

Australian Energy Market Commission

DRAFT RULE DETERMINATION

NATIONAL GAS AMENDMENT (DWGM SIMPLER WHOLESale PRICE) RULE 2019

PROPONENTS

Victorian Minister for Energy, Environment and Climate Change
Australian Energy Market Operator

5 SEPTEMBER 2019

RULE

INQUIRIES

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ABOUT THE AEMC

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

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SUMMARY

- 1 The Australian Energy Market Commission (Commission) has made a draft rule that amends the National Gas Rules (NGR), in relation to the Victorian Declared Wholesale Gas Market (DWGM), by:
- requiring AEMO to take into account transmission constraints that limit withdrawals in pricing schedules, which determine market prices
 - simplifying the mechanism that market participants can use to protect against the risk of incurring congestion uplift payments by removing the need to inject gas and submit injection hedge nominations.
- 2 The draft rule does not spread congestion uplift payments across all market participants, as suggested by the rule change proponent, but instead retains the current approach in which congestion uplift payments are allocated as far as practicable to market participants that cause a constraint.
- 3 The draft rule, which is a more preferable rule, was made in relation to a consolidated rule change request from the Victorian Minister for Energy, Environment and Climate Change and the Australian Energy Market Operator (AEMO). The consolidated rule change is referred to as the *DWGM simpler wholesale price* rule change request.
- 4 In deciding to make this draft rule, the Commission has taken into account interactions with the draft rule for the separate rule change on *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*.
- 5 The Commission decided not to make the rule change proposal to socialise or spread congestion uplift payments across market participants as it would not support the National Gas Objective (NGO). While this may simplify current arrangements, it removes an incentive for market participants to avoid contributing to some types of constraints in the declared transmission system (DTS).
- 6 Background**
- 7 On 5 November 2018, the Commission received a rule change request from the Victorian Minister for Energy, Environment and Climate Change that sought to amend the NGR. The rule change request sought to improve risk management options in the Victorian DWGM by 'socialising' or 'smearing' the recovery of congestion uplift payments across market participants, instead of the current approach that aims to recover congestion uplift payments from those parties that caused the congestion.
- 8 On 24 November 2016, the Commission received a rule change request from AEMO, on behalf of EnergyAustralia,¹ that sought to amend the NGR. The rule change request sought to allow AEMO to include physical constraints that limit scheduled withdrawals in the determination of the pricing schedule for the Victorian DWGM.

¹ AEMO is the only party other than the Victorian Minister who can proposed changes to the rules relating to the DWGM. AEMO has proposed the rule change after receiving a request to do so from EnergyAustralia.

- 9 As these two rule change requests related to a common subject matter and were seeking to address similar issues the Commission consolidated them under s.300 of the NGL.
- 10 On 5 November 2018, the AEMC also received two other related rule change requests from the Victorian Minister for Energy, Environment and Climate Change, seeking to amend the NGR:
- The *DWGM forward trading market* rule change request proposed establishing a forward trading exchange to make it easier for buyers and sellers to trade gas and lock in a future price in the Victorian gas market. On 4 July 2019, the Commission published a draft determination decision to not make this rule.
 - The *DWGM improvement to AMDQ regime* rule change request proposed introducing separate tradeable entry and exit certificates, enabling a secondary trading platform to be introduced and making certificates available for a range of different tenures. On 5 September 2019, the Commission published a draft determination decision to make a more preferable rule.
- 11 While the Commission has assessed these two related rule change requests through separate processes from the *DWGM simpler wholesale price* rule change that is the subject of this draft determination, interactions between the rule changes have been taken into account in determining the draft rules.
- 12 Features of the draft rule**
- 13 The draft rule amends the requirements on AEMO in using an optimisation program to produce pricing schedules, which determine market prices. The draft rule replaces the requirement for AEMO to not consider transmission constraints in the pricing schedule with a requirement to take into account any transmission constraints affecting withdrawals of gas.
- 14 The draft rule also simplifies the mechanism that market participants can use to protect against the risk of incurring congestion uplift payments, by:
- removing the need for market participants to inject gas to be eligible for protection against congestion uplift payments
 - removing the concept of congestion uplift hedge and the need for market participants to submit injection hedge nominations
 - implementing a new congestion mechanism based on market participant's daily withdrawals of gas exceeding their allocation of exit capacity certificate, on a whole of DTS basis. This replaces the current measure in which market participants protect against the risk of incurring congestion uplift payments by withdrawing less gas than their Authorised Maximum Internal Quantity (AMIQ) for a scheduling interval and injecting gas at the location of their AMDQ.
- 15 The draft rule does not spread congestion uplift payments across all market participants, as proposed by the Victorian Minister for Energy, Environment and Climate Change, but instead retains the current approach in which congestion uplift payments are allocated as far as practicable to market participants that cause a constraint.

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Benefits of the draft rule

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Having regard to the issues raised in the rule change request and during consultation, the Commission is satisfied the draft rule will, or is likely to, contribute to the achievement of the NGO for the following reasons:

- **Improved risk management in the DWGM** - in situations where there is a physical withdrawal constraint in the DTS, the draft rule reduces uncertainty and scheduling risk for market participants around whether their injection bids may be constrained off despite being below the market price. The draft rule also makes it simpler for market participants to manage the risk of incurring congestion uplift payments as it removes the requirement for market participants to inject or nominate hedge nominations to protect against the risk of congestion uplift payments. This change applies to the new exit capacity certificates and uncontrollable exit capacity certificates created through the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019* rule change. This makes it simpler for market participants to manage the risk of incurring congestion uplift payments as they can buy and hold these certificates and withdraw gas in accordance with the simplified congestion mechanism.
- **Improved signals and incentives for efficient operation and use of pipeline capacity** - compared to the current arrangements, the draft rule results in a more efficient scheduling process and utilisation of pipeline capacity. Currently, physically infeasible withdrawal bids may result in a higher price and lower quantity of gas traded. Under the draft rule, the market clearing engine will no longer 'see' physically infeasible withdrawal bids resulting in a market price and quantity that is more in line with the physical capability of the system.
- **Promotion of competition in downstream markets** - the draft rule simplifies the mechanism for market participants to protect against the risk of incurring congestion uplift payments, which may encourage new entrants to the Victorian retail gas market.
- **Lower regulatory and administrative burden** - the benefits of implementing the draft rule are expected to outweigh the costs. Removing the need to inject gas to activate congestion uplift protection will reduce the administrative burden.

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Implementation

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The draft rule sets out the following proposed timing for commencement of the rule:

- the amendments relating to internalising withdrawal constraints in the pricing schedule are to commence on 31 March 2020
- the amendments relating to the removal of the injection test from the congestion uplift framework are to commence on 1 January 2023, immediately after the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019* commences
- amendments for transitional arrangements are to commence on 12 December 2019.

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The transitional arrangements require that, by 1 January 2022, AEMO must review and where necessary, update and publish the Uplift payment procedures to take into account the rule.

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Consultation

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The Commission welcomes submissions on this draft determination and the draft rule by **24 October 2019**.

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1 RULE CHANGE REQUEST AND RULE MAKING PROCESS

This chapter provides a summary of the rule change request, relevant background information and the rule making process for the DWGM simpler wholesale price rule change request.

For additional background information on the operation of the DWGM please see the AEMC background paper.²

1.1 The consolidated rule change request

On 5 November 2018, the Commission received a rule change request from the Victorian Minister for Energy, Environment and Climate Change seeking to amend the NGR. The rule change request sought to improve risk management options in the Victorian DWGM by 'socialising' or 'smearing' the recovery of congestion uplift payments across market participants, instead of the current approach that aims to recover congestion uplift payments from those parties that caused the congestion.

On 24 November 2016, the Commission received a rule change request from AEMO, on behalf of EnergyAustralia, that sought to amend the NGR. The rule change request sought to enable AEMO to include constraints in relation to withdrawals within the DTS in the pricing schedule for the Victorian DWGM.

As these two rule change requests relate to a common subject matter and were seeking to address similar issues, the Commission consolidated them under s.300 of the NGL.

1.2 Current arrangements

In the course of trading gas within the DWGM on a given day, market participants may be exposed to:

- payments related to selling or buying gas from other market participants at the market price.
- ancillary and uplift payments aimed at recovering the cost of any transmission constraints within the DTS.
- market participant fees.³

There are four types of uplift payments:

- surprise uplift
- congestion uplift
- congestion Declared Transmission System Service Provider (DTS SP)

² AEMC, *Declared Wholesale Gas Market Background Paper*, Consultation paper, 14 March 2019.

³ For the full set of market participant fees see 2019-20 AEMO Final Budget and Fees: https://www.aemo.com.au/-/media/Files/About_AEMO/Energy_Market_Budget_and_Fees/2019/Final-201920-AEMO-Final-Budget-and-Fees-inc-ERA-final-determination.pdf

- common uplift

This rule change request only relates to congestion uplift payments. More information on these payments is outlined in the AEMC background paper.⁴

This section provides background information that is specific to the rule change request in this draft determination. It provides an overview of current arrangements relating to:

- the application of constraints in the DTS
- the congestion uplift framework
- uplift payment amounts in recent years.

1.2.1

Application of constraints in the DTS

Under the current arrangements the pricing schedule is an output of a market clearing engine assuming no physical constraints within the DTS (an 'infinite pool' model) and determines the market price for the gas day and any updates to the market price during the gas day. The quantity of gas is determined in the operating schedule. Table 1.1 provides a high-level summary of the different functions of the pricing schedule and the operating schedule.

Table 1.1: Differences between the pricing and operating schedule

PRICING SCHEDULE	OPERATING SCHEDULE
Ignores transmission constraints within the DTS	Includes transmission constraints within the DTS
Determines balance of day price	Hourly shadow price to determine efficient dispatch
Determines DTS-wide price	Location specific shadow price to determine efficient dispatch
Determines daily market prices and any updates to price during the gas day	Determines gas quantity

Source: AEMC

Under the current NGR, AEMO is not able to include constraints internal to the DTS in the pricing schedule. Physical constraints are included in the operating schedule and not the pricing schedule, as explained in the AEMC background paper.⁵

⁴ AEMC, *Victorian Declared Wholesale Gas Market Background Paper*, Consultation paper, 14 March 2019.

⁵ AEMC, *Declared Wholesale Gas Market Background Paper*, Consultation paper, 14 March 2019.

1.2.2

Congestion uplift framework

Congestion uplift payments

Congestion uplift seeks to recover the costs of locational transmission constraints from those parties that caused them. Congestion uplift payments are levied on market participants who are scheduled to withdraw in excess of their allocated portion of the physical capacity of the system, as defined by their authorised maximum interval quantity (AMIQ), derived from their authorised maximum daily quantity (AMDQ).

"Locational" constraints arise when a pipeline does not have the capacity to transport sufficient gas even if there were adequate forewarning of supply and demand conditions. For example, if on a very cold day there is high and sustained demand for gas in Melbourne, then the Longford to Melbourne pipeline may be unable to service this demand from the cheapest gas (offered at Longford). This would be the case even if AEMO has sufficient forewarning of high demand, because it is not able to indefinitely increase pressure in preparation. As a result, more expensive gas (for example from Dandenong LNG or Iona) may be required because it is on the demand side of the constrained Longford to Melbourne pipeline.

Locational constraints can be avoided by building more pipeline capacity - although this comes with its own costs relating to transmission investment. For this reason, congestion uplift seeks to allocate costs related to locational constraints by charging market participants which exceed their AMIQ⁶ related to their AMDQ). Therefore buying AMDQ is a proxy for contributing to the cost of the transmission system.

Congestion uplift hedge protection

Under the current arrangements, a market participant is able to hedge against congestion uplift payments if it:

- holds sufficient AMDQ
- is scheduled to inject gas into the DTS at a physical injection point matched to the location of its AMDQ, and
- nominates a quantity of its scheduled injection as a hedge against congestion uplift payments. This is called an injection hedge nomination (IHN).⁷

If a market participant has a congestion uplift hedge:

- it will not be required to pay congestion uplift payments if it withdraws a quantity of gas equal to or below its nomination, and
- it will not receive an ancillary payment if it is constrained on to inject gas up to its AMDQ.

