AEMC

RULE

Australian Energy Market Commission

RULE DETERMINATION

NATIONAL GAS AMENDMENT (DWGM INTERIM LNG STORAGE MEASURES) RULE 2022

PROPONENT

Victorian Minister for Energy, Environment and Climate Action

15 DECEMBER 2022

INQUIRIES

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CITATION

AEMC, DWGM interim LNG storage measures, Rule determination, 15 December 2022

ABOUT THE AEMC

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

SUMMARY

1 The Australian Energy Market Commission (AEMC) has made a rule that will enable the Victorian gas market operator to better respond to and manage the risk of curtailment for gas users that may arise due to the tight demand-supply conditions expected from 2023 to 2025.

2 This will be achieved through a more preferable final rule (final rule) that amends the National Gas Rules (NGR) to:

- require the Australian Energy Market Operator (AEMO) to act as both buyer and supplier of last resort in relation to the Dandenong liquefied natural gas (LNG) storage facility over 2023-2025
- set out the contractual, cost recovery, proceeds distribution, accountability and transparency arrangements that will apply to the buyer and supplier of last resort roles over this period.

3 The final rule is intended to reduce the risks to the safety, security and reliability of gas supply in Victoria and support the efficient operation of the declared wholesale gas market (DWGM) over 2023-2025.

4 It is intended to do so by allowing AEMO to manage threats to system security in the DWGM more effectively through the use of the Dandenong LNG facility over this period even if market participants do not contract for LNG capacity themselves.

5 The final rule will be in operation from 2023 to 2025 while the Energy Ministers' gas market supply adequacy and reliability reform program is undertaken.[1]

Features of the final rule

6 As with the proposed rule, the final rule provides for AEMO to act as both buyer and supplier of last resort for the Dandenong LNG facility over 2023-2025. It also sets out:

- the contractual arrangements to be put in place between AEMO and the LNG storage provider to support AEMO's roles as buyer and supplier of last resort
- how the costs AEMO incurs as buyer and supplier of last resort are to be recovered from market participants and how any proceeds it generates are to be distributed
- the accountability and transparency measures that will apply to AEMO in its capacity as buyer and supplier of last resort.

1 Energy Ministers, *Priority reforms for a more secure, resilient and flexible east coast gas market*, August 2022.

7 However, the final rule differs in some details from the proposed rule to better achieve the objectives of the rule change request. The key features of the final rule can be summarised as:

- **Buyer of last resort:** as a buyer of last resort, AEMO will be required to do the following:
  - **Storage capacity:** AEMO must procure all the uncontracted capacity (excluding operational and non-market LNG storage) available for winter on 1 March and may procure additional uncontracted winter capacity if it becomes available after this date. The storage capacity procured by AEMO will form part of its LNG reserve.
  - **LNG stock:** AEMO must purchase gas with the objective of achieving a target level of LNG stock by the beginning of winter. The target level, which is measured by reference to AEMO's contracted capacity, is the highest level reasonably possible or such lower amount determined by AEMO and approved by the Victorian Minister. AEMO will be able to determine whether to refill its LNG reserve at other times of the year, having regard to forecast market conditions and whether it is reasonably necessary to mitigate the risk of potential threats to system security.
  - **Capacity relinquishments**: AEMO must relinquish capacity to the LNG storage provider if it is required to satisfy a request by a market participant (unless it would result in AEMO breaching its safety plan or legislative/regulatory obligations). It may also transfer LNG stock to the market participant that acquires the relinquished capacity using the pricing methodology specified in the new *LNG reserve procedures*.
- **Supplier of last resort:** as a supplier of last resort, AEMO will be subject to the following:
  - **Use of the LNG reserve:** consistent with the existing power in rule 343(1) of the NGR, AEMO will be able to inject gas from its LNG reserve if it reasonably considers a threat to system security (i.e. a threat to supply, public safety, gas quality, system pressures and flows) is unlikely to subside without intervention.
  - **Supply from LNG reserve:** AEMO will be able to inject gas from its LNG reserve by including it in the operating schedule and, where applicable, pricing schedule at a price equal to the value of lost load, subject to a number of supplier of last resort provisions in the rules. AEMO will also be able to inject the gas using any other means available to it (e.g. by directing it in).
  - **LNG stock disposals:** AEMO will also be able to dispose of LNG stock where it has a contractual or regulatory obligation to do so. In such cases, AEMO will be required to include the LNG stock in an applicable pricing and operating schedule at a bid price of zero and, to the extent reasonably possible, schedule it in a manner that minimises any impacts on the market reasonably foreseeable to AEMO.
- **Contractual arrangements:** AEMO and the LNG storage provider will be required to have an LNG storage agreement in place at all times between 2023 and 2025.
  - The storage agreement must:
    - allow AEMO to perform its new roles in the manner set out in the rules (including procuring uncontracted storage capacity and relinquishing capacity)

