform. A trading platform that is integrated within the DWGM will enhance the effectiveness of the current model and maintain a single point of reference for the gas market in Victoria. Adding an exchange outside the DWGM (i.e. option 4.2) will effectively create another physical gas market, which doesn't appear to have any additional benefits and may only create confusion for current and prospective participants.

- **Improve AMDQ and AMDQ cc allocation and trading (option 5.2).** We agree with the AEMC that AMDQ provide some physical and financial benefits to holders. Given the presence of such benefits we think the first logical step regarding AMDQ is to ensure that these benefits are fully utilised and allocated to those who value it most.

We understand there is some ability to transfer AMDQ at the moment, but there are a number of limitations, including material search and transaction costs and lengthy processing times.<sup>18</sup> A trading platform mechanism that would facilitate market

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<sup>13</sup> AER, *Significant price variation report: Victorian Gas Market Longford Facility Outage 1 October 2016*, 21 December 2016, page 15.

<sup>14</sup> AER, *Significant price variation report: Victorian Gas Market Longford Facility Outage 1 October 2016*, 21 December 2016, page 5.

<sup>15</sup> Seed Advisory, *Declared Wholesale Gas Market Review*, 2 December 2016, page 39.

<sup>16</sup> Seed Advisory, *Declared Wholesale Gas Market Review*, 2 December 2016, page 39.

<sup>17</sup> AEMC, *Assessment of Alternative Market Designs, Review of the Victorian DWGM*, 30 March 2017, page 42.

<sup>18</sup> AEMC, *Assessment of Alternative Market Designs, Review of the Victorian DWGM*, 30 March 2017, page 65-66.

participants transferring all or part of their portfolio of financial benefits associated with holding AMDQ would overcome these limitations. We consider this option will:

- improve market participant's ability to manage congestion related risk, and
- allocate underutilised AMDQ more efficiently to those who value it.

This option is also consistent with secondary capacity trading options being implemented in the wider ECGM.

## 6. Next steps

We consider it appropriate that the complexity of the reform task be recognised through the development in the AEMC's final report of short and long term reform options. This would appropriately allow flexibility and refinements of the desired model going forward. To reflect this we consider that the final report should present a pathway to reform the DWGM that enables an incremental reform approach. The process should encourage industry, government and government institutions to work collaboratively.

The incremental approach could involve the AEMC recommending a package of options from the paper, and we would support the AEMC in further investigating the package that we presented in section 5.

We also consider that options to improve signals and incentives for investment other than firming capacity rights should be more fully investigated. To ensure these options address a clearly defined problem, we would support a review into the current incentives for APA to invest in the DTS. Such a review could consider the institutional arrangements governing investment in the DTS, including the incentives under the Service Envelope Agreement between AEMO and APA and the regulatory provisions under the NGR.

After the conclusion of the review and the effectiveness of the first stage of reforms are evaluated the merits of more complex and broad ranging market reform, such as the AEMC draft model, could be assessed. If more significant reform is warranted to achieve the COAG Gas Vision, we consider that further more wide ranging reform of the DWGM will require a separate and detailed process that is co-led and owned by governments and market participants.