Under the current arrangements, AMDQ provides financial protection against congestion uplift payments. The ability to hedge against congestion uplift payments is limited to those market participants with physical injections matched to the location of their AMDQ. If a

⁶ Under the current arrangements, market participants that intend to use an uplift hedge against congestion uplift payments assign a percentage of their total uplift hedge as authorised maximum interval quantity (AMIQ) for each scheduling interval. AEMO, *Technical guide to the Victorian Declared Wholesale Gas Market*, July 2013, p84.

⁷ Alternatively a market participant can use an agency injection hedge nomination (AIHN). An AIHN is submitted by a separate market participant and provides the recipient market participant with protection against congestion uplift payments. AEMO, *Technical Guide to the Victorian Declared Wholesale Gas Market*, pp. 82-83.

market participant is a spot buyer, that does not inject gas, it must enter a bilateral agreement with a market participant that is injecting at the location of its AMDQ, to receive hedge nominations (AIHNs).

1.2.3

Uplift payment amounts in recent years

On 1 October 2016, an outage at the Longford processing facility resulted in approximately \$3.1 million of out of merit order gas being scheduled to meet a supply shortfall, of which approximately \$2.8 million was funded through congestion uplift payments. Stakeholder views and further discussion on this event are set out in section 4.2.

Figure 1.1 below shows the total amount of uplift payments in the DWGM in 2017, 2018 and the first half of 2019.⁸ During this period of time:

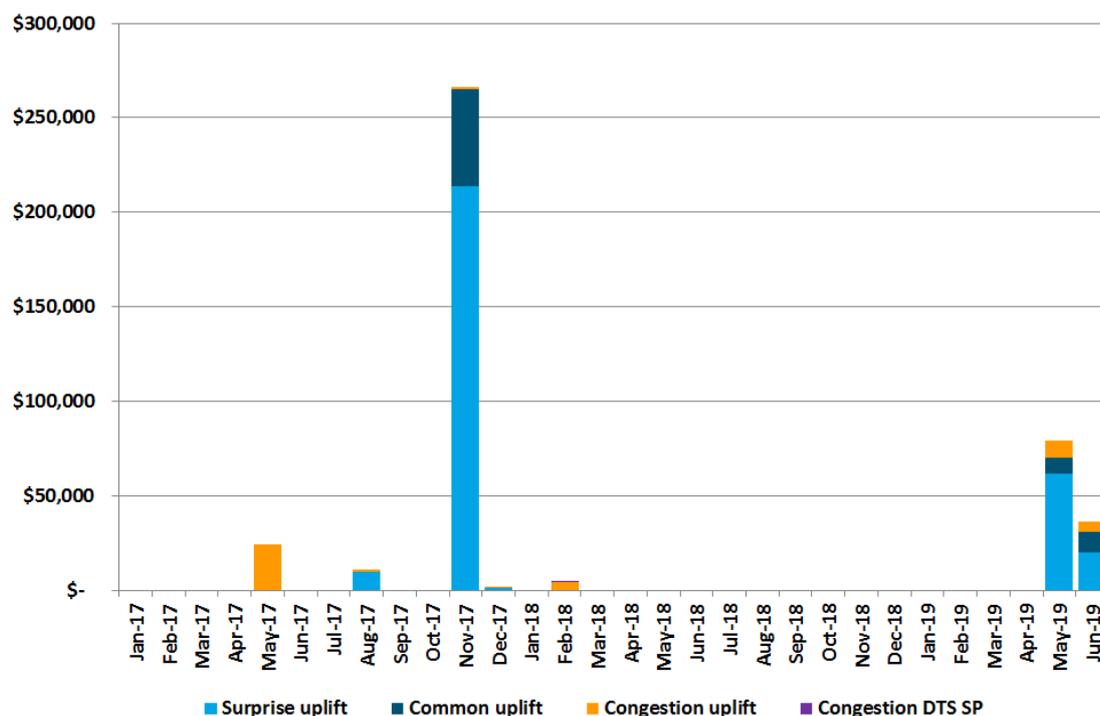
- in 2017 total uplift payments were \$303,085, of which congestion uplift payments were \$26,590
- in 2018 total uplift payments were \$4,427, of which congestion uplift payments were \$3,860.⁹
- in the first six calendar months of 2019 total uplift payments were \$115,290, of which congestion uplift payments were \$14,849.

In the first half of 2019, three events resulted in uplift payments as AEMO was required to schedule out of merit order injections from Dandenong LNG to maintain system security. All three instances were during periods of high system demand. In the first two instances high demand coincided with under delivery from some participants while in the third instance there was an unexpected increase in demand from gas powered generation (GPG) following an outage at the Loy Yang A coal power station.

⁸ This is the sum of payments for surprise uplift, congestion uplift, congestion DTS SP uplift and common uplift.

⁹ The DWGM background paper incorrectly stated that total uplift payments were \$1.08 million in 2018. For more information on the correction of this data, refer to the information sheet on the AEMC's website.

Figure 1.1: Uplift payments by type in 2017, 2018 and the first half of 2019



Source: AEMO

1.3 Rationale for the rule change request and proposed solution

1.3.1 Apply constraints on scheduled withdrawals in the pricing schedule

AEMO suggests that the current arrangements, where a system constraint would act to physically limit scheduled withdrawals from the DTS but this constraint is not applied in the pricing schedule, has adverse market outcomes and reduces the ability of market participants to hedge effectively. AEMO's rule change proposal seeks to address these issues by internalising withdrawal constraints in the pricing schedule. More information on the issues with the current arrangements and the proposed solution is provided in Chapter 3.

1.3.2 Spreading congestion uplift across market participants

The Victorian Government suggests that the current treatment of uplift payments (in particular the congestion uplift methodology) is a barrier to effective risk management and trade in the DWGM. The rule change proposal seeks to address these issues by socialising or spreading congestion uplift across market participants. More information on the issues with the current arrangements, the proposed solution and the more preferable draft rule, are provided in Chapter 4.

1.4 The rule making process

On 14 March 2019, the Commission published a notice advising of its commencement of the rule making process and consultation in respect of the rule change request.¹⁰ A consultation paper identifying specific issues for consultation was also published. Submissions closed on 26 April 2019.

The Commission received 11 submissions as part of the first round of consultation. The Commission considered all issues raised by stakeholders in submissions. Issues raised in submissions are discussed and responded to throughout this draft rule determination. Issues that are not addressed in the body of this document are set out and addressed in Appendix A.

On 13 June 2019 the Commission extended the period of time to make the draft determination to 5 September 2019. The Commission considers that this extension is necessary due to the complexity of the issues raised in the rule change request.¹¹

1.5 Consultation on draft rule determination

The Commission invites submissions on this draft rule determination, including the more preferable draft rule, by **24 October 2019**.

Any person or body may request that the Commission hold a pre final rule determination hearing in relation to the draft rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 12 September 2019.

Submissions and requests for a hearing should quote project number **GRC0049** and may be lodged online at www.aemc.gov.au.

1.6 Related draft determination on DWGM improvement to AMDQ regime

In considering the draft determination on this *DWGM simpler wholesale price* rule change, the Commission has considered interactions with the draft determination and the accompanying draft rule on the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*. The draft determinations and draft rules for both of these DWGM rule changes have been published on 5 September 2019.

Key aspects of the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019* are:

- introducing separate, tradeable entry and exit capacity certificates
- enabling a secondary trading platform to be introduced
- making capacity certificates available for a range of different tenures.

These changes are expected to allow for more efficient allocation of tie-breaking congestion uplift protection benefits to participants in the market.

¹⁰ This notice was published under s.308 of the National Gas Law (NGL).

¹¹ AEMC, *Extension notice under NGL*, 13 June 2019.

The interaction between the more preferable draft rule accompanying this draft rule determination, and the draft rule accompanying the draft determination on the AMDQ regime, are discussed further in chapter 4 of this draft determination.

2 DRAFT RULE DETERMINATION

This chapter outlines the:

- Commission's draft rule determination
- rule making test for changes to the NGR
- more preferable rule test
- assessment framework for considering the rule change request
- Commission's consideration of the more preferable final rule against the national gas objective (NGO).

2.1 The Commission's draft rule determination

Having considered views expressed by stakeholders in submissions and undertaken further analysis on the likely benefits of the proposed rule change, the Commission has determined to make a more preferable draft rule to address the issues identified in the rule change requests.

The more preferable draft rule made by the Commission is published with this draft rule determination. The key features of the more preferable draft rule are set out below.

Key features of the more preferable draft rule

The draft rule amends the requirements on AEMO in using an optimisation program to produce pricing schedules, which determine market prices. The draft rule replaces the requirement for AEMO to not consider transmission constraints in the pricing schedule with a requirement to take into account any transmission constraints affecting withdrawals of gas.¹²

The draft rule also simplifies the mechanism that market participants can use to protect against the risk of incurring congestion uplift payments, by:

- removing the need for market participants to inject gas to be eligible for protection against congestion uplift payments
- removing the concept of congestion uplift hedge and the need for market participants to submit injection hedge nominations¹³
- implementing a new congestion mechanism based on market participant's daily withdrawals of gas exceeding their allocation of exit capacity certificate, on a whole of DTS basis.¹⁴ This replaces the current measure in which market participants protect against the risk of incurring congestion uplift payments by withdrawing less gas than their Authorised Maximum Internal Quantity (AMIQ) for a scheduling interval and injecting gas at the location of their AMDQ.

The draft rule does not spread congestion uplift payments across all market participants, as proposed by the Victorian Minister for Energy, Environment and Climate Change, but instead

¹² See rule 221 of the Amending Rule.

¹³ See, for example, rule 200 of the Amending Rule.

¹⁴ See rule 240 of the Amending Rule.

retains the current approach in which congestion uplift payments are allocated as far as practicable to market participants that cause a constraint.

The Commission's reasons for making this draft determination are set out in section 2.4.

Further information on the legal requirements for making this draft rule determination is set out in Appendix B.

2.2 Rule making test

2.2.1 Achieving the NGO

The Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national gas objective (NGO).¹⁵ This is the decision making framework that the Commission must apply.

The NGO is:¹⁶

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.

2.2.2 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.

In this instance, the Commission has made a more preferable draft rule. The reasons are summarised below.

2.3 Assessment framework

In assessing the rule change request against the NGO the Commission has considered the following principles:

- **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, and the operation 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.

¹⁵ Section 291(1) of the NGL.

¹⁶ Section 23 of the NGL.

- **Trading between the DWGM and interconnected pipelines** - whether the current DWGM arrangements inhibit trading of gas between the DTS and interconnected facilities and pipelines, and options to allow producers and shippers to effectively operate across gas trading hubs on the east coast without incurring substantial transaction costs.
- **Promoting competition in upstream and downstream markets** - whether the DWGM continues to encourage the introduction of new gas supplies to the market and promote competition among retailers for the sale of gas, and the extent to which the design of the DWGM may be a deterrent to large users participating in the market.
- **Regulatory and administrative burden** - whether the cost of implementing the proposed solution(s) is/are proportional to the costs of managing the issues they are trying to resolve.

2.4 Summary of reasons for making a draft rule

The draft rule made by the Commission is attached to and published with this draft rule determination.

Assessment against the NGO

Having regard to the issues raised in the rule change request and during consultation, the Commission is satisfied the draft rule will, or is likely to, contribute to the achievement of the NGO for the following reasons:

- **Effective risk management in the DWGM** - in situations where there is a physical withdrawal constraint in the DTS, the draft rule reduces uncertainty and scheduling risk for market participants around whether their injection bids may be constrained off despite being below the market price. The draft rule also makes it simpler for market participants to manage the risk of incurring congestion uplift payments as it removes the requirement for market participants to inject or nominate hedge nominations to activate congestion uplift protection. This change applies to the new exit capacity certificates and uncontrollable exit capacity certificates created through the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*. The new mechanism makes it simpler for market participants to manage the risk of congestion uplift as they can buy and hold these certificates and withdraw gas in accordance with the simplified congestion mechanism.
- **Signals and incentives for efficient investment in and operation and use of pipeline capacity** - compared to the current arrangements, the draft rule improves the signalling of physical constraints in the determination of the pricing schedule and is expected to lower prices and increase the quantity of gas traded, allowing for more efficient operation. The draft rule allocates the cost of constraints as far as practicable to the causer, which provides an incentive to avoid causing constraints. Congestion uplift provides a weak signal for pipeline investment in the DTS under the current arrangements, which is retained under the more preferable draft rule.
- **Trading between the DWGM and interconnected pipelines** - to the extent the draft rule improves certainty around the wholesale price and the ability of market

participants to protect against the risk of congestion uplift payments this may encourage inter-regional trade.

