Australian Energy Market Commission

DRAFT RULE DETERMINATION

National Gas Amendment (STTM deviations and the settlement surplus and shortfall) Rule 2013

Rule Proponent

Australian Energy Market Operator

28 March 2013

RULE CHANGE

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About the AEMC

The Council of Australian Governments (COAG), through its then Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005. In June 2011, COAG established the Standing Council on Energy and Resources (SCER) to replace the MCE. The AEMC has two main functions. We make and amend the national electricity, gas and energy retail rules, and we conduct independent reviews of the energy markets for the SCER.

Summary of draft rule determination

On 16 July 2012, the Australian Energy Market Operator (AEMO, or Proponent) submitted a rule change request to the Australian Energy Market Commission (AEMC, the Commission) to make a rule regarding deviation pricing arrangements in the Short Term Trading Market (STTM) for natural gas.

The Commission has assessed the issues raised by the rule change request and, in this draft rule determination, is proposing to make a draft (more preferable) rule that will amend the National Gas Rules (NGR).

The draft rule largely adopts the amendments proposed by AEMO. In addition to this, the draft rule also creates a set of high level principles and parameters regarding deviation pricing for inclusion in the NGR. The principles and parameters are intended to guide AEMO in any future enhancement of the deviation pricing framework that is to be implemented through changes to the STTM Procedures. The principles and parameters balance the incentive for trading participants to accurately forecast their gas schedules, with the financial risks associated with participating in the STTM.

The rule change request arises from AEMO's STTM review,[1] which, under the NGR, it was required to complete by March 2012. As part of the review, AEMO was required to identify whether the graduated deviation parameters, amongst other matters, were set at an appropriate level. The review also identified more general improvements to the STTM.

With regard to deviation pricing in the STTM, AEMO considered that two main issues arise with the current arrangements. There is a poor alignment between the costs of providing Market Operator Services (MOS) to the market – that arise from trading participants' deviations – and the price paid, or charged, to trading participants for their deviations causing MOS. This disparity creates a large monthly financial settlement imbalance in the market, which is required to be funded by trading participants through shortfall charges, or less frequently, surplus payments.

In addition to this, AEMO considered that the large monthly settlement shortfall, which must be recovered from trading participants, means that the financial risks associated with participants deviating from their daily gas market schedule may be difficult to manage. This is because the majority of the costs arising from a trading participant's deviation are not completely known until after the end of the month.

AEMO also considered that the graduated deviation parameters were ineffective in recovering sufficient funds to recover the costs associated with providing MOS to the STTM on a gas day. Rather than proposing to modify the graduated deviation parameters, which would have required a significant change in the magnitude of the current parameters, AEMO recommended that the parameters should be deleted from the NGR.

1 For more detail, see AEMO, *STTM Operational Review and Demand Hubs Review - Final Report*, 30 March 2012.

AEMO considered that the misalignment between the costs of MOS to the market, and the prices paid, or charged, to trading participants for their deviations, could be corrected by strengthening the "causer pays" principles and parameters supporting the deviation pricing framework in the NGR. The proposed changes to the NGR would also facilitate AEMO to undertake a specific set of changes to deviation pricing, as determined through an STTM Procedure change process, to further give effect to their envisaged changes to deviation pricing.

AEMO's rule change request contained three key amendments to strengthen the causer pays principles and parameters supporting the deviation pricing framework. These included:

- amending the definition of "minimum market price" and "market price cap" to clarify that deviation prices do not relate to gas traded at a hub on a gas day;
- amending the definition of "deviation payment" and "deviation charge" to enable trading participants to be charged for deviations that result in a cost to the market, instead of accruing those payments and charges to the monthly settlement process; and
- deleting the "settlement surplus cap" and the "graduated deviation parameters" from the NGR. AEMO considered that with the changes envisaged to the deviation pricing arrangements, the graduated deviation parameters would no longer be required.

On 8 November 2012, the AEMC published a consultation paper on AEMO's rule change request, which outlined a number of issues for further consideration by stakeholders. In particular, the consultation paper considered the impact of removing the graduated deviation parameters from the NGR. Importantly, this would remove the only provision in the NGR relating to how deviation charges and deviation payments are determined. In response, it was proposed that the NGR outline a set of principles and parameters to guide AEMO in regards to how deviation charges and deviation payments are determined.

The AEMC received four submissions in response to the consultation paper, most of which were generally supportive of AEMO's proposal to amend the NGR and also the AEMC's proposal to include a set of guiding principles and parameters regarding deviation pricing.

In its assessment, the Commission considered that deviation pricing is an important aspect of the STTM market's design, as it is the primary mechanism for incentivising trading participants to accurately forecast and comply with their gas schedules. On that basis, the Commission considered that it was appropriate for the NGR to contain provisions relating to deviation pricing, and to not leave this entirely to the STTM Procedures. The high level principles and parameters for inclusion in the NGR seek to promote:

- the economically efficient operation of the STTM by incentivising trading participants to accurately forecast gas schedules;

- deviation charges and deviation payments that reflect the costs of providing MOS to the market, and which minimises the magnitude of the settlement shortfall or surplus; and

- deviation charges and deviation payments that are allocated to trading participants on a causer pays basis.

By strengthening the causer pays principles and parameters supporting the deviation pricing framework, and largely adopting the changes proposed by AEMO, the Commission considers that the draft (more preferable) rule has the potential to reduce the financial risks of participating in the STTM, and therefore, facilitate lower barriers to entry. The Commission also considers that the new deviation pricing arrangements are likely to lead to improved price signals and certainty in the STTM, which will clarify to trading participants the costs associated with deviating from daily gas market schedules.

The Commission has published a draft (more preferable) rule, with this draft rule determination.

The Commission welcomes submissions to the draft rule determination by no later than the close of business on Thursday, 9 May 2013.

Contents

1 AEMO's rule change request

The amendments proposed by the Australian Energy Market Operator (AEMO) in this rule change request arise from their review of the Short Term Trading Market (STTM) for natural gas, completed in March 2012. The statutory review considered a range of matters relating to the operation of the STTM and, in particular, the design of the deviation pricing framework.[2]

In the review, AEMO concluded that the current design of deviation pricing framework leads to a misalignment between the costs to the market resulting from Market Operator Services (MOS), which is the market's pipeline deviation balancing tool, and the revenue to the market resulting from deviation charges and deviation payments. As part of the review, AEMO proposed that the deviation pricing framework should be modified to better align the cost to the market of MOS with deviation charges and deviation payments.

AEMO considers that the changes proposed in this rule change request are necessary in the context of its envisaged overall changes to the deviation pricing design and settlement process under the National Gas Rules (NGR) and the STTM Procedures (Procedures).

The remainder of this chapter describes the rule change request and also includes background information regarding the current design and operation of the deviation pricing framework, including how deviations arise and their relationship to MOS.

Chapter 2 outlines the Commission’s reasons for making the draft (more preferable) rule.

Chapter 3 describes the issues raised by AEMO in relation to the proposed changes to the NGR, as well as the Commission’s assessment of those issues.

Chapter 4 outlines the range of issues that the Commission took into consideration when assessing AEMO’s rule change request.

Chapters 5 and 6 provide greater detail on some of the specific issues considered by the Commission.

1.1 The rule change request

On 16 July 2012, AEMO made a request to the Australian Energy Market Commission (AEMC, or Commission) to make a rule regarding deviation pricing and the settlement surplus and shortfall in the STTM.[3]

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2 For more detail, see AEMO, *STTM Operational Review and Demand Hubs Review - Final Report*, 30 March 2012.

3 AEMO's rule change request is available on the AEMC's website, www.aemc.gov.au.

1.2 Rationale for rule change request

The rule change request seeks to amend or remove specific provisions in the NGR that govern deviation pricing and the settlement surplus and shortfall in the STTM in all STTM hubs. The purpose of these amendments is to better align the costs incurred by trading participants who deviate from their daily gas market schedule with the prices that are charged by the market, or paid by AEMO in relation to their deviations. In brief, the amendments to the NGR are intended to strengthen the "causer pays"[4] principles supporting the deviation pricing framework.

AEMO envisages that to give full effect to these stronger principles, it will be required to undertake further consequent changes to the STTM Procedures.

In their rule change request, AEMO consider that two key issues arise under the current requirements set out in the NGR, outlined below.

1. Poor alignment between the cost of MOS and the price paid or charged for the deviations causing this MOS

Under the current arrangements, a disparity arises in the STTM between the costs incurred due to trading participants' deviating from their daily gas market schedule, and the prices they are charged, or paid, to cover those deviations. This disparity creates a large monthly settlement imbalance in the market, which is required to be funded through shortfall charges, or, less frequently, surplus payments. These charges and payments are levied on and paid by trading participants.

This means that trading participants who caused the need to balance the market with MOS on a day are not required to directly fund it, exposing other trading participants to financial risk, who may not have even participated in the market on that day. AEMO note that analysis conducted as part of their STTM review showed that, on average, deviation payments and charges only recovered 20 – 30 per cent of MOS costs with the balance needing to be funded by trading participants through settlement shortfall charges.[5]

2. Risks in the market due to the magnitude of the market imbalance (settlement surplus or shortfall)

The large settlement shortfall each month, which must be recovered from trading participants, means that the risks associated with trading participant's deviating from their daily gas market schedule may be difficult to manage. This is because the majority of the costs arising from a trading participant's deviation are not completely known until after the end of the month.