  - must otherwise be on substantially the same terms as the 2022 agreement between AEMO and the LNG storage provider, subject to variations that:
    - are reasonably necessary for the LNG storage facility's safe and reliable operation
    - give effect to terms of the 2022 LNG storage agreement providing for variation in specified circumstances or applying specified methodologies
- If the parties are unable to reach an agreement by 1 February 2023, they will be able to refer the dispute to arbitration by notice to the Australian Energy Regulator. The arbitrator will be able to make an interim determination that will apply until the final determination is made.

- **Cost recovery and treatment of proceeds:** AEMO will be required to recover the costs it incurs and distribute any proceeds that it generates through the buyer and supplier of last resort roles on a monthly basis through a new cost recovery-proceeds distribution mechanism. Under this new mechanism, costs and proceeds will be allocated to market participants using a fixed allocation factor, which will be based on the market participant's share of actual withdrawals in the prior financial year.
- **Accountability and transparency:** to provide transparency and accountability of AEMO's actions as buyer and supplier of last resort, AEMO will be required to:
  - publish any liquefaction schedules agreed with the LNG storage provider and material updates
  - publish a report by 1 May and 1 November each year that sets out a range of information on its buyer and supplier of last resort activities.
- These reporting requirements are in addition to the existing threat to system security and post-intervention reporting requirements that AEMO will be required to comply with when acting as supplier of last resort from the Dandenong LNG facility.

Benefits of the final rule

8 The AEMC is satisfied that the final rule should contribute to the achievement of the national gas objective by improving the safety, security and reliability of the supply of gas to Victorian consumers through:

- enabling the Dandenong LNG facility to be used more effectively by AEMO to mitigate risks to system security
- supporting the efficient operation of the DWGM.

The first of these benefits will be of particular importance over the term of the rule given the projected risk of peak day supply shortfalls, with the ability of AEMO's LNG reserve to act as an insurance policy that can be drawn upon if these shortfalls or other threats to system security arise.

9 The final rule is consistent with the intent of the rule change request, but reflecting the extensive stakeholder feedback, provides for:

- a more targeted, fit for purpose and proportionate buyer and supplier of last resort framework for the Dandenong LNG facility
- a greater degree of transparency and accountability of AEMO's actions as buyer and supplier of last resort
- additional steps to mitigate the risk that AEMO's new roles will crowd out market participants or otherwise affect their incentive to use the Dandenong LNG facility.

Commencement and operation of the final rule

10 The final rule commences on 15 December 2022. Before AEMO can commence its buyer and supplier of last resort roles:

- the LNG storage provider and AEMO will need to negotiate the LNG storage agreement and agree to a liquefaction schedule that enables AEMO to start filling its LNG reserve by 1 March 2023, or earlier if agreed by the parties
- AEMO will need to develop the *LNG reserve procedures* and update its gas scheduling procedures, which must be completed by 1 March 2023.

11 AEMO will be able to perform the buyer and supplier of last resort roles until the end of 2025, at which point these roles will cease. To facilitate the efficient transition from these roles, the LNG disposal, cost recovery-proceeds distribution and transparency provisions will remain in effect until mid-2026. At the end of this period, the final rule will cease to operate.