- **Promoting competition in upstream and downstream markets** - the draft rule simplifies the mechanism for market participants to protect against the risk of incurring congestion uplift payments, which may encourage new entrants to the Victorian retail gas market. To the extent the draft rule improves certainty around the wholesale price and the ability of market participants to protect against the risk of congestion uplift payments this may encourage new supply sources (e.g. interstate gas supplies or potentially LNG imports) to enter the market.
- **Regulatory and administrative burden** - the benefits of implementing the draft rule are expected to outweigh the costs. AEMO stated that it expects that the implementation the cost of internalising withdrawal constraints in the pricing schedule is likely to be small. The draft rule also reduces administrative burden as it removes the requirement for market participants to inject or submit hedge nominations to activate congestion uplift protection.

Rationale for the draft rule amendment on application of withdrawal constraints in the pricing schedule

The current arrangements do not allow AEMO to include a system constraint that would act to physically limit scheduled withdrawals from the DTS in the determination of the pricing schedule. This can lead to market outcomes that are unpredictable and do not reflect the supply/demand balance.

The draft rule internalises withdrawal constraints in the pricing schedule, as proposed by AEMO. The Commission considers that this component of the draft rule is likely to contribute to the NGO as it:

- is likely to lower prices and increase the quantity of gas traded
- is likely to improve the ability of market participants to manage scheduling risk by reducing uncertainty
- is unlikely to be costly to implement.

Rationale for more preferable draft rule amendment on congestion uplift framework

The current arrangements are complex and it can be difficult for market participants to manage the risk of congestion uplift payments through the congestion uplift hedge. The ability to hedge against congestion uplift payments is limited to market participants with physical injections matched to the location of their AMDQ.

The Commission does not consider that the rule change proposal to spread congestion uplift across market participants would support the NGO for the reasons set out below:

- it would not be cost reflective, and so it may reduce incentives for market participants to avoid causing constraints
- it would remove the ability market participants' currently have to manage the risk of congestion uplift payments.

The more preferable draft rule is to retain the current approach in which uplift payments are allocated as far as practicable to the causer of a constraint and simplify the congestion mechanism for market participants to protect against the risk of incurring congestion uplift payments. Having regard to the issues raised in the rule change request and during consultation, the Commission is satisfied that the more preferable draft rule will, or is likely to, better contribute to the NGO than the proposed rule, for the reasons set out below:

- congestion uplift payments would continue to be allocated as far as practicable to the causer of a constraint, which would be more cost reflective than spreading congestion uplift across market participants
- market participants would be able to protect against the risk of incurring congestion uplift payments through a simplified mechanism, which would not be possible if congestion uplift payments were spread across market participants
- incentives for the efficient operation of the market in the short-term would be greater than if congestion uplift were spread.

3 APPLICATION OF CONSTRAINTS IN THE DTS

This chapter provides a summary of the issues with the current arrangements, the rule change proposal to include physical constraints that limit scheduled withdrawals in the pricing schedule, stakeholder views and the Commission's draft determination position.

A summary of the key aspects is set out below.

Under the current arrangements, AEMO is not able to include a system constraint that would act to physically limit scheduled withdrawals from the DTS, in the determination of the pricing schedule. The proponent suggests that this results in:

- market outcomes that are unpredictable and do not reflect the supply/demand balance
- higher market prices and a lower quantity of gas traded, compared to if withdrawal constraints were internalised in the pricing schedule.
- uncertainty and risk that reduces market participant's ability to hedge effectively

The rule change proposal is to internalise withdrawal constraints in the pricing schedule.¹⁷

The Commission has made a draft rule based on the rule change proposal. The Commission considers that, compared to the current arrangements, the draft rule is:

- likely to lower prices and increase the quantity of gas traded
- likely to improve risk management
- unlikely to be costly to implement
- in the long-term interests of consumers.

3.1 Issues with the current arrangements raised in the rule change request

Under the current arrangements, AEMO is not able to include a system constraint that would act to physically limit scheduled withdrawals from the DTS, in the determination of the pricing schedule. Physical constraints are included in the operating schedule and not the pricing schedule, as explained in the AEMC background paper.¹⁸

AEMO suggests that the current arrangements have the adverse outcomes described below.¹⁹

¹⁷ It is important to note that neither the rule change proposal, nor the draft rule, suggest internalising *injection* constraints in the determination of the pricing schedule.

¹⁸ AEMC, Declared Wholesale Gas Market Background Paper, Consultation paper, 14 March 2019.

¹⁹ The previous practice was to apply constraints internal to the DTS in pricing schedule and operating schedule. In 2014, AEMO presented a brief to the Gas Wholesale Consultative Forum (GWCF) which identified that this practice did not comply with the NGR which states that in producing a pricing schedule, AEMO must not include a representation of the DTS. After discussions with industry, on 4 May 2015 the Wholesale Market Gas Scheduling Procedures (Victoria) v 2.0 took effect. The updated procedures introduced a new type of constraint and outlined the circumstances where the existing constraints could be applied. AEMO (on behalf of EnergyAustralia), Rule change request - *Application of constraints in the Declared Transmission System*, 24 November 2016, p2.

Market outcomes

AEMO claims that under current arrangements market outcomes are unpredictable and do not reflect the supply/demand balance.²⁰ For example, following the introduction of AEMO's new procedures in May 2015, where constraints internal to the DTS were active, maintenance of the Brooklyn Compressor restricted net withdrawals from the South West Pipeline to zero in the operating schedule, while the pricing schedule included all withdrawal bids. As the constraint does not cause ancillary payments in this case, there is no incentive for market participants to minimise the impact of the constraint. Therefore the pricing schedule is developed using demand that is not technically feasible on the day and is unrepresentative of the actual supply/demand balance.²¹

The proponent also suggests that higher market prices occur than would occur if system constraints act to physically limit scheduled withdrawals from the DTS were represented in the pricing schedule.²² This reduces gas trading compared to the situation where system constraints that would act to physically limit scheduled withdrawals from the DTS are represented in the pricing schedule.²³

Ability to hedge effectively

The proponent suggests that the uncertainty and risk associated with the current arrangements reduces a market participant's ability to hedge effectively in the market where constraints internal to the DTS limit withdrawals.

Section 3.2 explains how the proposed rule seeks to improve upon these outcomes including a stylised example.

3.2 Rule change proposal

The rule change proposal seeks to include withdrawal constraints in the determination of the pricing schedule. This would mean that where a system constraint would act to physically limit withdrawals from the DTS, AEMO would be required to apply a constraint to represent this in the pricing schedule.

Currently, rule 221(4) of the NGR states:

The inputs and assumptions set out in subrule (3) must be applied by AEMO in an optimisation program in which valid bids submitted by Market Participants are used to produce pricing schedules that specify injections and withdrawals of gas to be made in each gas day in a way that minimises the cost of satisfying the expected demand for gas in that gas day and for the purpose of doing so, AEMO must not take into account any transmission constraints affecting the transportation of gas in the declared

²⁰ AEMO, *Rule change request - Application of constraints in the declared transmission system*, 24 November 2016, p7.

²¹ *Ibid*, pp4-5.

²² *Ibid*, p6.

²³ *Ibid*, p7.

transmission system during that gas day.

The rule change request proposes that rule 221(4) of the NGR be amended so that:²⁴

- where a system constraint would act to physically limit scheduled withdrawals from the DTS, AEMO will apply a constraint to represent this in the pricing schedule
- a differential between the pricing and operating schedules will remain in cases where constrained on injections are required.²⁵

The proponent claims that if implemented, this rule change would mean that in determining the pricing schedule, the market clearing engine would only 'see' the withdrawal bids that are physically feasible in the schedule. In effect there would be greater alignment between the pricing and operating schedules under certain circumstances.²⁶

In practice, AEMO will implement this change by applying a Net Flow Transmission Constraint (NFTC) in the pricing schedule. A NFTC allows multiple injection and withdrawal meters at a common location to be combined so that the net aggregate flow at that location is constrained to reflect the physical capability of the DTS.²⁷

Determination of the pricing schedule under the current arrangements

Under the current version of the NGR, when withdrawals are constrained off there is no mechanism for compensating withdrawal bids below the market price. This means that where there are constrained withdrawals, an equivalent quantity of injections are not scheduled.

Figure 3.1 demonstrates the outcome in the pricing schedule under the current arrangements. The market price (P1) is determined according to the intersection of demand and supply assuming no internal constraints in the DTS. However, due to physical constraints the withdrawal bid represented by the green dashed line is not physically possible. As there is no mechanism for compensating lower priced withdrawal bids (i.e. it is not possible to 'constrain on' out-of-merit order gas), an equivalent quantity of injection bids are necessarily constrained off, represented by the red dashed line. This results in a market quantity (Q1).

This creates a deadweight loss borne by would-be injectors and withdrawers. Injection bids below the market price are constrained off even where there are no physical constraints preventing these injections. Withdrawal bids below the market price and above the price of the constrained off injections are not scheduled even where there are no constraints preventing these withdrawals. The proponent suggests that this produces a pricing schedule with a higher price and lower quantity of gas traded, compared to the case where withdrawal

24 The rule change request provides specific proposed drafting changes to rule 221(4) of the NGR, however this drafting is based on an earlier (now outdated) version of that rule. The drafting of rule 221(4) in the body of the text above reflects the current drafting of the rule.

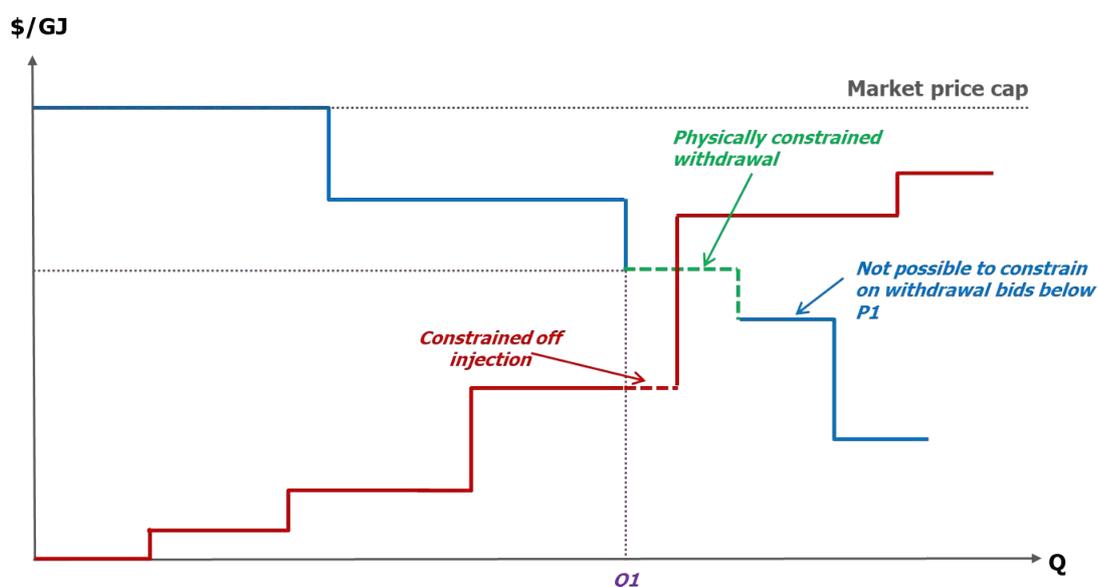
25 AEMO (on behalf of EnergyAustralia), *Rule change request - Application of constraints in the declared transmission system*, 24 November 2016, p6.

26 The Commission notes that the rule change request does not propose completely aligning the pricing and operating schedules. The proposal is to apply physical constraints on withdrawals in the determination of the pricing schedule.

27 AEMO (on behalf of EnergyAustralia), *Rule change request - Application of constraints in the declared transmission system*, 24 November 2016, p3.

constraints were included in the determination of the pricing schedule. No ancillary payments apply as no market participant has been constrained on.