4 The term "causer pays" refers to the economic principle that describes an approach to allocating costs. Under the causer pays principle, costs are allocated to parties that caused the cost in the first instance. This approach is considered to result in an efficient and equitable allocation of costs, and therefore, efficient market outcomes.

5 AEMO rule change request, page 7.

To support this argument, AEMO provided an example of this issue occurring in the STTM when, in 2010, trading participants raised the issue of the level of risk exposure that existed in the distribution of the settlement surplus or shortfall. Following two high price events at the Sydney hub, concerns were noted relating to how deviations that were incurred long after the high price days in question could lead to very large changes in a trading participant’s prudential exposure. A number of call events on trading participants were observed in relation to deviations on days where gas prices and MOS costs were low, due to trading participants' exposure to large shortfall charges caused by high prices or high MOS costs occurring earlier in the month.

This risk was seen as difficult to manage, particularly for trading participants who operate intermittently, enter the market mid-month, and those who did not deviate on the high price days in question. AEMO consider that this risk, created by the settlement of the surplus or shortfall, is a potential barrier to market entry for new entrants.[6]

1.3 Solution proposed in the rule change request

In response to the issues identified through AEMO's STTM review, and outlined above, AEMO proposed a number of changes to the NGR. The amendments are intended to better facilitate and strengthen the causer pays principle in relation to deviation pricing, and also facilitate AEMO’s envisaged changes to the Procedures. They proposed amendments to the NGR as follows:[7]

- Amend the definition of “deviation payment” in rule 364 to reflect that decrease MOS can either result in income to the market, or cause a cost to the market. AEMO proposes that the definition should provide that a deviation payment can not only be a payment by AEMO to a trading participant, but also a payment by a trading participant to AEMO.

- Amend the definition of “deviation charge” to make it consistent with the above proposed change to the definition of “deviation payment”.

- Amend the definition of the “minimum market price” (MMP) to clarify that deviation changes and deviation payments are not subject to the MMP and can therefore be negative.

- Amend the definition of the “market price cap” (MPC) for consistency with the proposed change to the MMP.

- Remove the definition of the “settlement surplus cap” from the NGR, so that there is no longer any cap on settlement surplus payments.

- Amend rule 405 to clarify that the MMP and MPC only apply to price steps used in ex ante and ex post scheduling, to ensure that they are not applied to deviation prices directly.

6 AEMO rule change request, page 7.

7 AEMO rule change request, page 12.

- Amend rule 461 for consistency with the proposed changes to the definitions of “deviation charges” and “deviation payments”.
- Remove rule 462, which sets out the graduated deviation parameters, which AEMO claims are not operating effectively in recovering the costs associated with providing MOS from trading participants.
- Remove rule 489, which requires AEMO to undertake the review of the STTM operation, as that review has been completed.

1.4 Relevant Background

1.4.1 The Short Term Trading Market

The STTM is a "day ahead" market, whereby gas is traded a day before the actual gas day. This means that relevant activities take place before (ex ante), on (intra) and after (ex post) each individual "gas day", which is the day for which gas is scheduled to be transported to a hub. The day before any gas day, pipeline operators submit pipeline capacity information to AEMO, who publishes this data. STTM users and shippers can then place "bids" to buy quantities of gas at the hub, and STTM shippers can place "offers" to sell quantities of gas to the hub.

On the basis of this information, AEMO matches offers and bids, determines the ex ante market price and draws up the initial market schedules for the flow of gas to and from the hub on the gas day. All the gas that is supplied and withdrawn, according to the market schedule, is settled at the ex ante market price.

The market schedule is published by AEMO approximately 18 hours ahead of the gas day so that shippers can use this information to nominate the quantity of gas they require to be transported by each pipeline operator (a process which occurs outside of the STTM). Pipeline operators then prepare pipeline allocation schedules, detailing the quantities of gas to be delivered to each shipper on each pipeline on the gas day.

On the gas day, shippers supply gas to the hub, and users withdraw gas from the hub.

1.4.2 Deviations, market operator service and deviation pricing

Typically, the amount of gas that shippers and users actually supply to, or withdraw from, an STTM hub on a gas day is different to the amount of gas they nominated in advance. This happens when, for example, end-user gas demand is higher than forecast.

The design of the STTM encourages trading participants to communicate these anticipated differences in gas demand in a transparent manner. This assists AEMO to balance the gas supply, and therefore minimise system costs for balancing the market, and maintaining the integrity of the system.

Shippers and users can submit equally offsetting market schedule variations (MSVs) to AEMO for additional (or less) gas bought (or sold) than scheduled. By submitting an MSV, a trading participant's market schedule is modified so that it better aligns with its actual allocation on a gas day.

If, after having submitted any MSVs, there is still a difference between a trading participant's modified market schedule quantity and actual allocated quantity, this difference is referred to as a "deviation". Deviations from nominated schedules generally incur a financial penalty. This is to incentivise trading participants to forecast as accurately as possible and meet their gas schedules, and to recognise the costs caused by deviations.

To facilitate the settlement process, pipeline operators for each STTM facility provide AEMO with final pipeline allocation data after each gas day, detailing the amount of gas actually allocated to each shipper on their respective pipelines.

1.4.3 Deviation charges and payments

Deviation quantities

A trading participant's deviation quantity is the difference between its gas market schedule (or modified gas market schedule) and the quantity of gas allocated to it at the end of each gas day. A deviation quantity can be either "long" or "short".[8]

- For a **<u>shipper</u>** who supplies gas to the hub, a long deviation means that it delivered more gas to the hub than scheduled. A short deviation means the actual quantity of gas it delivered was less than its market schedule.

- For a **<u>user or shipper</u>** who withdraws gas from the hub, a long deviation means that it consumed less gas at the hub than scheduled. A short deviation means the actual quantity of gas it consumed was more than its scheduled quantity.

Short deviations lead to additional gas being required at the hub, while long deviations lead to excess gas having to be sold back to the market.

Overview of deviation charges and deviation payments

If a trading participant has a short deviation, it *must pay* a "deviation charge" to AEMO. This deviation charge is effectively a payment by the trading participant to cover the purchase of additional gas that was required to cover its deviation quantity.

If a trading participant has a long deviation, it *will be paid* a "deviation payment" by AEMO. This deviation payment is effectively a payment to the trading participant for selling its excess gas back to the market.

8 NGR, rule 364.

As part of the settlement process, AEMO calculates, for each gas day, the deviation charges payable by, or deviation payments payable to, each trading participant at a hub.[9]

Details on how deviation charges and deviation payments are calculated are set out in the Procedures.[10]

Graduated deviation parameters

The NGR requires that, when AEMO calculates deviation charges and deviation payments, it must apply the graduated deviation parameters set out in rule 462 of the NGR. The graduated deviation parameters are provided below.

Figure 1.1 Graduated deviation parameters

Deviation percentage range	Factor
> +10%	90%
> +5% and ≤ +10%	95%
≥ -5% and ≤ +5%	100%
≥ -10% and ≤ -5%	105%
< -10%	110%

Deviation quantity range	Factor
> +1,200 GJ	90%
> +600 GJ and ≤ +1,200 GJ	95%
≥ -600 GJ and ≤ +600 GJ	100%
≥ -1,200 GJ and ≤ -600 GJ	105%
< -1,200 GJ	110%

The table sets out two different types of methods for calculating deviation prices:

- the "percentage method", where the deviation is calculated as a percentage of the market schedule (or modified market schedule) quantity, as shown in the first table above; and

- the "quantity method", where the deviation is measured in volume (GJ) terms, as shown in the second table above.

The graduated deviation parameters are used to determine an "adjusted ex ante market price" that is used in the calculation of deviation charges or deviation payments. For example, a short deviation of more than 10 per cent will mean the ex ante market price

9 NGR, rule 461(2)(g).

10 See AEMO's STTM Procedures, section 10.8. Available on AEMO's website.

will be upwardly adjusted by a rate of 110 per cent (i.e. increased by 10 per cent) if the percentage method applies. AEMO will calculate deviation prices based on both the "percentage method" and the "quantity method", and use the method that best advantages the trading participant.

Calculation of deviation charges and deviation payments

Short deviations, which result in a deviation charge payable by a trading participant to AEMO, are calculated using the highest of:

- the adjusted ex ante market price;
- the ex post imbalance price;[11] and
- the high contingency gas price (if applicable).[12]

In the STTM Procedures, the calculation of deviation charges are capped by the MPC, which is the maximum price for natural gas traded at a hub for a gas day. The MPC is currently set in the NGR at $400/GJ.

For a long deviation, the deviation payment payable by AEMO to a trading participant is calculated using the lowest of:

- the adjusted ex ante market price;
- the ex post imbalance price; and
- the low contingency gas price (if applicable).[13]

In the STTM Procedures, the calculation of deviation payments cannot be lower than the MMP, which is the minimum price for natural gas traded at a hub for a gas day. The MMP is currently set at $0/GJ in the NGR.