Background

12 On 8 August 2022, the Victorian Minister for Energy, Environment and Climate Action (Victorian Minister) submitted a rule change request to the AEMC.[2]

13 The rule change request is a priority action agreed to by Energy Ministers. It is intended to enable AEMO to manage peak day supply shortfalls in Victoria more effectively over 2023-2025 by allowing it to act as buyer and supplier of last resort for the Dandenong LNG facility.

14 The Victorian Minister asked that the rule change request be considered using an expedited process on the basis that it is an 'urgent rule' under the National Gas Law.

15 In doing so, the Minister stated that the arrangements currently applying to the Dandenong LNG facility are not providing market participants with sufficient incentive to hold LNG stock.

16 When coupled with the risk that Victoria could experience peak day supply shortfalls and reduced system resilience between 2023 and 2025, the Minister stated that these arrangements are posing an imminent threat to supply of gas in Victoria and the DWGM's effective operation.

2 Victorian Minister for Energy, Environment and Climate Action, *Rule Change Proposal — Enhanced Utilisation of the Dandenong LNG facility* (rule change request), 8 August 2022.

CONTENTS

1 VICTORIAN MINISTER'S RULE CHANGE REQUEST

1.1 The rule change request

On 8 August 2022, the Victorian Minister for Energy, Environment and Climate Action (Victorian Minister or proponent) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) and asked the Commission to consider it as an urgent rule under the National Gas Law (NGL).[3]

The rule change request is one of the priority actions agreed to by Energy Ministers on 8 June 2022 and is intended to reduce the risks to system security and public safety and improve the reliability of supply in Victoria between winter 2023 and 2025.[4]

It is intended to do this by amending the National Gas Rules (NGR) to require the Australian Energy Market Operator (AEMO) to act as both buyer and supplier of last resort in relation to the Dandenong liquefied natural gas (LNG) storage facility over this period (see Box 1 for information about this facility).[5]

These amendments were reflected in the proposed rule that accompanied the rule change request, which also sets out the contractual, cost recovery, accountability and transparency arrangements that would apply to these new roles.

The proposed rule is described in the rule change request as an interim measure that aims to reduce the risks under the current arrangements while work is undertaken on longer term security of supply and reliability reforms.[6]

3 Victorian Minister for Energy, Environment and Climate Action, *Rule Change Proposal — Enhanced Utilisation of the Dandenong LNG facility* (rule change request), 8 August 2022.

4 Rule change request, pp. 1-2; Energy Ministers, *Meeting communique*, 8 June 2022.

5 Rule change request, pp. 11-16.

6 Rule change request, p. 2.

BOX 1: ROLE AND USE OF THE DANDENONG LNG FACILITY

The Dandenong LNG facility is owned by APA Group (APA), which is also the owner of the Victorian Declared Transmission System (DTS). It is located in close proximity to Melbourne, which accounts for approximately 70 per cent of peak demand in Victoria.[a]

The facility is used to store LNG, which can be vaporised and injected quickly into the DTS to help alleviate short-term peaks in demand and threats to system security in the Victorian declared wholesale gas market (DWGM).

It can also be used in the management of a safe system shutdown, which may be required if a major supply disruption occurs and parts of the DTS have to be shut down to maintain system integrity and manage the risks to public safety.

The Dandenong LNG facility is currently the only facility in the DWGM that can address the risk of pipeline pressure breaches and associated safety risks in a timely manner. It has been used in this capacity during a number of major supply disruptions in Victoria, including the 1998 and 2016 Longford outages.[b] This is because it can take a number of hours to transport gas from other sources (including the Iona Underground Storage facility) to Melbourne.

The Dandenong LNG facility can be used to store approximately 680 TJ of LNG in total. However, APA has advised that it requires approximately 79 TJ for operational and tank integrity purposes.[c]

The Dandenong LNG facility's vaporisation rate (required to inject LNG into the DTS as gas) is quite high at around 237 TJ/day. However, the opposite flow, the liquefaction rate (sometimes referred to as the refill rate), is a lot lower, with estimates ranging from 5.6 TJ/day — 8.2 TJ/day.[d] The difference between the vaporisation and liquefaction rates means it takes considerably more time to fill the tank than it does to empty the tank.