Figure 3.1: Pricing schedule under the current arrangements



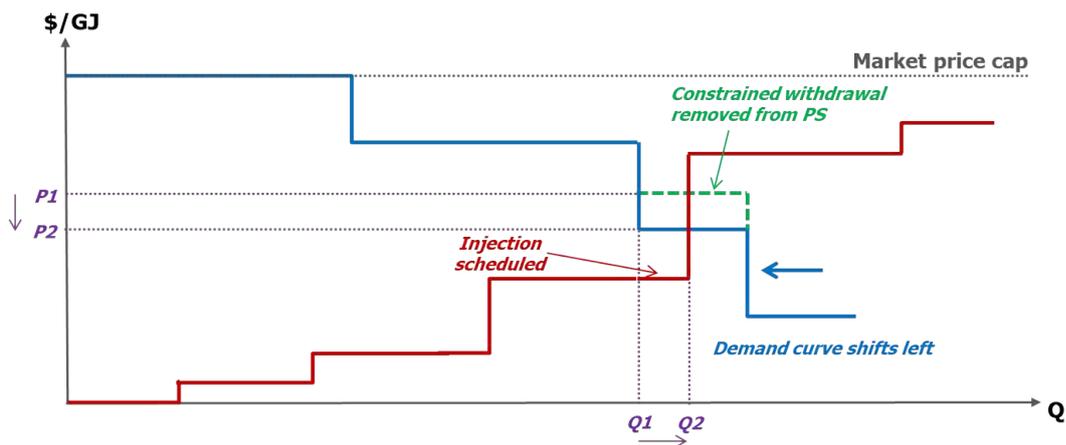
Source: AEMC analysis

Determination of the pricing schedule under the proposed rule

Figure 3.2 compares outcomes in the pricing schedule under the current arrangements and the proposed rule. It shows that:

- under the current arrangements, physically constrained withdrawal bids are not included in the determination of the pricing schedule, resulting in a price of P1 and a quantity of gas trade of Q1. In effect, the market clearing engine does not currently 'see' the physically constrained withdrawal bids represented by the green dashed line.
- the rule change proposal to include physically constrained withdrawal bids in the determination of the pricing schedule causes a leftwards shift of the demand curve, a lower price of P2 and a higher quantity of gas traded of Q2.
- no ancillary payments apply as no market participant has been constrained on.

Figure 3.2: Pricing schedule under the proposed rule



Source: AEMC analysis

The proponent suggests that outcomes under the rule change proposal, compared to the current arrangements, would be:

- lower price
- increase volume of gas traded
- improved risk management for market participants by providing greater certainty around scheduling in situations where there are physical withdrawal constraints
- no change in ancillary payments.

3.3 Stakeholder views

In public submissions and during the DWGM stakeholder workshop (16 May 2019) stakeholders were generally supportive of the proposed rule to internalise withdrawal constraints in determining the pricing schedule. Submissions focused on risk management. There was a general agreement that the proposed rule would improve the ability of market participants to manage their risks.

3.3.1

Risk management

AEMO noted that the current arrangements may be causing higher prices where the market participant's cumulative withdrawal bids exceed the constraint to deliver gas to a system withdrawal point.²⁸ This can cause market participants to bid differently in the DWGM and may lead to unpredictable outcomes.

AGL suggested that the current arrangements are leading to irrational outcomes which are unpredictable for market participants.²⁹ The pricing schedule does not take into account physical constraints on withdrawals leading to:

- a higher market price for all participants
- gas that is priced between the rational price and the pricing schedule price not being scheduled.

AGL suggested that by aligning the operating schedule and pricing schedule we would expect to see rational and predictable outcomes.³⁰

EnergyAustralia noted that the current arrangements are unpredictable and do not reflect the underlying demand and supply for gas.³¹ The price in the pricing schedule is often set on demand that is 10 to 20 per cent higher than is technically feasible and that there is an ongoing risk that participants may be unable to effectively hedge using injections.

Powershop suggested that withdrawal constraints internal to the DTS should be included in the pricing schedule to avoid adverse outcomes as described in the consultation paper.³²

ERM Power suggested that the current approach of not considering withdrawal constraints in the determination of the pricing schedule can distort market prices and result in scheduling outcomes that are confusing and unpredictable, creating risks for market participants.³³ When controllable withdrawal constraints are not considered in the determination of the pricing schedule and infeasible controllable withdrawal bids included in the pricing schedule and later removed in the operating schedule, AEMO will also constrain down injection bids in the operating schedule (in order of price, and regardless of location) by an equivalent quantity. The impact of this is that supply offered in at prices lower than the market price may not be scheduled in the operating schedule. Affected shippers are therefore exposed to the risk of not being able to inject gas to hedge a position, and may face prices up to \$800/GJ. ERM suggests that these are suboptimal market outcomes.

Origin Energy submitted that the proposed rule may not fundamentally improve the ability of participants to manage price and volume risk in the market.³⁴ The proposed change would simplify the existing framework by creating greater alignment between the pricing and operating schedules under certain circumstances. However, given the change is only intended

28 AEMO submission, p. 17.

29 AGL submission, p. 2.

30 It should be noted that the rule change request does not propose completely aligning the operating and pricing schedules. The proposal is to apply physical constraints on withdrawals in the determination of the pricing schedule.

31 EnergyAustralia, submission on consultation paper, p.2.

32 Powershop submission, p. 3-4.

33 ERM Power submission, p. 3.

34 Origin submission, p. 2.

to address those circumstances where a withdrawal constraint is offset by a reduction in injections (and therefore no uplift payments are required), it is unlikely to improve the ability of participants to manage congestion uplift more broadly.

No stakeholders which commented on the risk management aspects of the proposed rule suggested that the above analysis is incorrect, or that the proposed rule change is inappropriate.

3.3.2 **Cost of implementation**

Through the consultation process AEMO has indicated that it does not expect the rule change to be costly to implement. AGL submitted that realigning the operating and pricing schedule presents a low regulatory and administrative burden, as these arrangements were in place as recently as 2015.³⁵ EnergyAustralia agreed that adding that there is unlikely to be a significant impact on industry.³⁶

3.3.3 **Interaction between proposals to include withdrawal constraints in the pricing schedule and other proposed changes to the DWGM**

Stakeholders did not consider that there would be any significant interaction between the proposal to internalise withdrawal constraints in the pricing schedule and the separate rule change proposal on *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*:

- AEMO considered that it would still be relevant to internalise withdrawal constraints if separate exit capacity certificates were introduced. Exit capacity certificates would provide tie breaking benefits to provide priority in scheduling equally priced withdrawal bids, so there is still likely to be competition to become the marginal bidder at some locations where withdrawal capacity exceeds exit AMDQ.³⁷
- EnergyAustralia considered that aligning the pricing and operating schedules in the specific circumstances of the rule change request would not result in any loss of congestion signals, as constrained on withdrawals and associated ancillary payments rarely occur.³⁸
- AGL considered that aligning the pricing schedule and operating schedule would contribute to addressing the Victorian Government's DWGM risk management concerns.³⁹

Stakeholders have not yet had an opportunity to provide written submissions on potential interactions between the proposal to internalise withdrawal constraints in the pricing schedule and the more preferable rule amendment in this rule change to remove the injection test from the congestion uplift framework. The concept of removing the injection

³⁵ AGL submission, p. 3.

³⁶ EnergyAustralia submission, p. 2.

³⁷ AEMO, submission on consultation paper, p.15.

³⁸ EnergyAustralia, submission on consultation paper, p.2.

³⁹ It should be noted that the rule change does not propose completely aligning the pricing schedule and operating schedule. The proposal is to apply withdrawal constraints in the determination of the pricing schedule in the same way that these are applied in the operating schedule. See AGL, submission on consultation paper, p. 2.

test from the congestion uplift framework was raised at the DWGM stakeholder workshop in Melbourne on 16 May 2019.⁴⁰

3.4 Commission's draft determination

The Commission has made a draft rule consistent with the proposed rule. The Commission considers that, compared to the current arrangements, the draft rule is:

- likely to lower prices and increase the quantity of gas traded
- likely to improve risk management
- unlikely to be costly to implement
- consistent with rule amendments to other parts of the DWGM that will be introduced at the same time
- in the long-term interests of consumers.

Lower price and higher quantity of gas traded

The draft rule is likely to be welfare enhancing in situations when there are physical constraints on withdrawals in the DTS. Under the current arrangements, infeasible withdrawal bids are considered in setting the pricing schedule. This may mean that other withdrawal bids are not scheduled and injection bids are unnecessarily constrained off. By internalising withdrawal constraints in the determination of the pricing schedule, the market clearing engine will no longer 'see' the infeasible withdrawal bids leading to a lower market price and higher quantity of gas traded in the pricing schedule.

Improve risk management

The Commission is also of the view that the draft rule will incrementally improve risk management by market participants in the DTS. In situations where there is a physical withdrawal constraint, there is uncertainty for participants around whether their injection bids may be constrained off despite the bid being below the market price. Under the draft rule this likelihood is diminished, providing a small improvement in market participants' ability to manage risk.

Implementation costs

The Commission notes that AEMO have begun scoping the cost of implementing the draft rule and AEMO has stated that it expects that implementation costs are likely to be small. It is expected that the draft rule will not have significant operational costs as the change is effectively a return to how the DWGM was scheduled prior to 2015.

Interactions with *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*

The Commission considers that internalising withdrawal constraints in the pricing schedule is unlikely to have negative interactions with other draft rule amendments to the DWGM.

⁴⁰ AEMC, DWGM simpler wholesale price, Consultation paper, 14 March 2019.

- There is unlikely to be any significant interaction between the draft rule to internalise withdrawal constraints and the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*. The draft AMDQ rule involves the creation of separate entry and exit capacity certificates and enables a secondary trading platform to be introduced for trading of these certificates. These changes aim to improve the ability for market participants to gain capacity certificates for the purpose of risk management in the DWGM.
- Under the current arrangements, the market clearing engine considers withdrawal bids that are physically constrained in determining the market price in the pricing schedule. As there is no mechanism to compensate, and therefore schedule an equivalent amount of unconstrained withdrawal bids below the market price, a quantity of injections equal to the amount of physically constrained withdrawals are necessarily de-scheduled.
- The draft rule to include withdrawal constraints in the determination of the pricing schedule would mean that where some withdrawal bids are physically constrained, these bids will not be 'seen' by the market clearing engine in determining the market price. Consequently, the withdrawal quantities in the pricing schedule would be higher, and the market prices lower, than under the current arrangements.
- It is possible that within the increased withdrawal quantity that is scheduled, withdrawal tie breaking benefits associated with exit capacity certificates with withdrawal tie-breaking benefits could have value in determining which withdrawals are scheduled in a case where withdrawal bids are tied. Market participants will continue to be scheduled on the basis of their bids and the benefits of tie-breaking will continue to apply where constraints are binding, or when multiple bids are equally beneficial to the schedule.
- The Commission has decided not to make a draft rule in the *DWGM forward trading market* rule change. As such, it is expected that there will be no interaction with the draft rule to internalise withdrawal constraints in the DTS.

Interaction with draft rule amendment to congestion uplift framework in this rule change

Including withdrawal constraint in the pricing schedule is not expected to negatively interact with removing the injection dependency test from the congestion uplift framework. Under this more preferable rule, market participants may choose to purchase exit capacity certificates and choose not to purchase entry capacity certificates.

4 CONGESTION UPLIFT FRAMEWORK

This chapter provides a summary of the issues with the current congestion uplift framework, proposed and alternative solutions, stakeholder views and the Commission's draft determination position. The sections set out:

- a summary comparison of options for the congestion uplift framework
- proponent's views, stakeholder views and AEMC analysis of:
 - the current arrangements for congestion uplift
 - the proposal to spread congestion uplift across market participants
 - removing the injection test from congestion uplift framework
- analysis of other considerations - directional flow point constraint (DFPC) pricing and more cost reflective congestion uplift.

Given the interactions between this rule change and the separate rule change on *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*, the Commission has assessed these policy options considering the changes to the AMDQ regime in the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*.⁴¹

A brief summary of this chapter is set out below.

The proponent considers that the current treatment of uplift payments, in particular the congestion uplift methodology, is a barrier to effective risk management and trade in the DWGM. The proponent proposes that congestion uplift payments are spread across market participants.

The Commission considers that the current congestion uplift framework provides a reasonable balance in trading off the costs and benefits of allocating congestion costs to causers, however there are some issues with this approach.

The Commission does not consider that spreading congestion uplift across market participants would support the National Gas Objective. While it may simplify risk management for some participants it removes the ability to manage the risk of congestion uplift payments and may increase the risk of participants contributing to constraints. Stakeholder views were mixed, with most stakeholders opposed to spreading congestion uplift.