This deviation pricing framework means that trading participants with deviations effectively face a penalty for deviations from their daily gas market schedules because they are paying, or are being paid, a price that is generally less favourable to them than the ex ante market price that would have applied had they not deviated.

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11 The ex post imbalance price is calculated the day after each gas day and is intended to represent the price that would have been set if trading participants had accurately forecast their gas schedules. In other words, it is the market price which is adjusted for changes in supply and demand that occurred since publication of the ex ante market schedules.

12 Contingency gas is a mechanism for balancing supply and withdrawals at a hub when other mechanisms (including market operator service) are unable to do so. A "high" contingency gas price is paid to contingency gas providers whose gas increases supply and/or reduces withdrawals. This price is set at the offer price of the most expensive contingency gas provider who is called.

13 A "low" contingency gas price is paid by contingency gas providers whose gas decreases supply or increases withdrawals. This price is set at the price bid of the least expensive contingency gas provider called.

1.4.4 Pipeline deviations and the market operator service

Ideally, the total quantity of gas nominated (including intra-day re-nominations[14]) by shippers to the STTM pipeline operator for delivery to a hub on a gas day would match the actual quantity of gas delivered to the hub by that pipeline on that day. If this is not the case, the result is a "pipeline deviation".

Pipeline deviations are determined on the basis of actual flow data that pipeline operators measure for each pipeline after each gas day. A “positive” pipeline deviation means more gas was delivered to the hub than nominated, while a “negative” pipeline deviation means less gas was delivered to the hub than nominated.

If there is a pipeline deviation, the gas that is necessary to balance that deviation is provided (or withdrawn) by MOS.[15]

Under the current arrangements,[16] MOS can be supplied by shippers who hold a contract with an STTM facility operator that entitles the shipper to either withdraw (loan) gas from the facility, or store (park) gas on the facility. These shippers are referred to as "eligible contract holders".[17]

MOS is managed by AEMO. Currently, at quarterly intervals during the year, AEMO invites eligible contract holders to submit price-quantity offers for the provision of MOS (the MOS service price) for the next quarterly "MOS period". AEMO lists the various offers from lowest to highest prices and generates a "MOS stack" accordingly.[18] The MOS offer prices are capped by the MOS cost cap, defined in the NGR, which is the maximum MOS price for a MOS increase offer or a MOS decrease offer that AEMO may include in a MOS stack (being $50/GJ).[19]

Separate stacks are published for "increase MOS" (where additional gas needs to be delivered to the hub) and "decrease MOS" (where excess gas needs to be withdrawn from the hub).

14 Individual shippers may make "intra-day" re-nominations with the relevant pipeline operator for additional or less gas. These re-nominations, if accepted by the pipeline operator, will result in adjustments to pipeline allocation schedules.

15 MOS is defined as "the market operator service by which capacity (in GJ) is provided to balance pipeline deviations by increasing or decreasing the quantity of natural gas supplied to or withdrawn from a hub using an STTM pipeline". See NGR, rule 364

16 The Commission has made a draft rule determination with respect to this issue, and has proposed that the eligibility requirements for MOS providers is broadened to include any shipper that holds an underlying agreement with an eligible contract holder that allows this to occur. The draft rule determination also proposes that the MOS period is reduced from a three month to one month MOS period. See the AEMC website for *Market Operator Service – Eligibility and Timing, Draft rule determination*, GRC0016, published Thursday 28 February 2013.

17 NGR, rules 364 and 399.

18 See AEMO's STTM Procedures, sections 5.5.1 and 5.5.2.

19 See definitions set out in rule 364 of the NGR.

In addition to the MOS service price, AEMO pays or charges the MOS provider the "MOS commodity charge" for the physical volume of MOS gas supplied or withdrawn on the gas day. The MOS commodity charge is set equal to the ex ante market price that applies two days after the relevant gas day.

1.4.5 The relationship between MOS and deviations

If changes in demand and supply of gas on a particular gas day are communicated to the market by trading participants in a precise and transparent way, MSVs will account for the increased or decreased gas traded between shippers and users.[20]

Changes in quantities that were not accounted for by MSVs will result in deviation quantities, which attract deviation penalties. These same deviation quantities will have to be offset by the provision of MOS gas if they were not re-nominated by shippers to pipeline operators.

The relationship between deviations and MOS can be summarised as follows:

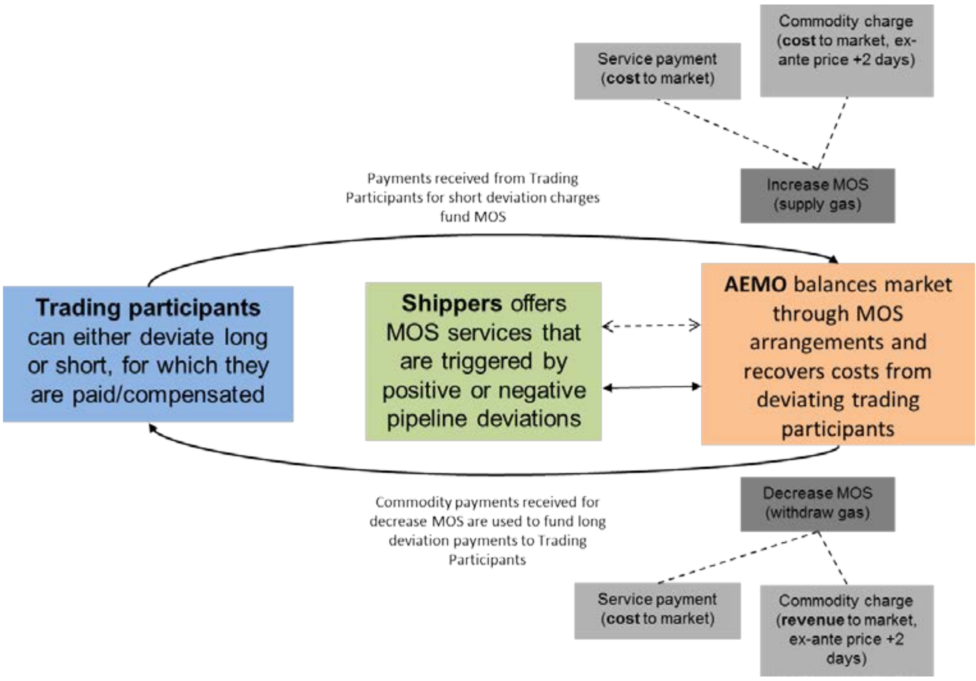
- Increase MOS will be provided where the net deviations on a pipeline are short (negative). AEMO must pay the MOS provider for the provision of increase MOS. AEMO charges trading participant's deviation charges for short deviations. The income AEMO collects from deviation charges should ideally offset at least some of the costs incurred by AEMO relating to the provision of increase MOS.

- Decrease MOS will be provided where the net deviations on a pipeline are long (positive). AEMO will be paid the MOS commodity charge by the MOS provider for decrease MOS. AEMO pays trading participants deviation payments for long deviations. The income AEMO collects from MOS commodity charges should ideally offset at least some of the costs incurred by AEMO relating to the provision of decrease MOS.

The general relationship between trading participants' deviations, pipeline deviations and MOS is illustrated in Figure 1.2.

20 Intra-day shipper re-nominations with pipeline operators will reflect these same changes at the pipeline allocation level.

Figure 1.2 Relationship between deviations and MOS



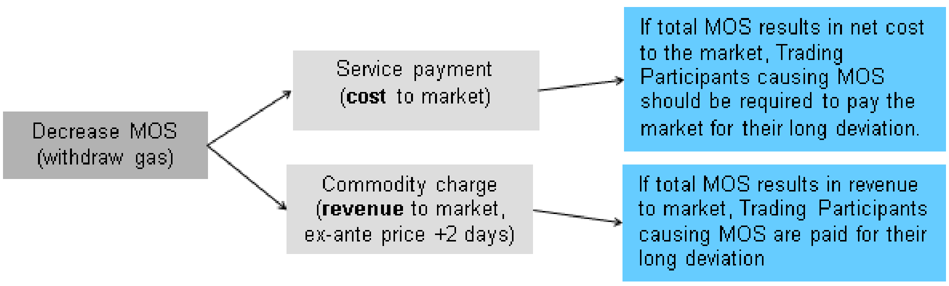
The total amount charged by AEMO for trading participants' deviations from their daily gas market schedules generally does not match the total amount paid by AEMO for MOS. The difference between these payments and charges is recovered though the monthly settlement process.

Decrease MOS and market revenue

In specific circumstances, decrease MOS can impose a cost to the market which, under the current arrangements, cannot be recovered from trading participants. This circumstance arises when the commodity charge paid to AEMO, by a MOS provider, is less than the MOS service charge that AEMO pays the MOS provider. Put another way, if the value of the service component is more than the value of the commodity component, the market incurs a cost in providing decrease MOS.

Under the current arrangements, the deviation payments paid to trading participants cannot be less than $0/GJ (i.e. allowed to be negative) as they are capped by the MMP. This relationship is illustrated in Figure 1.3 below.