This feature of the facility has important implications for how it is used throughout the year. It is not, for instance, continuously drawn down and refilled throughout winter. Nor is all the stock disposed of at the end of winter as highlighted in Figure 1.1.

Source: AEMC.

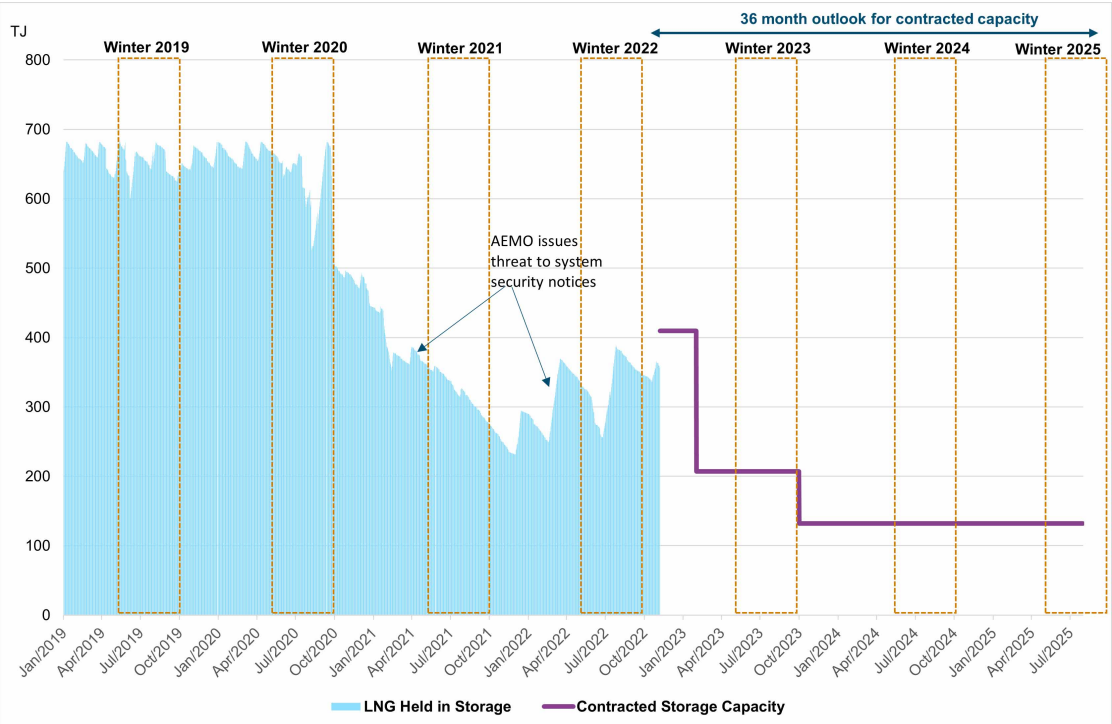
Note: a. Rule change request, p. 4.
b. ibid.
c. APA, correspondence with AEMC via email, 25 November 2022.
d. The nameplate rating reported on the Bulletin Board is 8.2 TJ/day. APA's website refers to 5.6 TJ/day (see https://www.apa.com.au/our-services/gas-transmission/gas-storage/dandenong-lng-gas-storage-facility/)

1.2 Rationale for the rule change request

The key concern raised in the rule change request is that the arrangements currently applying to the Dandenong LNG facility (see appendix F) are not providing for the effective use of the facility. In the Victorian Minister's view, this poses a significant risk to system security, safety and reliability of supply in Victoria and to the effective operation of the DWGM.[7]

Elaborating further on this, the proponent noted that the stock of LNG held in the Dandenong LNG facility has fallen significantly since 2019 and the market has failed to adequately respond to the threat to system security notices issued by AEMO (see Figure 1.1). This has resulted in the LNG stock reaching 'hazardously' low levels going into winter 2021 and 2022.[8]

Figure 1.1: Dandenong LNG facility capacity and outlook



Source: Gas Bulletin Board (actuals + 36-month outlook), accessed November 2022.