To address issues with the current arrangements, the Commission has made a more preferable draft rule, which:

- requires AEMO to take into account transmission constraints that limit withdrawals in pricing schedules, which determine market prices
- simplifies the mechanism that market participants can use to protect against the risk of incurring congestion uplift payments by removing the need to inject gas and submit injection hedge nominations.

⁴¹ <https://www.aemc.gov.au/rule-changes/dwgm-improvement-amdq-regime>

The draft rule does not spread congestion uplift payments across all market participants, as suggested by the Victorian Minister for Energy, Environment and Climate Change, but instead retains the current approach in which congestion uplift payments are allocated as far as practicable to market participants that cause a constraint.

4.1 Summary comparison of options for congestion uplift framework

The Commission considered the following three options for the congestion uplift framework:

1. retaining the current arrangements (section 4.2)
2. the rule change proposal to spread congestion uplift (section 4.3)
3. a more preferable draft rule to remove the injection test from the congestion uplift framework (section 4.4).

The discussion of the three options is set out in relation to a number of areas; cost reflectivity, risk management, competition in downstream markets, short and long term incentives and administrative burden. While not referred to separately in the assessment framework, cost reflectivity, or allocating costs to causers, is an important factor to consider in relation to signals and incentives for efficient operation and use of the DTS. Table 4.1 below provides a summary comparison of these three options in terms of these assessment areas.

Table 4.1: Comparison of options on congestion uplift framework

OPTION	CURRENT ARRANGEMENTS (RETAIN INJECTION TEST)	SPREAD CONGESTION UPLIFT	MORE PREFERABLE RULE (REMOVE INJECTION TEST)
Cost reflectivity	Costs allocated as far as practicable to causers.	Does not allocate costs to causers.	Costs allocated as far as practicable to causers.
Risk management	The ability to manage the risk of congestion uplift payments is limited to market participants with physical injections matched to the location of their AMDQ.	Congestion uplift payments expected to be less volatile for some market participants, compared to the current arrangements. Market participants no longer have an ability to manage the risk of congestion uplift payments.	Simpler for market participants to manage the risk of congestion uplift payments as no longer need to physically inject or submit hedge nominations. Ancillary payments could increase compared to the current arrangements,

OPTION	CURRENT ARRANGEMENTS (RETAIN INJECTION TEST)	SPREAD CONGESTION UPLIFT	MORE PREFERABLE RULE (REMOVE INJECTION TEST)
			however not expected to be a large change.
Competition in downstream markets	As above for risk management.	As above for risk management.	As above for risk management.
Inter-regional trade	Ability to hedge congestion uplift relates to risk management (as applies for each option, as outlined above) and matters in the <i>Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019</i> .		
Short-term incentives	Provides incentive for market participants to procure gas from a range of sources and locations for uplift hedge, which may help reduce constraints. Difficulty obtaining congestion uplift hedge may be a disincentive for smaller participants to trade gas.	Reduced incentives to avoid causing constraints. Uplift costs imposed on parties that did not cause a constraint. Changing market conditions could increase use of GPG and associated risks.	Removing the injection test may reduce the incentive for market participants to inject to remain in balance. This is not expected to increase the risk of system issues due to other arrangements that provide balancing incentives.
Long-term incentives	Congestion uplift is not expected to provide an investment signal.		
Administrative burden	Expected to add cost and time to implement in conjunction with new ADMQ regime.	Not expected to be material	Simpler new congestion mechanism expected to be lower cost and time to implement, compared to retaining the injection test with the new AMDQ regime.

Source: AEMC

4.2 Current arrangements for congestion uplift

This section summarises the issues raised by the rule change proponent with the current congestion uplift framework, stakeholder views and the Commission's view.

4.2.1 Issues raised by the rule change proponent with the current arrangements

The proponent considers that the current treatment of uplift payments (in particular the congestion uplift methodology) is a barrier to effective risk management and trade in the DWGM, as explained below.

The current uplift methodology is highly complex

It is difficult for market participants to understand and predict the outcomes of the current uplift methodology.⁴²

The current uplift methodology may not effectively allocate costs to the causers of those costs⁴³

The congestion uplift framework was designed to address constraints relating to high levels of demand that would not be able to be met due to capacity constraints in the DTS. This type of congestion is less likely to occur now than in the past due to physical and commercial changes in the market.

Congestion due to maintenance or outage is more likely to occur now, but in these circumstances the congestion uplift methodology is unlikely to allocate costs to cause and may be contributing to inefficient and inequitable market outcomes, as noted below in relation to the event on 1 October 2016.

The current uplift methodology may deter financial risk management and trade

The ability to hedge against congestion uplift is restricted to participants with physical injections matched to the location of their AMDQ, which may negatively impact trading.

A market participant that is only a buyer from the spot market is unable to directly hedge against congestion uplift even if it has AMDQ. Its only option is to enter into an agency injection hedge nomination (AIHN) with an injecting participant at the location of the AMDQ. The injecting participant could be a competitor and unwilling to provide the buyer with an AIHN. The proponent suggests that this increases the transaction costs of purchasing gas from the spot market as the arrangement must be entered into bilaterally and ex ante.

Otherwise the participant must acquire its own gas supply contract, inject and hold sufficient AMDQ to manage the risk of congestion uplift. The proponent suggests this may be challenging if the participant only requires a small volume of gas, which is likely for a spot market buyer, particularly a new entrant.

A market participant that exclusively transports gas from Longford to Culcairn through the DTS is unable to hedge its congestion uplift exposure. A market participant that is injecting at

⁴² Victorian Minister for Energy, Environment and Climate Change, *Rule change proposals for the declared wholesale gas market reforms*, 29 October 2019, p2.

⁴³ *Ibid*, p4.

Longford requires AMDQ in order to hedge congestion uplift and it cannot acquire AMDQ without acquiring tariff V or tariff D customers in Victoria - which is unlikely if it is just intending to transport gas through the system. This may serve as a disincentive for inter-regional trade.

The effectiveness of risk management options is limited as the market price does not reflect the total wholesale cost of gas. This limits the effectiveness of any physical forward position of financial derivative hedges entered into by market participants outside of the DWGM:⁴⁴

- a market participant that is scheduled to inject gas bought outside of the DWGM to meet its own withdrawals requirements will not be exposed to the market price if it is in balance, but would still be exposed to, and may incur, uplift payments
- a market participant which enters into a financial derivative contract to hedge its exposure to the market price, would still be exposed to, and may incur, uplift payments.

The evolution of the market may result in more frequent or more material uplift payment being levied

The proponent notes that, while the above issues have been of relatively little consequence during the stable market environment of the recent past, they are becoming increasingly apparent and costly in a more dynamic market.

The proponent notes that of 27 days leading to positive ancillary payments from July 2008 to October 2018, 21 have occurred in the 2016 and 2017 calendar years.⁴⁵ Within the days of positive ancillary payments in 2016 and 2017, congestion costs were the largest category of uplift payments due to a single events - the unplanned shutdown of the Longford gas processing facility on 1 October 2016. In this event, the AER noted that "approximately \$3.1 million in ancillary payments were generated across the market as gas was scheduled out of merit order including from Dandenong LNG".⁴⁶ Of the \$3.1 million in ancillary payments on 1 October 2016, \$2.8 million were allocated to market customers as congestion uplift payments.⁴⁷ The amount allocated to market customers as congestion uplift payments was according to the rules, although the nature of the congestion, being caused by an unplanned outage of a major facility, does not accord well with many stakeholders' understanding of what ordinarily constitutes congestion on gas pipelines.⁴⁸

4.2.2

Stakeholder views on current arrangements

Stakeholders had mixed views on whether there was a problem with the current arrangements for congestion uplift. Most stakeholders considered that while there were issues with the current 'cost to cause' methodology, there were also issues with the rule

44 Victorian Minister for Energy, Environment and Climate Change, *Rule change proposals for the declared wholesale gas market reforms*, 29 October 2019, p3.

45 The proponent notes that over this period of time, AEMO's procedures and methodologies have been subject to modification for reasons other than congestion management. Victorian Minister for Energy, Environment and Climate Change, *Rule change proposals for the declared wholesale gas market reforms*, 29 October 2019, p4.

46 AER, *Weekly Gas Market Report*, 25 September - 1 October 2016.

47 AEMO, *DWGM Event - Intervention - 1 October 2016*, 14 October 2016, p6.

48 Victorian Minister for Energy, Environment and Climate Change, *Rule change proposals for the declared wholesale gas market reforms*, 29 October 2018, p4.

change proposal (see section 4.3) to spread congestion uplift across market participants. Stakeholders views on individual issues related to the current arrangements are outlined below.

Cost reflectivity

Stakeholders had mixed views on the cost reflectivity of congestion uplift under the current arrangements. AEMO, ERM and EnergyAustralia suggested that there were issues with the current 'cost to cause' methodology. The issues were:

- AEMO considered that the congestion scenario that the uplift framework was designed for is no longer the only relevant scenario and it can result in uplift costs being allocated to congestion uplift event when no congestion has occurred.⁴⁹
- EnergyAustralia and ERM considered that it may not effectively allocate cost to their causers of congestion.⁵⁰
- AEMO and ERM suggest that it can allocate congestion costs due to issues occurring outside the DTS.⁵¹ ERM note that on 1 October 2016, the outage at the Longford processing facility resulted in \$3.1m of out of merit order gas being scheduled to meet the supply shortfall, of which approximately 90% was funded through congestion uplift payments. ERM suggested that the current arrangements resulted in participants with no contracts for Longford gas, and who had no part to play in causing the shortfall, incurring congestion uplift payments if they did not have a congestion uplift hedge.⁵²

Other stakeholders had mixed or supportive views on the current arrangements:

- Some stakeholders considered that it was imperfect but addressed various trade-offs. Origin noted that the tradeoff associated with the gross pool, open access framework is the absence of locational price signals, such that the allocation of congestion uplift to causers is likely to be imperfect⁵³ Major Energy Users note that in the development of the DWGM and its subsequent refinements over the years there had not been developed a solution that provided a better overall outcome than the current uplift arrangements.⁵⁴ The AER suggested that it was unlikely that any one approach would be able to deliver more cost reflective pricing, a simpler methodology, greater predictability and a single price to facilitate hedging.⁵⁵
- AGL cautioned against using the events of 1 October 2016 as a 'day of focus' for assessing this rule change request. On 1 October 2016 gas powered generators (GPG) in South Australia were under direction following the state-wide black out and a Contingency Gas Event was occurring in Sydney. Losing gas supply from Longford placed additional stress on the DTS and led to high cost gas supply being required.⁵⁶

49 AEMO, submission on consultation paper, p.2. and p.13.

50 Submissions on consultation paper: EnergyAustralia, p.3.; ERM, p.2.

51 Submissions on consultation paper: AEMO, p2; EA, p3; ERM, p2.

52 ERM, submission on consultation paper, p2.

53 Origin, submission on consultation paper, p.4.

54 Major Energy Users, submission on consultation paper, p.2.

55 AER, submission on consultation paper, p.4.

56 AGL, submission on consultation paper, p.1.

- Powershop considered that the market allocated costs correctly on 1 October 2016. On this day a supply interruption occurred and gas was required to be scheduled out of bid merit order. The participants who failed to meet their scheduled injections from Longford created the requirement for more gas to be injected from other supply sources and through other pipelines. The market allocated costs correctly such that the market participants who failed to follow scheduling instructions and failed to validate their AMDQ were allocated congestion uplift.⁵⁷

Risk management

Stakeholders suggested there were risk management issues with congestion uplift under the current arrangements:

- Stakeholders thought the congestion uplift methodology is complex⁵⁸ and difficult to understand⁵⁹ and predict.⁶⁰
- ERM suggested that a disproportionately higher level of risk is imposed on participants who are purchasing from the market but not injecting (or who might be injecting but do not have matching AMDQ).⁶¹
- ERM also suggested that, by imposing risks on participants who are not physically injecting into the market, the congestion uplift arrangements also continue to hinder the development of financial instruments and new ways of trading.⁶²
- AEMO noted that market participants have purchased unallocated authorised MDQ at auction and configured IHN to maximise congestion uplift hedge and allocated authorised MDQ to maximise injection tie-breaking benefits. AEMO said that although this indicates market participants are using congestion uplift hedges to manage their exposure to congestion uplift, the availability of authorised MDQ (both unallocated or available for sale) is limited which reduces the effectiveness of this measure.⁶³

Powershop supported the current arrangements from a risk management perspective as reasonable components of a market in which a retailer buys goods and transports them to market.⁶⁴

Short-term signals and incentives

Stakeholders had mixed views on the current congestion uplift framework on short term signals and incentives. Powershop noted that a market that allocates on a 'cost-to-cause' basis supports effective procurement from reliable sources and acts to increase system security and integrity.⁶⁵

57 Powershop, submission on consultation paper, p.3.

58 Submissions on consultation paper: AEMO, p.2; AGL, p.2.

59 EnergyAustralia, submissions on consultation paper, p.3.

60 ERM, submissions on consultation paper, p.2.

61 ERM, submission on consultation paper, p.2.

62 Ibid, p.2

63 AEMO, submission on consultation paper, p.14.

64 Powershop, submission on consultation paper, p.2.

65 Powershop, submission on consultation paper, p.2.

Other stakeholders did not support the current congestion uplift framework:

- AEMO suggested that the incentives created by the current uplift framework can be a deterrent to trading gas on the DWGM⁶⁶
- ERM suggested that the market design should provide incentives for shippers to adhere to their operating schedules and forecast withdrawals as accurately as possible and this is largely achieved under the current market design by surprise uplift and deviation pricing (i.e. not through congestion uplift).⁶⁷

Long-term investment signals

Stakeholders considered that the current congestion uplift framework did not provide a signal for pipeline investment in the DTS.