Figure 1.3 Decrease MOS relationship to market revenue and costs



1.4.6 Monthly settlement surplus and shortfall

AEMO performs calculations in order to settle the market for each individual gas day and invoices trading participants on a monthly basis.

Settlement of any particular gas day maybe made up of payments to trading participants by AEMO and charges paid by trading participants to AEMO. These payments and charges result primarily from trading participants' deviations from their daily gas market schedules and MOS provision, but may also include charges for MSVs and provision of contingency gas (if needed).

Overall, these payments and charges typically do not match, leading to either a settlement surplus (over-collection) or a settlement shortfall (under-collection). Over a monthly billing period, AEMO accumulates the daily settlement surpluses and shortfalls at a hub and distributes the net settlement surplus or shortfall to trading participants at the end of the month. This is to ensure that over each month, the total market revenue balances the total market expenses caused by trading participants' deviations and MOS provision.

In the case of a settlement shortfall, the additional funds that are needed to balance the settlement are collected from the trading participants who have deviated, on the basis of their share of all deviations over that month.

In the case of a settlement surplus, the excess funds will be re-distributed to trading participants in two stages:

- First, surplus funds are re-distributed to trading participants who have deviated, based on their share of all deviations over a month. However, because the NGR contains a "settlement surplus cap", which is applied in the STTM Procedures so this surplus payment amount to be capped at $0.14 per GJ.[21] This cap is designed to prevent trading participants recovering a large proportion of their deviation charges through the monthly settlement process, which could reduce their incentive not to deviate.

- Secondly, the excess funds that remain after the settlement surplus cap is reached are re-distributed to all trading participants, based on their proportional share of the month's withdrawals at the hub. This means that trading participants who did not contribute to the over-collection of funds during the month may also share in the re-distribution of excess funds.

1.5 Commencement of rule making process

On 8 November 2012, the Commission published a notice under section 303 of the National Gas Law (NGL) advising of its intention to commence the rule making process and first-round stakeholder consultation in respect of the rule change request.

21 NGR, rule 364.

A consultation paper prepared by AEMC staff, identifying specific issues or questions for consultation, was published with the rule change request. Submissions to the consultation paper closed on 20 December 2012.

The Commission received four submissions on the rule change request as part of the first round of consultation. They are available on the AEMC's website.[22] A summary of the issues raised in the submissions, and the Commission's response to each issue, is contained in Appendix A.

1.6 Extension of time

Due to the complexity of the issues raised by the rule change request, in particular issues associated with removing the graduated deviation parameters from the NGR, on 8 November 2012 the Commission extended the period of time for the draft rule determination to 28 March 2013 under section 317 of the NGR.

1.7 Consultation on draft rule determination

In accordance with the notice published under section 308 of the NGL, the Commission invites stakeholder submissions on this draft rule determination by no later than the close of business on Thursday 9 May 2013.

In accordance with section 310(2) of the NGL, any person or body may request that the Commission hold a 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 by no later than the close of business on Thursday 4 April 2013.

Submissions and requests for a hearing should quote project number "GRC0014" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

22 www.aemc.gov.au

2 Draft rule determination

2.1 Commission's draft rule determination

In accordance with section 308 of the NGL, the Commission has made this draft rule determination in relation to the rule proposed by AEMO.

The Commission has determined not to make AEMO's proposed rule, but rather proposes to make the draft (more preferable) rule.

The draft (more preferable) rule adopts substantive elements of AEMO's proposed rule and is attached to, and published with, this draft rule determination.

The Commission's reasons for making this draft rule are set out in Chapter 3. The key features of the draft (more preferable) rule are described in section 3.5 of Chapter 3.

2.2 Commission's considerations

In assessing the rule change request, the Commission considered:

- the Commission's powers under the NGL to make the rule;
- the rule change request;
- stakeholder submissions received during the first round of consultation; and
- the Commission's analysis as to the ways in which the proposed rule will, or is likely to, contribute to the National Gas Objective (NGO).

There is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles relating to this rule change request.[23]

2.3 Commission's power to make the rule

The Commission is satisfied that the draft (more preferable) rule falls within the subject matter about which the Commission may make rules.

The proposed rule falls within section 74 of the NGL. More specifically, it relates to:

- the operation of a Short Term Trading Market of an adoptive jurisdiction (s.7491)(a)(va)); and
- the activities of Registered Participants, users, end users and other persons in a regulated gas market (s.74(1)(a)(vi)).

23 Under section 73 of the NGL, the AEMC must have regard to any relevant MCE Statement of Policy Principles in making a rule.

2.4 Rule making test

Under section 29(1) of the NGL, the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the NGO. This is the decision making framework that the Commission must apply.

The NGO is set out in section 23 of the NGL as follows:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interest of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas."

The Commission considers that the relevant aspect of the NGO for this rule change request is the efficient operation of, and efficient investment in, natural gas services for the long term interest of consumers of natural gas with respect to price.[24]

The Commission is satisfied that, if made, the draft (more preferable) rule will, or is likely to, contribute to the achievement of the NGO by:

- *Reducing the financial risks of participating in STTM - which may potentially lower barriers to entry for STTM trading participants and, thereby, enhancing the efficient operation of natural gas services. Lower financial risks may facilitate lower end-use gas prices.*

If made, the draft (more preferable) rule may reduce the financial risks of participating in the STTM by strengthening the causer pays principle in the deviation pricing framework. The causer pays principle in this context seeks to equitably and efficiently allocate MOS costs to the parties that caused the need for MOS. Allocating costs in this way helps to achieve efficient market outcomes, which is a principle consistent with the NGO.

Chiefly, the causer pays principle is strengthened by clarifying that the MMP and MPC do not apply to the calculation of deviation charges and deviation payments, which could otherwise prevent deviation payments to be negative. This change will allow long deviation payments to become negative and, in turn, allows trading participants to pay AEMO for negative long deviation payments. This will have the effect of more closely linking MOS costs to the trading participant(s) that was responsible for causing MOS on a gas day.

Allowing negative long deviation payments is also likely to subsequently result in a reduction in the magnitude of the settlement shortfall or surplus, which is determined at the end of each month. This is because trading participants that cause decrease MOS will be more directly accountable for those costs, instead of them accruing to the monthly settlement surplus.

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24 Under section 291(2), for the purposes of section 291(1) the AEMC may give such weight to any aspect of the NGO as it considers appropriate in all circumstances, having regard to any relevant MCE Statement of Policy Principles.

Further, under the draft (more preferable) rule, if a settlement surplus arises, then funds would be re-distributed to trading participants based on their share of deviations for that month, and not their share of withdrawals from the hub.

Strengthening the causer pays principle in this way is likely to benefit trading participants as they are less likely to be exposed to MOS costs they had no involvement in generating. This is particularly the case if there had been events during the month preceding settlement where MOS costs were high as a result of deviations, but a trading participant was not involved in, or contributed to, those deviations. This is an important factor for trading participants, as it reduces the financial risks of participating in the STTM and potentially lowers barriers to entry.

If made, this draft (more preferable) rule may contribute to the efficient operation of the STTM and the use of natural gas services, as it more effectively links "costs to cause" and reduces the administrative burden on AEMO and trading participants of balancing the STTM, and recovering costs associated with the large monthly settlement shortfalls typically experienced in STTM hubs.

- *Improving price signals regarding the value of MOS services - potentially resulting in STTM trading participants being able to better ascertain the costs of deviating from their daily gas market schedule and, therefore efficiently utilising natural gas services. Efficient utilisation of natural gas services may facilitate lower end-use gas prices.*

Clarifying that the MMP and MPC do not apply to deviation charges and deviation payments, and thereby allowing deviation payments to be negative, recognises that there are costs associated with deviating from daily gas market schedules and therefore, balancing the gas market. Applying the causer pays principle in this way improves price signals in the STTM regarding MOS costs and, therefore, the costs of deviating from daily gas market schedules.

The proposed change to the arrangements will potentially enable trading participants to make more informed decisions regarding the value derived from a service (gas) against the market cost (MOS) of providing that service.

Improving price signals in this way is likely to lead to a more efficient utilisation of natural gas services, as trading participants can make more informed choices as to the true cost and benefits of deviating from their daily gas market schedules.

Under section 295(4) of the NGL 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 AEMO’s declared network functions. The proposed draft rule does not relate to AEMO’s declared network functions.

2.5 More preferable rule

Under section 296 of the NGL, the AEMC may make a rule that is different (including materially different) from a market initiated proposed rule (a more preferable rule) if the AEMC is satisfied that, having regard to the issue or issues that were raised by the market initiated proposed rule (to which the more preferable rule relates), the more preferable rule will, or is likely to, better contribute to the achievement of the NGO.

Having regard to the issues raised by the rule proposed in the rule change request, the Commission is satisfied that the proposed draft (more preferable) rule will, or is likely to, better contribute to the NGO for the following reasons:

- *Providing regulatory certainty to trading participants and the market that any future amendments to the deviation pricing framework will have regard to economic efficiency objectives, and incentives on trading participants to accurately forecast and comply with their daily gas market schedules.*

The draft (more preferable) rule removes rule 462, which contains the graduated deviation parameters, and which is currently the only provision in the NGR that governs how deviation charges and deviation payments are calculated. In the absence of that rule, the NGR would simply provide that deviation payments and deviation charges are to be determined by AEMO for each gas day in accordance with the Procedures.