According to the proponent, if this trend continues into 2023 when the supply-demand balance is expected to tighten (see Box 2), it will pose a significant risk to the DWGM. AEMO modelling suggests a 15-35 per cent probability of curtailment in 2023 if the same level of LNG stock held at the start of winter 2022 is held at the start of winter 2023.[9]

7 Rule change request, pp. 1-2.
8 ibid, pp. 7-9.
9 ibid, p. 9.

The need for sufficient LNG stock to manage operational, reliability and emergency requirements is expected to continue through 2025, as production from legacy gas fields in Victoria declines and planned outages at the Longford gas plant occur.[10]

The proponent noted that the NGR may be contributing to the ineffective use of the Dandenong LNG facility because, while it is clear that AEMO can use the facility to fulfil its system security and safety roles, it is unclear whether it can do so for reliability purposes to mitigate against the risk of curtailment:[11]

> While AEMO can contract to fulfil its system security and safety roles, neither the current NGR nor Victorian legislation currently provide any certainty on whether, when and how AEMO is to procure, maintain and dispose of additional LNG stock from a declared LNG facility, in order to support reliability of supply and mitigate against the risk of curtailment.
>
> There is, for example, no formal reliability standard in place for gas and it will not be possible to implement any such standard by winter 2023. Both AEMO and market participants, and ultimately end users, would benefit from such certainty with regard to Dandenong LNG usage.
>
> …in view of the shifting context of the market, there is a strong case for AEMO's role in relation to Dandenong LNG storage to be strengthened considerably over the next few years and to better define its ability to hold, use and cost recover against any Dandenong LNG that is used to support the reliability of supply...
>
> This rule change request will allow time for a broader package of measures, including a gas reliability standard or equivalent, to be developed by supporting reliable supply over the intervening period in the context of a tightening supply-demand balance and reduced system resilience…

10 Rule change request, p. 9.

11 ibid, p. 10.

BOX 2: FORECAST MARKET CONDITIONS OVER 2023-2025

Estimates developed by AEMO as part of the latest *Victorian gas planning report* (VGPR) suggest that 60-66 per cent of the capacity of the Dandenong LNG facility will be required in winter 2023 for operational, reliability and emergency system shutdown purposes. Specifically, AEMO has estimated that approximately:

- 140 TJ will be required for emergency system shutdown purposes
- 266–310 TJ will be required to mitigate against the risk of customer curtailment, with 310 TJ being required if the commissioning of the western outer ring main on the DTS is delayed.

The amounts required in winter 2023 are significantly higher than those estimated for 2021 (110 TJ) and 2022 (128 TJ). This reflects an increased risk of curtailment that is expected to occur from 2023 as a result of a projected deterioration in the supply-demand balance and system resilience.

The projected deterioration in the supply-demand balance can be seen in the Australian Competition & Consumer Commission's (ACCC) July 2022 *Gas inquiry interim report*. The projections contained in this report indicate the potential for a 54 PJ shortfall in supply in the southern states (Victoria, NSW, SA, ACT and Tasmania) in 2023.

Longer-term forecasts published by the ACCC suggest that demand will continue to exceed supply in the southern states in 2024 and 2025, with the supply shortfall expected to increase each year unless new sources of supply are brought online.

The ACCC's projections are broadly consistent with AEMO's, with the March 2022 VGPR noting that peak day and seasonal adequacy risks are forecast to emerge in Victoria in 2023:

> The *2022 Gas statement of opportunities* (GSOO) forecasts that extreme gas demand (including gas generation) in severe cold weather may exceed the supply available in Victoria and NSW from winter 2023.
>
> Unplanned capacity reductions of production, storage or transmission facility capacity, higher gas generation demands than forecast due to coincident or prolonged coal-fired generator outages, or the delayed completion of the Western Outer Ring Main (WORM) project may result in insufficient peak day or seasonal supply capacity from 2023.
>
> There are no anticipated supply solutions that can be developed prior to winter 2023… In the absence of higher than forecast Longford gas production, options to mitigate the peak day shortfall risk are limited to demand response, including curtailment.