- AEMO and ERM considered that investment signals from congestion uplift are muted or weak under the current arrangements.⁶⁸
- Origin noted the trade-off associated with the gross pool, open access framework absence of locational price signals, such that the signals for investment within the system are likely to be imperfect.⁶⁹
- Lochard Energy note that despite the slight increase in the AMDQ cc price over the years, this, in itself, has not led to material capacity expansion on the South West Pipeline (SWP).⁷⁰
- ERM did not expect pipeline investments in the DTS to be driven by market signals through the congestion uplift framework. Instead, they noted pipeline investments are primarily driven through the regulatory investment process. ERM consider that capacity based instruments (such as AMDQ), that are created with the objective of providing signals for market investment, are unlikely to be effective under a market carriage regime given the market clearing process ultimately determines the allocation of both capacity and commodity.⁷¹

Competition in downstream markets

Stakeholders suggested the current arrangements for congestion uplift had the following issues in relation to downstream competition:

- AEMO suggested the uplift framework was overly complex and may act as a barrier to entry.⁷²
- The AER, through its wholesale market monitoring program, noted that market participants did not understand how the uplift payments levied on them were allocated and that uplift payments can be a significant financial burden on participants without

66 AEMO, submission on consultation paper, p2.

67 ERM, submission on consultation paper, p.2.

68 Submissions on consultation paper: AEMO, p.14; Lochard Energy, p.3.

69 Origin, submission on consultation paper, p.4.

70 Lochard Energy, submission on consultation paper, p.3.

71 ERM, submission on consultation paper, p.3.

72 AEMO, submission on consultation paper, p2.

AMDQ. This may disproportionately affect smaller players and may act as a disincentive to new players considering entering the market.⁷³

- ERM suggested that the disproportionately higher level of risk imposed on participants who do not have a congestion uplift hedge was likely to affect new entrant retailers and other small participants (who are likely to find it difficult to secure contracts for small quantities of gas on competitive terms).⁷⁴

Trading between interconnected pipeline and facilities

Stakeholders had mixed views on the effect of the current congestion uplift arrangements on inter-regional trade. AGL suggested that gas can currently be traded in and out of the DWGM efficiently on transportation agreements at every interval of the DWGM gas day. The DWGM enables participants to manage uplift charges, particularly by diversifying their supply options and to receive an appropriate payment if out of merit gas is required.⁷⁵

Other stakeholders suggested that the current uplift framework did not support inter-regional trade:

- AEMO suggested that it increased risk in trading gas between the DTS and interconnected facilities due to the risk of incurring congestion uplift payments (e.g for a participant who injects at Longford but has no authorised MDQ for uplift hedge). A trader will need to price this risk in their operating strategy.
- ERM suggested that participants seeking to buy gas from the DWGM to move to another location in the east coast network currently faced increased risks. This outcome was at odds with recent gas market reforms that have been implemented with the objective of facilitating trading across the interconnected east coast gas market.⁷⁶

4.2.3

Commission's analysis and draft determination position

The Commission considers that the current congestion uplift framework provides a reasonable balance in trading off the costs and benefits of allocating congestion costs to causers, however there are some issues with this approach as outlined below.

Cost reflectivity

The Commission considers that the current arrangements do not always effectively allocate the cost of constraints to the causer, however they provide an appropriate trade-off between cost reflectivity and practicality. The DTS is a complex meshed network with multiple sources of supply, meaning that there are a range of potential scenarios that can result in uplift payments and it is difficult to always allocate costs to the causer of the constraint. It would likely be possible to develop a more cost reflective congestion uplift methodology (see section 4.4.1 for more discussion on this consideration), however this would be more complex and would be costly to design and implement. The Commission considers that the

73 AER, submission on consultation paper, p.4.

74 ERM, submission on consultation paper, p.2.

75 AGL, submission on consultation paper, p.3.

76 ERM, submissions on consultation paper, p.2.

current obligation in the NER appropriately addresses this trade-off as it requires uplift payments to be 'allocated as far as practicable to the cause'.⁷⁷

While the congestion scenario that the uplift framework was designed for is no longer the only relevant scenario (due to expansions of the DTS), an approach based on allocating uplift payments as far as practicable to the cause remains appropriate, and should provide flexibility to manage future changes to the DTS (e.g. future expansion for the Western Outer Ring Main (WORM)).

While congestion uplift payments can result from events that occur outside the DTS (e.g. Longford outage on 1 October 2016), market participants inside the DTS currently have an ability to manage this risk by purchasing contracts that allow them to inject gas to hedge against the risk of incurring congestion uplift payments.⁷⁸

Risk management

The Commission notes that risk management is a key issue with the current congestion uplift framework.

The current congestion uplift hedge mechanism is complex and may be difficult for market participants (particularly new entrants) to understand. This may deter financial risk management and trade in the DWGM.

It may also be difficult for market participants to manage the risk of congestion uplift payments. The ability to hedge against congestion uplift payments is limited to those market participants with physical injections matched to the location of their AMDQ and the current allocation of AMDQ may be inefficient due to a lack of flexibility in the tenure of products and a lack of trading. The Commission notes that the new AMDQ regime proposed in the draft rule of the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019* will support more efficient allocation of certificates by enabling market participants to purchase certificates over shorter tenures and through enabling a secondary trading platform to be introduced. This is discussed further in section 4.3.1 of this draft determination.

Short-term signals and incentives

The current congestion uplift framework can provide beneficial short-term signals and incentives, however this is not always the case.

The current arrangements are beneficial in that the allocation of uplift costs, as far as practicable to the causer, provides an incentive for market participants to procure gas from a range of sources and locations for uplift hedge, which may help avoid some constraints.

A downside of the current arrangements are that some market participants may find it difficult to obtain congestion uplift hedge protection and this may be a disincentive to trade gas in the DWGM.

⁷⁷ NER clause 240(2)(a)

⁷⁸ The ability of market participants to manage this risk is likely to improve as a result of the changes to the AMDQ regime in the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019* and the more preferable draft rule to remove the injection test from the congestion uplift framework (see section 4.4).

The current inefficient allocation of AMDQ contributes to bias in the allocation of uplift payments to market participants and inefficient market outcomes.

Long-term investment signals

Congestion uplift provides a weak signal for pipeline investment under the current arrangements. Almost all pipeline investments in the DTS are through the regulatory investment process, as opposed to being driven by market signals through congestion uplift.⁷⁹ This is a function of the market carriage regime where the market clearing process determines the allocation of both capacity and commodity and there is no locational price signal.

Competition in downstream markets

It is unclear that the congestion uplift framework is deterring new entry in downstream market. Stakeholders noted that it can be difficult to understand and manage the risk of incurring congestion uplift payments and that this may be a barrier to entry for smaller retailers, who may find it difficult to secure contracts for small quantities of gas on competitive terms. However, it is noted a number of smaller retailers have entered the Victorian gas retail market in recent years, so the materiality of the factor on market entry decisions may not be significant.

Trading between interconnected pipeline and facilities

The Commission notes the mixed views from stakeholders on the effect of the current congestion uplift arrangements on inter-regional trade. These are related to the ability to hedge congestion uplift, which are discussed above. They are also matters that relate to the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*.

In conclusion, the Commission considers that the current congestion uplift framework provides a reasonable balance in trading off the costs and benefits of allocating congestion costs to causers, however there are some issues with this approach. To address these issues, the Commission has made a more preferable draft rule that removes the injection test from the congestion uplift framework, as discussed in section 4.4.

4.3 Rule change proposal to spread congestion uplift

This section summarises the rule change proposal to spread congestion uplift across market participants, stakeholder views and the Commission's draft position on this option.

4.3.1 Rule change proposal to spread congestion uplift

In order to address the issues with the current uplift framework in the DWGM (detailed in section 4.2), the Victorian Minister proposed the changes outlined below.

⁷⁹ The Commission notes that there have been some market driven investments in the DTS. For example, Origin note that market investments have been made to increase export capacity at Culcairn for market participants that have capacity agreements outside the DTS on the other side of the pipeline near Culcairn. Origin, submission on consultation paper, p4.

To change the way congestion uplift payments are recovered

The current cost to cause methodology for allocating congestion uplift payments to market participants would be replaced with a pro rata method that spread congestion uplift payments across market participants.

The proponent suggested that there are likely to be different ways that congestion uplift could be spread across market participants and that the AEMC should explore different implementation methods through the rule change process. For example, common uplift is currently recovered on a pro rata basis from market participants based on each participant's withdrawal quantities relative to all withdrawals on the relevant gas day.

To retain the way surprise and congestion DTSSP are recovered

The proponent proposed surprise uplift would be retained in its current form as it is necessary to maintain incentives for market participants to accurately forecast their gas requirements and facilitate efficient decisions regarding adjusting their gas requirements.

Congestion DTSSP was also proposed to be retained in its current form. The proponent suggests that the rationale for changing the recovery of congestion uplift does not appear to hold for the DTS service provider, which arises when the service providers fails to comply with its obligations under the Service Envelope Agreement.⁸⁰

4.3.2

Stakeholder views

Most stakeholders were opposed to the rule change proposal to spread the recovery of congestion uplift payments across market participants. Stakeholders views on individual issues related to the current arrangements are outlined below.

Cost reflectivity

Stakeholder views were mixed. AGL did not support the proposal to spread congestion uplift as the causer pays principle should continue to underlie uplift payments to encourage participants to consider how they manage their diversity of supply. Much of the congestion cost incurred by parties arises from the out of merit order gas that is required from another uncongested source.⁸¹

Some stakeholders were supportive of the proposal to spread congestion from a cost allocation perspective:

- ERM suggested that, if costs cannot be allocated to their cause, the rule change proposal would be reasonable and results in a more even risk allocation. It would allocate a greater proportion of total uplift payments on a pro-rata basis to withdrawals, in a similar method to the way in which common uplift is allocated.⁸²

80 The DTS service provider (APA Group) and AEMO are parties to the Service Envelope Agreement, under which: (a) The service providers makes available the entire VTS to AEMO and provides a range of supporting services to AEMO, and (b) AEMO operates the VTS in accordance with the National Gas Rules.