Deviation pricing is an important aspect of the STTM market design, and it is therefore important that the NGR provides some guidance when developing deviation payments and deviation charges. The proposed draft (more preferable) rule achieves this by creating a set of principles for the calculation of deviation payments and deviation charges which promote:

- the economically efficient operation of the STTM by incentivising accurate forecasts of gas schedules on the behalf of trading participants;

- deviation charges and deviation payments that reflect the costs of providing MOS to the market, and which minimise the magnitude of the settlement shortfall or surplus; and

- deviation charges and deviation payments are allocated to trading participants on a causer pays basis.

Each of these objectives, outlined as principles for inclusion and/or parameters in the NGR, are likely to contribute to the efficient operation and use of natural gas services by ensuring that any future changes to the deviation pricing framework are achieved in a manner that is consistent the causer pays principle and potentially reduces the financial risks faced by trading participants operating in the STTM.

3 Commission's reasons

The Commission has analysed the rule change request and assessed the issues/propositions arising. For the reasons set out below, the Commission proposes that the draft (more preferable) rule be made. Its analysis of AEMO's proposed rule is also set out below.

3.1 Assessment of issues

AEMO Proposal

AEMO proposes to modify the deviation pricing framework in order to better align the cost to the market of a deviation (i.e. the costs of supplying MOS) with the charge or payment associated with that deviation. In other words, AEMO is seeking to strengthen the causer pays principle in the deviation pricing framework.

AEMO propose that this can be achieved through a combination of changes to the NGR and also to the Procedures.

With regard to the Procedures, AEMO propose to strengthen the causer pays principle by introducing the average cost of MOS (per GJ) incurred for a gas day into the set of calculations used to determine deviation payments and deviation charges. If implemented, this change would mean that:

- The deviation charge for a short deviation would be the maximum of:
  - the ex ante market price;
  - the ex post imbalance price;
  - the average increase MOS cost; and
  - the high contingency price (if called).
- The deviation payment for a long deviation would be the minimum of:
  - the ex ante market price;
  - the ex post imbalance price;
  - the average decrease MOS cost; and
  - the low contingency price (if called).

AEMO expects this change to the deviation pricing framework to reduce the magnitude of the settlement shortfall by up to 80 per cent. It would also better assign the cost of MOS to trading participants who caused it on a particular gas day, rather than leaving it to the monthly settlement surplus or shortfall.

To give full effect to the strengthening the causer pays principle supporting the deviation pricing framework, AEMO also considers that the following amendment also need to be made in the NGR. The reasons for this are discussed below.

Amending the definitions of MMP, MPC, as well as deviation payments and deviation charges

AEMO seeks to clarify that the MMP and MPC do not apply to the application of deviation pricing.[25] The MMP is defined by the NGR as the "minimum market price for natural gas traded at a hub for a gas day, being $0/GJ".[26] AEMO considers that the MMP should not apply to deviation charges or deviation payments, as those prices do not relate to prices for gas traded in the market. Clarifying the definition of MMP (to remove any suggestion of its application to the calculation of deviation charges or deviation payments) would then allow deviation payments to be negative.

In order to permit negative deviation payments to be made, AEMO also seeks to amend the definition of a "deviation payment". The definition currently reads "an amount payable by AEMO to a Trading Participant in respect of a long deviation quantity".[27] AEMO proposes that this definition be changed to reflect that a deviation payment may not only result in a payment to a trading participant by AEMO, but may also result in a payment by a deviating trading participant to AEMO.

In order to be able to assign the full cost of decrease MOS to trading participants with long deviations, the price for a long deviation needs to be allowed to be negative. A negative deviation payment would mean that the party that deviated would pay AEMO, rather than be paid by AEMO. AEMO considers that this would result in better causer pays pricing.

For reasons of consistency, AEMO also proposes similar amendments to the definition of the MPC and "deviation charge".

Deleting the settlement surplus cap, currently set at $0.14 per GJ

AEMO proposes that reference to the settlement surplus cap of $0.14/GJ be deleted from the NGR.[28] AEMO expects that by implementing their currently envisaged Procedures changes for the deviation pricing framework, the amount it will need to recover from deviation charges and deviation payments over a month is likely to exceed the cost of the MOS that was caused by those deviations, resulting in a settlement surplus for most months.

Having a surplus cap in place would mean that over-recovered MOS costs would be returned, in part, to the trading participants with the greatest share of a month's withdrawals, rather than to those trading participants that funded the surplus.

25 AEMO rule change request, page 10.

26 NGR, rule 364.

27 NGR, rule 364.

28 AEMO rule change request, page 11.

Removing the surplus cap would allow over-recovered MOS costs to be returned solely to those parties that paid deviation prices and funded that surplus.

Graduated deviation parameters

AEMO argues that the graduated deviation parameters discourage trading participants from bringing additional gas to the market on a day when the market is likely to be short, and instead encourage reliance on MOS for balancing the market. This is because the graduated deviation parameters penalise all trading participants that deviate by more than a specified percentage or GJ quantity.[29]

AEMO considers that, in some circumstances, allowing trading participants to deviate from their daily gas market schedules will actually assist the market as it reduces the amount of MOS required and, as a consequence, that party should not be penalised for doing so. For example, if there is an overall short deviation at a hub, any party that deviates long will reduce the amount of MOS required to balance the hub and will reduce costs to the market.

3.2 Assessment of proposed rule

The Commission has assessed the issues raised by the rule change request. The Commission notes that the amendments proposed by AEMO will enable them to undertake their envisaged changes to the Procedures with a view to correcting a misalignment between costs to the market resulting from MOS, and revenue to the market from deviation charges and deviation payments.

At the outset, the Commission considers that the proposed changes to the NGR must be assessed on their own merits, and independently of any envisaged changes to the deviation pricing framework that AEMO intends to introduce through their Procedure change process. Therefore, the Commission's assessment of the rule change proposal does not consider the details or merit of any envisaged Procedure changes to be proposed by AEMO and outlined in their rule change request, such as including average MOS costs as part of the deviation pricing calculations.

Amending the MMP and MPC

The Commission agrees with AEMO that the causer pays principle can be strengthened by allowing long deviation payments to be negative, and paid to AEMO by trading participants. However, the Commission considers it is preferable to achieve this outcome by including guidance in the NGR in relation to the calculation of deviation charges and deviation payments (which calculations are required by the NGR to be set out in the Procedures) and by including a definition of "deviation price".

29 This penalty arises because the graduated deviation parameters are used by AEMO to calculate the adjusted ex ante price, which is one of the prices used by AEMO when calculating deviation charges and deviation payments under the Procedures. The result is that a trading participant who deviates will pay or receive a less favourable price for the gas than if it had accurately forecast gas schedules and paid the ex ante market price.

Together these amendments will remove any impediments there may have been in the NGR from including calculations in Procedures that allow deviations payments to be negative. The proposed amendments to the MPC and MMP run the risk of causing ambiguity and confusion for how these market parameters were intended to operate and in their application to other rules, in particular, the application of MPC for an administered price cap state.

On this basis, the Commission has also determined that amendments to rule 405, relating to the price of natural gas, are unnecessary.

Settlement surplus cap

The Commission considers that removing the settlement surplus cap does not impact trading participant's incentives to adhere to their daily gas market schedules. While surplus funds will effectively be returned to the trading participants that caused MOS, any incentive to deviate is likely to be counteracted by strengthening the causer pays principle in the deviation pricing framework, such as removing impediments to negative long deviations.

Graduated deviation parameters

The Commission has considered the impact of removing the graduated deviation parameters from the NGR, and notes that, while the parameters are intended to apply an increasingly severe penalty the larger the deviation, this does not work in practice.

The Commission considers that the graduated deviation parameters currently create:

- weak incentives for trading participants to accurately forecast gas schedules; and
- a settlement shortfall in most months, which must be recovered from STTM trading participants more broadly, thereby increasing the financial risks of participation.

The Commission notes that removing the graduated deviation parameters would leave the NGR silent on the matter of how to calculate deviation charges and deviation payments. This is because all reference to deviation pricing in the NGR would be removed, meaning that, if the rule was deleted as proposed, the NGR would simply provide that deviation payments and deviation charges are to be determined by AEMO for each gas day in accordance with the Procedures.

The Commission considers that deviation pricing is an important aspect of the market's design, as it is the primary mechanism for incentivising trading participants to accurately forecast gas schedules and comply with their daily gas market schedules. On that basis, the Commission considers that some guidance is required in the NGR regarding the deviation pricing framework, with the majority of the technical and administrative detail to be contained in the Procedures. As such, it is appropriate for the NGR to contain a number of high level principles to guide AEMO in the development of deviation payments and deviation charges.

The Commission has decided to include, as part of the draft (more preferable) rule, a set of principles and parameters to be inserted into the NGR, which reflect those that were consulted upon in the AEMC consultation paper for this rule change request. The principles that were consulted on are outlined in Box 3.1. Further consideration of the proposed principles, including issues raised by stakeholders, are addressed in Chapter 6.

Box 3.1: Deviation pricing framework principles

1. Deviation charges and payments should be set to promote the economically efficient operation of the STTM by incentivising accurate forecasting of gas schedules, to the extent practicable.

2. Deviation charges and deviation payments should, to the extent practicable, reflect the costs of providing MOS and minimise any settlement shortfall charge or settlement surplus payment.

3. When determining deviation charges and deviation payments:

   (a) If an administered price cap state applies by reason of material involuntary curtailment, then deviation charges are priced at the administered price cap and deviation payments are priced at the ex ante market price for the gas day; and

   (b) In all other cases, the maximum deviation price used to calculate a deviation charge must not exceed the sum of the MPC plus the MOS cost cap, and the minimum deviation price used to calculate a deviation payment must not be less than the sum of the MMP minus the MOS cost cap.

4. Any settlement shortfall charge or settlement surplus payment that occurs should be allocated to trading participants on the basis of their share of deviations.

Statutory review

The Commission has decided to not amend the NGR to remove the statutory requirement on AEMO to undertake a review of the STTM (rule 489). The deletion of the rule is not necessary for, or consequential to, the request to make a rule. While the Commission acknowledges that the obligation under rule 489 is now spent and the provision is now redundant after the completion of the STTM review in March 2012, the Commission considers it is more appropriate to pursue this NGR amendment through the next Minor Change rule, in which the AEMC undertakes to correct minor errors and make non-material changes to the NGR.

3.3 High level principles

In determining whether to include principles in the draft (more preferable) rule, the Commission has considered the appropriate role for each regulatory instrument, NGR and the Procedures, within the current energy market governance framework.

The Commission has considered this issue previously and in various contexts.[30]

The Explanatory Material on the Draft Short Term Trading Market Rules provides a high level policy context as to the appropriate division of matters between the NGR and the Procedures for gas market arrangements:[31]

> "Under the conceptual framework for the STTM legislation the NGL will deal with a limited number of high level features of the regime, the NGR will contain the detail of the market operation and the STTM procedures will include the more detailed process requirements involved in NGR obligations and address lower level technical and administrative matters"

The following table elaborates on these principles as outlined in the Explanatory Material.[32]

30 See AEMC, *Economic regulation of transmission services*, final rule determination, November 2006; AEMC, *Short Term Trading Market - Market Schedule Variation*, final rule determination, October 2011; and AEMC, *Market Service Operator – Timing and Eligibility*, draft determination, 28 February 2013.

31 See *Explanatory Material on the Draft Short Term Trading Market Rules,* 2009, page 2.

32 See *Explanatory Material on the Draft Short Term Trading Market Rules,* 2009, page 2.

Figure 3.1 STTM regulatory frameworks

Instrument	Responsibility	Subject Matter
National Gas Law	Enacted by SA Parliament, as the lead legislator. Application Acts govern the extent to which the national gas legislation applies in the relevant jurisdiction.	The STTM will be authorised under the NGL, which will make high level provisions for: • STTM establishment; • the functions of AEMO in relation to the STTM; and • liabilities of AEMO and other participants (where appropriate) in relation to the STTM.
National Gas Rules	Made initially by the South Australian Minister, subject to MCE endorsement. Future amendments to be made by the Australian Energy Market Commission, in accordance with the rule change procedures outlined in the NGL.	The rules for the STTM will be incorporated in the NGR and will deal with issues such as registration, market operations, balancing arrangements via MOS, contingency gas and settlements.
STTM Procedures	Made by AEMO, in accordance with the NGL/NGR.	STTM Procedures will cover more detailed technical and administrative matters. The initial STTM Procedures will be developed and made by AEMO under the NGL. AEMO will then be able to amend STTM Procedures in accordance with the consultation process in the NGR.

These issues were also previously discussed by the AEMO Implementation Steering Committee (ISC) in the context of the transfer of the jurisdictional gas market rules to the national regulatory framework in 2009. The AEMO ISC proposed that the Procedures are more appropriate where the purpose is to provide for the "technical and procedural detail supporting the [day to day] operation of the gas market.[33]

This issue was also reviewed by the Commission, in relation to the regulation of transmission services in the electricity market,[34] and by the Expert Panel on Energy Access Pricing in its report to the MCE on Energy.[35]

The Expert Panel considered that "the rules should address matters that have industry wide application or effects that are likely to change relatively infrequently over time and that do not rely on an assessment of individual market participant conditions or circumstances".

The Expert Panel also noted that in some circumstances it may be appropriate for the rules to avoid a high degree of prescription to allow regulators, for example, the ability to accommodate particular circumstances of individual market participants in regulatory decisions.

33 See Australian Energy Market Operator Establishment, *Legislative framework: statement of proposed approach*, August 2008.

34 See AEMC, *Economic regulation of transmission services*, final rule determination, November 2006.

Ultimately, the Expert Panel considered that these decisions are best made through the rule making process, which facilitates a full and transparent exchange of views and an approach tailored to meet the particular characteristics of each regulatory design issue.[36]

The Commission considered this advice when developing the principles and rules in relation to the Economic Regulation of Transmission Services rule change.

While these previous policy statements should be viewed in their context, they are nevertheless useful in informing the Commission's current assessment approach. Taking them into account, the NGR may be viewed as more appropriate than the Procedures where the regulatory obligations:[37]

- impose (or impact on the) substantive rights, obligations and duties on (of) participants;
- potentially have significant financial implications for trading participants;
- have a significant impact on the economic efficiency of the market and market design;
- have effects that are likely to change relatively infrequently over time and be subject to limited exceptions; and
- have industry wide application or impact.

In regard to this rule change request, the Commission considers that these principles provide a good framework for considering where an obligation should sit in the regulatory and institutional framework, consistent with the current governance arrangements.

At the same time however, each rule change request must be dealt with on a case by case basis and on its merits, for any particular circumstance that may apply. In addition, such principles should continue to be reviewed when necessary and in the context of a developing gas market.

It is noted that the Commission has previously considered the principles outlined in this section as part of the assessment process for past rule change requests, where the appropriateness of the regulatory instrument (NGR or Procedures) has been tested.[38]

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35 See Expert Panel on Energy Access Pricing 2006, *Report to the Ministerial Council on Energy*, April 2006.

36 Expert Panel on Energy Access Pricing 2006, *Report to the Ministerial Council on Energy*, April 2006, page 26.

37 This list is not exhaustive, and is derived from the discussion and principles set out separately by the AEMO ISC, as well as elements of the Expert Panel on Energy Access Pricing in its report to the Ministerial Council on Energy.

38 See AEMC, *Economic regulation of transmission services*, final rule determination, November 2006; AEMC, *Short Term Trading Market - Market Schedule Variation*, final rule determination, October

3.4 Application of high level principles

In the context of this rule change request, and taking into account the high level principles outlined above, the Commission considers that including principles to support a strengthened deviation pricing framework should be included in the NGR for the following reasons:

- Participation in the STTM by trading participants imposes certain obligations and liabilities with respect to MOS costs that are caused by deviations from their daily gas market schedule. The deviation pricing framework assists in clarifying the extent to which trading participants are required to fund the costs of MOS caused by their actions.
- Deviation prices financially impact on trading participants in the STTM. Therefore, the rules should contain a set of principles to guide AEMO's development of deviation prices to ensure that they meet economic efficiency objectives, and reduces the financial risks associated with participation in the STTM.
- The high level principles guiding the deviation pricing framework are unlikely to change frequently, and provide AEMO with sufficient flexibility to accommodate changing market conditions.
- Deviation pricing has the potential to impact on wider industry and the economy. For example, large industrial end-users may be impacted by deviation prices through their use of gas supplies and participation in the STTM.

3.5 Proposed rule

The Commission is proposing to make the draft (more preferable) rule, which largely adopts the rule change proposed by AEMO, with the exception of the following amendments:

- Principles and parameters are included and are intended to guide AEMO in developing a deviation pricing framework under the Procedures, for reasons discussed in section 3.2.
- Including a definition of "deviation price" which together with the above principles removes any impediments there may have been in the NGR from allowing deviation payments to be determined as negative amounts.
- Not making the proposed amendments to rule 405 on the basis that, in light of the above, they are not necessary.
- The draft (more preferable) rule does not seek to delete rule 489, which relates to AEMO's spent obligations to undertake a review of the STTM.

2011; and AEMC, *Market Service Operator – Timing and Eligibility*, draft determination, 28 February 2013.

4 Commission’s assessment approach

This chapter describes the assessment framework that the Commission has applied to assess the rule change request in accordance with the requirements set out in the NGL (explained in Chapter 2).

The matters outlined below are considered in greater detail in the following Chapters 5 and 6.

4.1 Consideration of counterfactual arguments

In assessing any rule change request against the NGL criteria, the first step is to consider the counterfactual arrangements against which the rule change is being compared. In the present case, the counterfactual arrangements are:

- Deviation payments and deviation charges do not adequately reflect whether they are costs or income to the market, and deviation payments cannot be negative. This means that where MOS results in a cost to the market, AEMO is unable to recover these costs directly from the trading participants that caused the need for MOS, and would instead be recovered from all trading participants through the monthly settlement shortfall process.