81 AGL, submission on consultation paper, p.2.

82 ERM, submission on consultation paper, p.2.

- AEMO supported spreading congestion uplift provided it could be established that the ability to allocate the costs of congestion to the actual causers is sufficiently difficult that misallocation is likely. AEMO note that it could result in an increase in ancillary payments in some circumstances.⁸³
- Qenos suggested that the rule change proposal was a fairer way to allocate congestion uplift as these costs should be smeared across all participants and not just attributed to those without AMDQ.⁸⁴

Risk management

Most stakeholders did not consider that spreading congestion uplift would improve the ability of market participants to manage risk:

- Origin noted that it is unlikely to address all of the factors that may limit the use of financial derivatives, largely because not all trading risk is captured in a single commodity price in the DWGM.⁸⁵
- Powershop considered that spreading congestion uplift would not promote the use of risk management solutions such as financial derivatives (any increase in risk would be built into the price of the contract).⁸⁶
- MEU noted that it would not remove all uplift charges, so would merely result in a “cleaner” gas price, rather than a “clean” gas price.⁸⁷
- Lochard Energy noted that the value of AMDQ in providing a hedge against congestion uplift should be retained.⁸⁸

Some stakeholders noted that spreading congestion uplift could have positive effects on risk management:

- Qenos suggested it would make it easier to manage the cost of purchasing and transporting gas and move it from Longford to Culcairn.⁸⁹
- AEMO noted that it would make outcomes more predictable and simplify current processes as market participants would not need to provide an IHN or AIHN as uplift hedge would be removed.⁹⁰
- AEMO also noted that it may improve incentives for a net buyer to trade gas in the DWGM. Under the current arrangements such participants may be disincentivised from trading due to challenges with hedging congestion uplift exposure.⁹¹
- The AER noted that a simplified pricing methodology may assist the development of markets for risk management products (such as futures or forward markets) to the extent

83 AEMO, submission on consultation paper, pp.13 and 15.

84 Qenos, submission on consultation paper, p.2.

85 Origin, submission on consultation paper, p.3.

86 Powershop, submission on consultation paper, pp.2-3.

87 Major Energy Users, submission on consultation paper, p.2.

88 Lochard Energy, submission on consultation paper, p.3.

89 Qenos, submission on consultation paper, p.2.

90 AEMO, submission on consultation paper, p.15 and 19.

91 Ibid, p.8.

that participants are able to effectively mitigate a greater proportion of their total market price risk.⁹²

Short-term signals and incentives

Stakeholders were concerned about the potential effect of spreading congestion uplift on short-term signals and incentives:

- APA, AGL, EnergyAustralia and Origin were concerned that it could reduce the incentive to minimise congestion.⁹³ APA suggested that it could encourage consequence-free risky or inappropriate bidding behaviour.⁹⁴
- Powershop suggested that it could "diminish system integrity". It may encourage market participants to contract for less reliable or lower priority gas to achieve cost reductions as other participants would be accountable for losses resulting from poor performance of such contracts.⁹⁵
- Origin and EnergyAustralia suggested that, while demand driven congestion in the DTS has been rare in recent times, this dynamic could change if participants do not face an appropriate share of costs of any congestion they may cause.⁹⁶
- The AER noted the possibility that constraints relating to high level of demand could reoccur as the market continues to evolve, particularly due to unpredictable demand from GPG.⁹⁷ Origin considered that demand from GPG is a concern in this regard as it has the potential to cause significant congestion in the DTS, particularly through winter periods and intraday when GPG demand has not been forecast.⁹⁸
- Origin suggested that it would be a perverse outcome if spreading congestion uplift resulted in higher levels of congestion and exposed certain market participants to higher levels of congestion uplift payments. Therefore, GPG should continue to face incentives to minimise congestion.⁹⁹
- Lochard Energy suggested that until a clear and more effective capacity price signal is available, the price of AMDQ, together with the current arrangements for congestion uplift, both provide indicators of demand for capacity and should be retained.¹⁰⁰

Long-term investment signals

Powershop consider that spreading congestion uplift would inhibit efficient investment of the gas market.¹⁰¹ AEMO support spreading congestion uplift provided it could be established that

92 AER, submission on consultation paper, p.4.

93 Submissions on consultation paper: APA, p2; AGL, p.3; Origin, p.3.; EnergyAustralia, p.3.

94 APA, submissions on consultation paper, p.2.

95 Powershop, submissions on consultation paper, p.3.

96 Submissions on consultation paper: Origin, p.3; EnergyAustralia, p.3.

97 The AER noted that incidence of constraints had declined in recent years due to the expansion of the South west pipeline and Victoria-NSW interconnect. In addition, further expansions of the South west pipeline (WORM project) are to occur in the coming years. However the AER cautioned that the trend of decreasing incidence of constraints may not continue. AER, submissions on consultation paper, pp.4-5.

98 Origin, submission on consultation paper, p.3.

99 Origin, submission on consultation paper, p3.

100 Lochard Energy, submission on consultation paper, p.4.

101 Powershop, submission on consultation paper, p.3.

system demand driven congestion in the DTS is rare and therefore the removal of congestion uplift is unlikely to materially impact incentives for investment.¹⁰²

Competition in downstream markets

Stakeholders had mixed views on whether spreading congestion uplift would improve retail competition. Origin and AEMO had positive views, suggesting that:¹⁰³

- it would reduce the risk of participating in the market as a net buyer
- removing the complex hedging uplift mechanism would simplify the congestion uplift framework, which may improve the ability of new entrants to understand and manage their exposure to uplift. This may reduce barriers to entry and encourage new entrants into the market, promoting competition amongst retailers.

Powershop suggested that it may limit new entrants to the market as it may encourage participants to contract for less reliable gas in the knowledge that other participants are accountable for losses resulting from poor performance of such contracts. This could contribute to greater volatility and uncertainty over costs.¹⁰⁴

Trading between interconnected pipeline and facilities

MEU considered that spreading congestion uplift payments would result in Victorian consumers being levied with the uplift charges associated with the export of gas to other regions and that Victorian end users should not be obliged to pay such costs.¹⁰⁵ Qenos suggested it would make it easier to manage the cost of purchasing and transporting gas and move it from Longford to Culcairn.¹⁰⁶

Implementation costs

AEMO and AGL considered that implementing the rule change proposal would likely have a low administrative cost.¹⁰⁷ AEMO noted that it would need to make procedure and system changes to facilitate the spreading of congestion uplift.

4.3.3

Commission's analysis and draft determination position

The Commission does not consider that spreading congestion uplift would support the National Gas Objective for the reasons set out below. Instead, the current approach is retained in which congestion uplift payments are allocated as far as practicable to market participants that cause a constraint.

102 AEMO, submission on consultation paper, p.13.

103 Submissions on consultation paper: Origin, p.1.; AEMO, p.20

104 Powershop, submission on consultation paper, p.3.

105 Major Energy Users, submissions on consultation paper, p.3.

106 Qenos, submission on consultation paper, p.2.

107 Submissions on consultation paper: AEMO, p.22; AGL, p.3.

Cost reflectivity

The Commission considers that:

- spreading congestion uplift would spread the cost of constraints across market participants and would not be cost reflective
- spreading congestion uplift may reduce short-term incentives that are important for the operation of the DWGM. These incentives are discussed further below.

Risk management

Spreading congestion uplift would likely result in all market participants that withdraw gas paying small additional amounts of uplift payments, but would not allow for the risk of these payments to be managed effectively. It would remove the ability that market participants currently have to manage the risk of congestion uplift payments through the congestion uplift hedge.

It would however reduce the volatility of congestion uplift payments, over an extended period of time, for individual market participants that have not typically used the congestion uplift hedge. This may be beneficial for net buyers or smaller participants that may find it difficult to purchase contracts to obtain the congestion uplift hedge. By reducing the risk of infrequent large congestion uplift payments to these market participants, it may improve their incentives to trade gas in the DWGM.

Market participants generally manage wholesale price risk by buying gas supply agreements outside of the DTS and ensuring participation on both sides of the market. This approach does not cover all commodity trading risk, as market participants can still be exposed to other cost risks relating to deviation and uplift payments.

Short-term signals and incentives

Spreading congestion uplift could diminish short-term incentives for market efficiency and avoiding contributions to constraints.

Moving away from allocating congestion uplift payments as far as practicable to the causer to an approach where these costs are spread across market participants is expected to reduce incentives to avoid causing constraints. This is a particular concern for GPG as it has the potential to cause significant congestion on the DTS, for example in the peak winter period. This risk may increase if more GPG is used as coal power stations retire. Unlike other gas systems in Australia, the DTS features little active linepack to manage imbalances on many days of the year and the entire capability of the system is sometime need to manage daily swings in load. While future expansions of the DTS such as the WORM will increase the capacity and ability of the system to manage potential constraints, they are a key concern associated with the rule change proposal.

Ancillary payments could increase as some scheduled injections that historically were used for IHNs and did not receive ancillary payments could be eligible to receive ancillary payments as uplift hedge would no longer apply. However this would not be expected to be a material increase as ancillary payments commonly go to high priced gas that is not used for IHNs (see section 4.4.2).

Long-term investment signals

Similar to the current arrangements, if congestion uplift were spread across market participants it could continue to provide a weak signal for pipeline investment as the total amount could reveal where additional capacity is needed.

Competition in downstream markets

Spreading congestion uplift may encourage new entrants to the Victorian gas retail market to some extent. It would reduce the volatility of congestion uplift payments, over an extended period of time, to individual market participants that have not typically used the congestion uplift hedge. The extent to which this factor may influence market entry decisions appears to be low based on a number of retailers recently entering the market.

Trading between interconnected pipeline and facilities

The Commission notes the mixed views from stakeholders on the effect of the current congestion uplift arrangements on inter-regional trade. These are related to the ability to hedge congestion uplift, which are discussed above. They are also matters that relate to the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*.

4.4 More preferable draft rule to remove injection test from congestion uplift framework

This section summarises the more preferable draft rule to amend the congestion uplift framework by removing the injection test and the Commission's reasons for making the draft rule on this basis. The Commission's decision to make this more preferable draft rule was made considering interactions with the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*, that was considered separately through a concurrent process.

Stakeholders have not had yet an opportunity to comment formally on the draft rule. This option was not raised in the rule change request or consultation paper. It was raised at the stakeholder workshop for the three DWGM rule changes in Melbourne on 16 May 2019, which occurred after the publication of the consultation paper. Stakeholder views are welcome on this aspect of the draft rule, as well as all other parts of this draft determination and the draft rule.

4.4.1 New congestion mechanism proposed in more preferable draft rule

As outlined in section 4.2 and 4.3 of this draft determination, the Commission considers that:

- the current arrangements for congestion uplift provide a reasonable balance in trading off the costs and benefits of allocating congestion costs to causers, however there are some issues with this approach.
- it is not appropriate to spread congestion uplift across market participants.

As outlined in section 4.2.3, the key issues with the current congestion uplift framework relate to risk management:

- The congestion uplift hedge mechanism is complex and may be difficult for market participants (particularly new entrants) to understand.
- It may be difficult for market participants to manage the risk of congestion uplift payments. The ability to hedge against congestion uplift payments is limited to those market participants with physical injections matched to the location of their AMDQ. If a market participant is a spot buyer, that does not inject gas, it must enter into a bilateral agreement with a market participant that is injecting gas at the location of its AMDQ, to receive hedge nominations.
- The current allocation of AMDQ is inefficient meaning that a proportion of the market may have insufficient AMDQ to protect against congestion uplift payments.

To address these issues with the current arrangements, the Commission's draft rule:¹⁰⁸

- retains the current approach in which uplift payments are allocated as far as practicable to the causer¹⁰⁹
- retains the ability of market participants to protect against the risk of congestion uplift payments
- simplifies the mechanism for market participants to protect against the risk of incurring congestion uplift payments by:
 - removing the need for market participants to inject gas to be eligible for protection against congestion uplift payments
 - removing the concept of congestion uplift hedge and the associated need for market participants to submit hedge nominations (IHNS or AIHNS)
 - implementing a new congestion mechanism based on market participant's daily withdrawals of gas exceeding their allocation of exit capacity certificates, on a whole of DTS basis. This replaces the current measure in which market participants are protected from the risk of incurring congestion uplift payments if they withdraw less than their Authorised Maximum Interval Quantity (AMIQ) for a scheduling interval and are physically injecting at the location of their AMDQ.

The characteristics of the new congestion uplift mechanism are described in Table 4.1 below. The Commission considers that this new congestion mechanism would operate effectively with the proposed changes to the AMDQ regime in the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*. In particular, the new AMDQ regime would support more efficient allocation of certificates by enabling market participants to purchase certificates over shorter tenures and by enabling a secondary trading platform to be introduced. This is expected to support market participants in more efficiently matching their expected withdrawal requirements with exit capacity certificates that can be used to protect against the risk of incurring congestion uplift payments.

¹⁰⁸ AEMC, *Draft National Gas Amendment (DWGM simpler wholesale price) Rule 2019*

¹⁰⁹ NGR 240(2)(a) under the current rules.