- The settlement surplus is capped at $0.14/GJ. This means that monthly settlement surpluses are redistributed to trading participants, after the cap has been reached, on the basis of their proportional share of withdrawals from the hub. The surplus cap is designed to maintain the incentive to accurately forecast gas schedules by not returning funds to deviating trading participants.

- Keeping the graduated deviation parameters in the NGR is likely to result in AEMO recovering insufficient funds from trading participants for their deviations on a gas day. This is likely to continue to result in a settlement shortfall of up to 80 per cent each month, and potentially expose trading participants to unanticipated costs through the monthly settlement shortfall process.

4.2 Application of high level principles

The Commission has also considered the following relevant matters as they relate to the rule change request:

- the extent to which the proposed changes to the deviation pricing framework impact on the efficient operation of the market, and use of gas services in the STTM;

- the extent to which enhancing causer pays as a principle for inclusion in the NGR will lower barriers to entry for trading participants;

- the extent to which price certainty and clarity regarding deviation pricing lowers the financial risks of participating in the STTM for trading participants; and
- whether the proposed rule is consistent with the principles of good regulatory practice.

5 Efficient operation of the STTM

5.1 Rule proponent's view

AEMO has proposed a number of amendments to the NGR to correct the misalignment between the cost of MOS and the price paid or charged for deviations causing MOS. The proposed amendments to the NGR would also facilitate AEMO to undertake a broader set of changes to the Procedures. Proposed changes to the NGR include:

- amending the definitions of the MMP, MPC, deviation charge and deviation payment;
- deleting the settlement surplus cap; and
- deleting the graduated deviation parameters.

The proposed amendments are intended to strengthen the causer pays principle in the deviation pricing framework. According to AEMO, enhancing the causer pays principle should broadly result in a reduction in the financial risks associated with participating in the STTM.

Overall, AEMO anticipates that the proposed changes will reduce deviation pricing uncertainty in the STTM, providing stronger price signals and incentives in the market. AEMO considers that these changes will promote the efficient use of natural gas services. It is anticipated that these changes, if made, are likely to result in the more efficient operation of the STTM.

5.2 Stakeholder views

Stanwell Corporation

Stanwell Corporation (Stanwell) was generally supportive of AEMO's proposal to strengthen the causer pays principles supporting the deviation pricing framework.[39]

Stanwell considered that the causer pays principle would be most effective where there was also a corresponding change to the MOS period from three monthly to daily.[40] According to Stanwell, a daily MOS period would strengthen trading participants' accurately forecasting gas schedules, and allow them to better manage their gas requirements on a daily basis, and therefore potential deviations from their daily gas market schedules.

Stanwell supported the proposal to remove the settlement surplus cap, only if the MOS period was reduced to a daily period. According to Stanwell, forecasts provided by

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39 See AEMC website, Stanwell Corporation, consultation paper submission, page 1.

40 The MOS period is the subject of another rule change request currently under consideration by the AEMC. See *Market Service Operator – Timing and Eligibility,* draft determination, GRC0016, 28 February 2013, available on the AEMC website.

trading participants are undertaken in good faith, as per the NGR provision, and until such time as daily MOS is adopted, there is merit in maintaining the settlement surplus cap to ensure that the incentive on trading participants to accurately forecast gas schedules is not diminished.[41]

Stanwell did not object to amendments to the definition of MMP, MPC, deviation payments and deviation charges as proposed by AEMO.[42]

Alinta Energy

Alinta Energy (Alinta) considers that AEMO's rule change proposal will be effective in better facilitating causer pays in relation to MOS costs in the STTM. Alinta supports the removal of the settlement surplus cap so that any over-recovery of funds from deviating trading participants can be distributed back to those trading participants, as opposed to trading participants based on their proportional share of withdrawals from the hub.[43]

Alinta also supported AEMO's proposed amendments in relation to the definition of MMP, MPC, deviation charges and deviation payments. Specifically, Alinta considered that the proposed amendments are required to better enable the alignment of causer pays, and in particular, to enable negative deviation pricing to occur. However, on this issue, Alinta considered that the potential liabilities faced by trading participants should be bounded by the MPC and MMP via an explicit connection to MOS (this issue is addressed in greater detail in the next chapter regarding the removal of the graduated deviation parameters and the proposal to include high level principles and parameters).[44]

Origin Energy

Origin Energy (Origin) strongly supported AEMO's rule change request to strengthen the causer pays in the STTM.[45]

EnergyAustralia

EnergyAustralia supported all aspects of AEMO's rule change proposal and considered it a positive development. However, they also noted that there might be other ways in which deviation pricing design might be altered to simplify it and improve its efficiency.[46]

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41 See AEMC website, Stanwell Corporation, consultation paper submission, page 2.

42 See AEMC website, Stanwell Corporation, consultation paper submission, page 3.

43 See AEMC website, Alinta Energy, consultation paper submission, page 2.

44 See AEMC website, Alinta Energy, consultation paper submission, page 2.

45 See AEMC website, Origin Energy, consultation paper submission, page 1.

46 See AEMC website, EnergyAustralia, consultation paper submission.

5.3 Commission's considerations

The Commission considers that the changes proposed by AEMO are likely to result in a strengthening of the causer pays principle that supports the deviation pricing framework. Primarily, this can be achieved by allowing negative long deviation payments, and for trading participants to pay AEMO for those negative long deviations.

The Commission has considered the extent to which changing the definition of MPC and MMP will help strengthen the causer pays principle. The amendments seek to remove any ambiguity that may arise whereby deviations are considered to form part of the natural gas that is traded at a hub.

Amending the definitions of MMP and MPC as proposed may provide greater clarity that they do not apply to deviation charges and deviation payments. However, there are broader implications that changing these definitions may impact on the operation of other parts of the NGR relating to the cumulative price threshold, the administered price cap and the administered price cap state.

To that extent, and to give clarity to the intent of the policy, the Commission has created a definition for “deviation price” and included principles and parameters for the calculation of deviation charges and deviation payments. Together, these amendments should provide clarity that the MPC and the MMP do not apply to deviation prices, thereby allowing negative long deviation payments.

The Commission considers that allowing negative long deviation payments should reduce the financial risks associated with participating in the STTM, as trading participants will be charged for their deviations on the gas day. The Commission also considers that determining deviation charges and deviation payments in this manner is more efficient and is likely to improve clarity and pricing certainty with regard to the costs associated with deviating from a daily gas market schedule.

The Commission considers that removing the settlement surplus cap from the NGR also has the potential to strengthen the causer pays principle. Removing the surplus cap would allow over-recovered MOS costs to be returned solely to the trading participants that paid deviation prices and funded the surplus in the first place, and not returned to all trading participants based on their share of withdrawals from the hub.

The Commission notes, however, that depending on the size of the settlement surplus, removing the settlement surplus cap may reduce the effect of the incentive on trading participants to not deviate and accurately forecast gas schedules. This is because the effective penalty for deviating will be lower. However, AEMO could still potentially include a settlement surplus cap through the Procedures process if, in its view, its removal was blunting the incentive to accurately forecast gas schedules. Potentially re-introducing the settlement surplus cap would need to be consistent with the proposed principles included in the draft (more preferable) rule.

The Commission agrees with AEMO that the proposed changes are likely to lead to improved efficiency in the STTM. This change to the arrangements will potentially enable trading participants to make more informed decisions regarding the value derived from a service (gas) against the market cost (MOS) of providing that service. This is particularly the case where enhancements to the causer pays principles result in improved pricing clarity and therefore better utilisation and investment in natural gas services.

6 Good regulatory practice

6.1 Rule Proponent's view

In their rule change request, AEMO propose deleting the graduated deviation parameters from the NGR. This is because, under their envisaged changes to the deviation pricing framework, which includes introducing average MOS costs as part of the calculation to determine deviation prices, the parameters would no longer be required.

According to AEMO, the graduated deviation parameters do not recover sufficient income to recover the costs of providing MOS. This results in recurring monthly settlement shortfalls, which must be recovered from trading participants.

According to AEMO, the graduated deviation parameters have the effect of discouraging trading participants from bringing extra gas to the market on a day when the market is likely to be short. Instead, the current approach encourages trading participants to rely on MOS to balance the market.

6.2 AEMC stakeholder consultation paper

At the commencement of this rule change, the AEMC published a consultation paper[47] outlining issues raised by the request. In the consultation paper, it was noted that the potential removal of the graduated deviation parameters would inadvertently result in the removal of the only reference in the NGR that governs how deviation charges and deviation payments are calculated. If rule 462 was to be deleted, as proposed by AEMO, then the NGR would simply provide that deviation payments and deviation charges are to be determined by AEMO for each gas day in accordance with the Procedures.

Given that the deviation pricing framework is an important aspect of the market's design, the AEMC proposed including a set of principles in the NGR to guide AEMO in the development of deviation charges and deviation payments. This approach was considered appropriate as the content of any Procedure change will only be determined after a separate Procedure change process.

On that basis, a set of principles were included for consultation (as outlined earlier in Box 3.1).

47 AEMC, *STTM deviation and the settlement surplus and shortfall*, consultation paper, 8 November 2012.

6.3 Stakeholder views

EnergyAustralia

EnergyAustralia did not provide any specific comment on the proposed set of principles for inclusion in the NGR.

Origin Energy

Origin Energy (Origin) considered that it would be good practice for the NGR to outline the high level policy directions in relation to the deviation pricing framework, and for the Procedures to provide technical specifics to give effect to those policy directions. To that extent, Origin considered it appropriate for the NGR to provide some guidance as to how AEMO develops its deviation pricing framework, while the Procedures detail how the deviation charges and deviation payments are calculated.[48]

Origin considered that the principles outlined in the consultation paper provided an appropriate level of guidance and limits for AEMO to develop a deviation pricing framework in line with its proposed market design change.[49]

Origin raised concern in their submission regarding the overlap between the AEMC and AEMO's consultation processes for this rule change, specifically, applying to the Procedure change process from AEMO. Origin suggested that stakeholders should have sufficient opportunity to assess AEMO's Procedure change proposal prior to the close of submissions to the AEMC's draft rule determination. Origin considered that overlapping the two consultation processes is particularly important as it allows stakeholders to properly assess the AEMC's proposed principles in conjunction with the changes proposed by AEMO, to determine whether the principles provide sufficient guidance, or require further amendment.[50]

Stanwell Corporation

Stanwell Corporation (Stanwell) generally supported removing the graduate deviation parameters from the NGR. Stanwell considered that implementation of a causer pays approach, as proposed by AEMO, negates the need for these parameters.[51]

Alinta Energy

Alinta Energy (Alinta) supported the inclusion of principles regarding deviation pricing. However, Alinta considered that the wording in the NGR should be clear such that AEMO must not make a determination which is inconsistent with these principles.[52]

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48 See AEMC website, Origin Energy, consultation paper submission, page 2.

49 See AEMC website, Origin Energy, consultation paper submission, page 2.

50 See AEMC website, Origin Energy, consultation paper submission, page 3.

51 See AEMC website, Stanwell Corporation, consultation paper submission, page 2.

52 See AEMC website, Alinta Energy, consultation paper submission, page 2.

Also, as noted in the previous chapter, Alinta considered that the principles should be explicit in limiting the liabilities faced by trading participants with regard to AEMO calculating deviation charges and deviation payments:[53]

> "As such, whether a separate floor and cap is needed for deviation pricing seems less relevant than is there safeguards in the rules that ensure participants are not exposed to unlimited liability. In this instance, it would appear that the boundaries for deviation charges would rely on the Market Operator Service pricing parameters. This may be appropriate and if so, there is a view it should be specifically bounded as such via an explicitly connection to Market Operator Service."

6.4 Commission's view

The Commission considers that it is appropriate for the NGR to contain a set of principles and parameters to guide AEMO's development of deviation payments and deviation prices. The principles and parameters appropriately balance incentives for accurately forecasting gas schedules with the financial risks of participating in the STTM. This is enabled by the draft (more preferable) rule, which provides greater flexibility to design a deviation pricing framework that strengthens the causer pays principle.

The Commission notes that stakeholders are generally supportive of including high level principles in the NGR to guide AEMO's development of deviation charges and deviation payments.

The Commission has also considered the issues raised by Alinta with regard to limiting the liabilities of trading participants. The Commission notes that, although unlikely, it is possible that a situation may arise whereby deviation charges and deviation payments are not determined on the basis of average MOS costs (as envisaged by AEMO), or in relation to the various gas prices in the market (ex ante, imbalance, contingency gas price and so forth). Further, each of these gas prices is limited by the NGR which, in turn, limits the prudential exposure of trading participants.

On this basis, the Commission has decided for reasons of good regulatory practice to include additional principles and parameters to limit the liability of trading participants. The principles and parameters require that deviation charges and deviation payments cannot be higher than the MPC plus the MOS cost cap, and not less than the MMP minus the MOS cost cap.

If an administered price cap state applies (for example, for reasons relating to material involuntary curtailment), then deviation charges and deviation payments are similarly limited by the administered price cap, and the ex ante market price for that gas day.

The deviation pricing principles and parameters outlined in this draft rule determination and included in the draft (more preferable) rule, should provide AEMO

53 See AEMC website, Alinta Energy, consultation paper submission, page 3.

with the flexibility to undertake changes, more immediately and into the future, that further enhance the deviation pricing framework.

Abbreviations

AEMC, or Commission	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
ISC	Implementation Steering Committee
MCE	Ministerial Council on Energy
MMP	Minimum Market Price
MOS	Market Operator Services
MPC	Market Price Cap
MSV	Market Schedule Variations
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
STTM	Short Term Trading Market

A Summary of issues raised in submissions

Stakeholder	Issue	AEMC Response
Alinta Energy (Alinta)	AEMO's Procedures should be consistent, and never inconsistent, with the proposed principles and intent of the NGR.	The Commission notes this point.
Alinta	Where a matter is removed from the NGR in favour of AEMO Procedures the NGR should contain principles which limit the judgement of AEMO, and not allow matters which conflict with the intent of the change or for the reintroduction of matters not contained in the NGR.	The Commission notes this point.
Alinta	Removal of the settlement surplus cap is supported by Alinta.	The Commission notes this point.
Alinta	Supports the inclusion of principles regarding deviation pricing and supports, but suggests change to wording such that "AEMO must not make a determination which is inconsistent with the listed principles".	The Commission notes this point. The draft (more preferable) rule provides specific guidance as to how AEMO should apply the proposed principles supporting the deviation pricing framework.
Alinta	Does not believe long deviations are as problematic as short deviations. By introducing average MOS costs the penalty seems quite severe for a trading participant who is also unlikely to be deriving benefits from the MOS stack and may also be exposed to counter-acting MOS charges.	The Commission notes this point.
Alinta	Supports the amendments to better align "cost to cause", and in particular, to enable negative deviation pricing to occur.	The Commission notes this point.
Alinta	The boundaries for deviation charges would rely on the MOS pricing parameters, and should be specifically bounded via an explicit connection to MOS.	The Commission notes this point and has amended the principles to reflect the limited liability of trading participants with regard to deviation payments and deviation charges.

Stakeholder	Issue	AEMC Response
EnergyAustralia	Supports the removal of the settlement surplus cap.	The Commission notes this point.
EnergyAustralia	Supports the removal of the graduated deviation parameters.	The Commission notes this point.
EnergyAustralia	Supports the rule change as submitted by AEMO.	The Commission notes this point.
Origin Energy (Origin)	Strongly supports the principle of the rule change proposal to strengthen "cost to cause" in the STTM.	The Commission agrees with this point.
Origin	The proposed market design change goes a significant way to reduce deviation pricing uncertainty in the STTM.	The Commission agrees with this point.
Origin	Consider it to be good practice for the NGR to outline the high level policy directions and the Procedures to provide the technical specifics to give effect to those policy directions.	The Commission agrees with this point.
Origin	AEMC's proposed principles provide appropriate guidance and limits for AEMO to develop a deviation pricing structure in line with its proposed market design change.	The Commission agrees with this point.
Origin	Considers that the MOS service payment should be valued at the marginal clearing price rather than the pay – as – bid price.	The Commission notes this point, and considers it beyond the scope of this rule change request.
Origin	Recommends the NGR is amended to introduce an ability to review and resettle price outcomes in the event that there are large deviations or scheduled MOS due to non-market factors.	The Commission notes this point, and considers it beyond the scope of this rule change request.
Origin	Considers it is appropriate for AEMO to wait until the publication of the AEMC's draft rule determination before it commences its own Procedures change consultation. By doing this, stakeholders can confirm whether there is an appropriate balance of prescription in the NGR around the detail in the	The Commission notes this point.

Stakeholder	Issue	AEMC Response
	Procedures.	
Stanwell Corporation (Stanwell)	Supports a "cost to cause" concept for deviation pricing in the STTM, provided there is a corresponding change to daily MOS.	The Commission notes this point.
Stanwell	Supports the removal of the settlement surplus cap, but only if there is also a change to a daily MOS period.	The Commission notes this point. The length of the MOS period is the subject of another AEMC rule change for which a draft determination was published on 28 February 2013. See the AEMC website for *Market Operator Service - Eligibility and Timing*, draft rule determination.
Stanwell	A change in forecast by a market participant in and of itself does not demonstrate forecasting inaccuracy or a lack of compliance with the good faith provisions of the NGR.	The Commission notes this point.
Stanwell	Has no objection to amendments to the definition of the MMP, MPC and deviation payments and charges as proposed by AEMO.	The Commission notes this point.
Stanwell	Successful implementation of "cost to cause" will only be achieved through a related move to daily MOS to provide market participants with sufficient flexibility to manage their daily MOS requirements.	The Commission notes this point. The length of the MOS period is the subject of another AEMC rule change for which a draft determination was published on 28 February 2013. See the AEMC website for *Market Operator Service - Eligibility and Timing*, draft rule determination.
Stanwell	An area for consideration in the future may be the potential removal of the ex post imbalance price as a mechanism for determining deviation pricing in the future.	The Commission notes this point.