Table 4.2: Characteristics of new congestion uplift mechanism in more preferable draft rule

CHARACTER- ISTIC	DESCRIPTION	REASON
Injection test	Removed.	Simpler method for participants to understand and manage risk of incurring congestion uplift payments. Reflects original congestion measure used when the DWGM started. The new measure retains the concept that 'unauthorised withdrawals' (i.e. withdrawals above exit certificate holdings) are to pay congestion uplift costs.
Congestion uplift methodology	Participants' withdrawals exceed exit certificates on daily, DTS wide basis.	
Participant coverage	All withdrawals - controllable and uncontrollable.	All withdrawals can cause constraints.

Source: AEMC

The draft rule retains the current high level specification in the NGR in relation to the cost allocation process for uplift payments. For example, the current clause 240(2)(a) of the NGR set out that 'uplift payments are allocated as far as practicable to the cause'. This would provide AEMO with discretion to design and amend the uplift mechanism and Uplift payment procedures to incorporate the rule amendments, and other potential future changes that are not related to this rule change request.

5 IMPLEMENTATION

This chapter discusses the implementation timing, transitional arrangements and level of specification in the Commission's draft rule.

5.1 Timing for commencement of the rule

The proposed timing for commencement of the rule is as follows:

- the amendments relating to internalising withdrawal constraints in the DTS are to commence on 31 March 2020.¹¹⁰ AEMO will need to consult with industry prior to commencement of the rule amendment.
- the amendments relating to the removal of the injection test from the congestion uplift framework are to commence on 1 January 2023¹¹¹ These amendments commence operation immediately after the commencement of schedule 1 of the *Draft National Gas Amendment (DWGM improvements to AMDQ regime) Rule 2019*.
- amendments for transitional arrangements are to commence on 12 December 2019.¹¹²

5.2 Transitional arrangements

The transitional arrangements require that, by 1 January 2022, AEMO must review and where necessary, update and publish the Uplift payment procedures to take into account the rule.

110 Schedule 1 of the *Draft National Gas Amendment (DWGM Simpler Wholesale Price) Rule 2019*

111 Schedule 2 of the *Draft National Gas Amendment (DWGM Simpler Wholesale Price) Rule 2019*.

112 Schedule 3 of the *Draft National Gas Amendment (DWGM Simpler Wholesale Price) Rule 2019*.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AIHN	Agency Injection Hedge Nomination
AMDQ	Authorised Maximum Daily Quantity
AMDQ cc	AMDQ credit certificates
AMIQ	Authorised Maximum Interval Quantity
Authorised MDQ	Authorised Maximum Daily Quantity
COAG Energy Council Commission	Council of Australian Government's Energy Council See AEMC
DFPC	Directional Flow Point Constraint
DTS	Declared Transmission System
DTSSP	Declared Transmission System Service Provider
DWGM	Declared Wholesale Gas Market
GPG	Gas powered generation
IHN	Injection Hedge Nomination
MEU	Major Energy Users
MCE	Ministerial Council on Energy
NFTC	Net Flow Transmission Constraint
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
WORM	Western Outer Ring Main

A SUMMARY OF OTHER ISSUES RAISED IN SUBMISSIONS

This appendix sets out the issues raised in the first round of consultation on this rule change request and the AEMC's response to each issue. If an issue raised in a submission has been discussed in the main body of this document, it has not been included in this tab

Table A.1: Summary of other issues raised in submissions

STAKEHOLDER	ISSUE	AEMC RESPONSE
<p>AEMO, pp 2 and 11. AGL, pp.1-2.</p>	<p>AEMO suggest if congestion uplift is spread across market participants, consideration should be given to how congestion will be efficiently managed in the future. AEMO previously highlighted (in the 2017 DWGM review) that a planning standard could be considered to mitigate against future congestion by ensuring that there is an efficient level of investment in network capacity to meet the needs of industry and consumers.</p> <p>AGL also suggested that the AEMC consider whether a planning standard should be applied to the DTS.</p>	<p>State and territory governments are responsible for the regulation of gas transmission and distribution pipelines within their jurisdiction. This includes service reliability standards. Therefore, consideration of whether to apply a Planning standard in the DTS is a matter for the Victorian Government.</p>
<p>AGL, p.3.</p>	<p>Suggest that the AEMC and AEMO could investigate whether the procedures can be made clearer to provide greater transparency around how uplift charges, including congestion uplift, are incurred. Providing more information for participants may assist them to mitigate against charges.</p>	<p>The draft rule changes the uplift mechanism and will require AEMO to amend their uplift procedures through a consultation process. This will provide the opportunity for participants to provide input into these procedures.</p>
<p>AGL, p.3. EnergyAustralia, p.3.</p>	<p>AGL suggest that market information should be improved through advance notices of constraints that market participants can respond to. AGL suggests that such notices, coupled with more frequent provisional schedules (e.g. every hour, 24 hours before a schedule), could be a simple change that gives participants better information to manage their exposures, though not directly simplifying the price.</p>	<p>The Commission notes the suggestion to improve market information through advance notices of constraints. This proposal is outside scope for this rule change and is a matter that AEMO can address through changes to its procedures.</p>

STAKEHOLDER	ISSUE	AEMC RESPONSE
EnergyAustralia, p.3.	<p>EnergyAustralia suggested that there is potential for the minimisation of market impacts from unplanned outage events (i.e. 1 October 2016 Longford outage) by improving information flow between production plant operators, AEMO and participants so that participants have more time to adjust injections at others points into the DTS, therefore minimising the cost of out of merit gas. EnergyAustralia encouraged the AEMC to investigate further the asymmetry of information in the market that often occurs during unplanned outages.</p>	<p>The Commission notes the point raised in relation to potential asymmetry of information during unplanned outages. AEMO may be able to address this by amending its procedures and publishing more information. Stakeholders could submit a rule change if they consider that additional information should be included on the Bulletin Board.</p>
AEMO, p. 17.	<p>The AEMC should consider whether extending the proposed solution to include constraints on supply congestion is beneficial. Supply congestion may occur where there are more bids for injection at less than the marginal price than can be accommodated by the pipeline. This scenario may be possible at Iona and if any of the proposed LNG import facilities are built. Any unintended consequences for DTS SP congestion uplift should also be considered.</p>	<p>The Commission considers that extending the rule change to include constraints on injections is out of scope as it goes beyond the issues identified in the rule change request relating to the pricing schedule.</p>
ERM, pp.2-3.	<p>ERM suggest that there are situations where the current market design does not provide incentives for shippers to adhere to their operating schedules and forecast withdrawals as accurately as possible. For example, on 1 October 2016, AEMO issued an ad-hoc schedule that replaced the 6 AM operating schedule. ERM suggest that the effect of this ad hoc schedule was that those who failed to deliver gas in accordance with the original 6 AM schedule had minimal deviations and hence minimal exposure to deviation payments and surprise uplift. ERM suggest that this is another part of the market design that would be worth reviewing.</p>	<p>The Commission notes potential amendments related to ad hoc schedules are out of scope to be considered as part of this rule change request.</p>

STAKEHOLDER	ISSUE	AEMC RESPONSE
Major Energy users, p.3.	As there is no quantitative assessment or an assessment of the costs that will be spread across market participants, the MEU has difficulty accepting the rule change proposal would improve outcomes for most end users.	For the reasons outlined in chapter 4, the Commission has decided not to spread congestion uplift across market participants. Therefore, a quantitative assessment of the costs of spreading congestion uplift is not necessary.
Major Energy Users, p.3.	There has been no assessment as to whether a significant proportion of the uplift charges that will be socialised derive from specific areas of the DTS. If this is the case, the uplift charges should be allocated to where the uplift is caused and so provide a price signal for needed investment to address the congestion. The MEU notes that in electricity market, the AEMC is considering dynamic regional pricing to address localised congestion costs. There is no contemplation that this might be an option for the DWGM.	<p>As outlined in chapter 4, the Commission does not consider that congestion uplift provides a price signal for pipeline investment to address congestion.</p> <p>The draft rule is not to spread congestion uplift and retain an approach based on allocating the cost of constraints as far as practicable to the causer.</p> <p>The Commission notes that dynamic regional pricing is out of scope to be considered through this rule change request.</p>
AEMO, p.15.	AEMO suggests that the AEMC considers improving transparency by requiring the methodology for the determination of DTS SP uplift to be included in the AMDQ Procedures and moving limitations to liability for DTS Service Provider uplift in rule 240(7) from the Service Envelope Agreement to the rules. Consideration also needs to be given to the impact of the AEMO rule change request on application of constraints in the DTS on NFTCs and DTS SP congestion uplift.	<p>The suggestion to move limitations of liability for the determination of DTS SP uplift from the Service Envelope Agreement to the rules is outside scope for this rule change. If a stakeholder considered that this information should be moved to the rules, it could submit a rule change request.</p> <p>See section 3.2 for comments in relation to the application of constraints in the DTS on NFTCs.</p>

STAKEHOLDER	ISSUE	AEMC RESPONSE
		<p>The draft rule is not expected to have an impact on DTS SP congestion uplift. The draft rule to internalise withdrawal constraints in the determination of the pricing schedule is not expected to result in a requirement for out of merit order gas to be constrained on and is not expected to result in additional DTS SP congestion uplift.</p>
<p>Powershop, p.2.</p>	<p>Powershop does not consider that the two rule changes that were consolidated into the <i>DWGM simpler wholesale price</i> rule change address similar issues and should have been considered in isolation from each other, as separate rule changes.</p>	<p>The Commission considers that the two rule change requests relate to a common subject matter and are seeking to address similar issues. The issues relate to wholesale pricing in the DWGM, which is inter-related between market prices set in the pricing schedule and ancillary and uplift payments resulting from the operating schedule.</p>

B LEGAL REQUIREMENTS UNDER THE NGL

This appendix sets out the relevant legal requirements under the NGL for the AEMC to make this draft rule determination.

B.1 Draft rule determination

In accordance with s. 308 of the NGL the Commission has made this draft rule determination and accompanying draft rule in relation to the consolidated rule change proposal from the Victorian Minister for Energy, Environment and Climate Change and AEMO, on behalf of EnergyAustralia.¹¹³

The Commission's reasons for making this draft rule determination are set out in section 2.4.

A copy of the draft rule, which is a more preferable draft rule, is attached to and published with this draft rule determination. Its key features are described in section 2.1.

B.2 Power to make the rule

The Commission is satisfied that the more preferable draft rule falls within the subject matter about which the Commission may make rules. The more preferable draft rule falls within s. 74 of the NGL as it relates to the operation of a declared wholesale gas market; and the activities of Registered Participants in a regulated gas market. Further, the more preferable draft rule falls within the matters set out in Schedule 1 to the NGL as it relates to AEMO's functions, powers and duties, and the duties and obligations of Registered Participants in regard to a declared wholesale gas market; and the setting of prices in the declared wholesale gas market.

B.3 Commission's considerations

In assessing the rule change request the Commission considered:

- it's powers under the NGL to make the rule
- the rule change request
- submissions received during first round consultation
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NGO.

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for this rule change request.¹¹⁴

The Commission may only make a rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed rule is compatible with the proper performance of Australian

¹¹³ AEMO is the only other party of than the Victorian Minister who can propose changes to the rules relating to the DWGM. AEMO has proposed this rule change after receiving it from EnergyAustralia.

¹¹⁴ Under s. 73 of the NGL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy. On 1 July 2011, the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated council is now called the COAG Energy Council.

Energy Market Operator (AEMO)'s declared system functions.¹¹⁵ The more preferable draft rule is compatible with AEMO's declared system functions because it leaves those functions unchanged.

B.4 Civil penalties

The Commission cannot create new civil penalty provisions. However, it may recommend to the COAG Energy Council that new or existing provisions of the NGR be classified as civil penalty provisions.

The draft rule does not amend any clauses that are currently classified as civil penalty provisions under the NGL or National Gas (South Australia) Regulations. The Commission does not propose to recommend to the COAG Energy Council that any of the proposed amendments made by the draft rule be classified as civil penalty provisions.

B.5 Conduct provisions

The Commission cannot create new conduct provisions. However, it may recommend to the COAG Energy Council that new or existing provisions of the NGR be classified as conduct provisions.

The draft rule does not amend any rules that are currently classified as conduct provisions under the NGL or National Gas (South Australia) Regulations. The Commission does not propose to recommend to the COAG Energy Council that any of the proposed amendments made by the draft rule be classified as conduct provisions.

¹¹⁵ Section 295(4) of the NGL.