AEMO also pointed to the risks associated with an overall decline in system resilience in Victoria and noted that greater reliance would be placed on the Dandenong LNG facility to help alleviate threats to system security and emergencies.

The reduction in system resilience has largely been attributed to the Longford gas plant. In its recent *Gas supply and system adequacy risk* report, AEMO noted that the Longford production rate is expected to decline in the second quarter of 2023, but that if the decline occurs earlier, there will be less gas available to refill storage:

> …creating a potential risk of entering winter 2023 with low storage inventories. If this occurs, there could be very significant gas supply shortfalls in the southern states during 2023.

AEMO also noted in the VGPR that Esso had advised it that, as production declines and there is less redundancy, full plant outages will be required, with a one-day outage planned for late 2023 and a one-month outage planned for late 2025.

AEMO noted that these will be the first full plant planned outages of the Longford gas plant and that it will need to operate the DTS in an unprecedented manner during these outages.

Source: ACCC, *Gas inquiry interim report*, July 2022, pp. 17; 27; 45. AEMO, *Victorian gas planning report update*, March 2022, pp. 3; 11; 61-63; 78. *AEMO, Gas supply and system adequacy risks*, July 2022, p. 4.

Note: AEMO defined system resilience as the ability of the system to limit the extent, severity and duration of system degradation following an abnormal event.

1.3 Proposed solution in the rule change request

To address the issues outlined above, the proponent has proposed that Part 19 of the NGR be amended to implement the proposed rule, which would be in operation between 2023 and 2025. The proposed rule provides for AEMO to act as the:

- buyer of last resort of capacity in the Dandenong LNG facility and to purchase gas for storage as LNG with the objective of achieving and maintain LNG stock at the target level during each winter
- supplier of last resort in relation to the use of its LNG stock.

The proposed rule also sets out:

- the contractual arrangements to be put in place between AEMO and the LNG storage provider to support AEMO's roles as buyer and supplier of last resort
- how the costs AEMO incurs as buyer and supplier of last resort are to be recovered from market participants and how any proceeds it generates are to be distributed
- the accountability and transparency measures that would apply to AEMO in its capacity as buyer and supplier of last resort.

Figure 1.2 below provides an overview of the key elements of the proposed rule change.

Figure 1.2: Key elements of the proposed rule

<table>
<tr><td>AEMO as buyer of last resort</td><td colspan="2">Procurement of uncontracted storage capacity
AEMO must contract any uncontracted LNG storage capacity for winter that is available at the end of 15 March and may contract any additional uncontracted capacity that becomes available after.

Procurement of gas to fill LNG storage
AEMO must purchase gas for storage & vaporisation with objective of achieving and maintaining LNG stock at target level during winter.

Relinquishment to other market participants
• AEMO may relinquish storage capacity to LNG storage provider if a market participant acquires or proposes to acquire the capacity
• AEMO may transfer LNG stock to a market participant if that participant has acquired a right to store the stock in the LNG facility</td><td>Winter target level
LNG stock target level is:
• the highest level reasonably possible, or
• such other level determined by AEMO and approved by the Victorian Minister.</td></tr>
<tr><td>AEMO as supplier of last resort</td><td>Use of LNG reserve
AEMO may use LNG reserve at such times and quantities it considers reasonably necessary, or desirable, to ensure security of the DTS and satisfy operational requirements.

Procedures
The Gas scheduling procedures must set out the procedures relating to the use of the LNG reserve, which must give effect to the supplier of last resort principles</td><td colspan="2">Supplier of last resort principles
• AEMO’s LNG stock is to ordinarily be scheduled after other market participants
• AEMO’s injection bids from LNG reserve must be at VoLL (i.e. $800/GJ)</td></tr>
<tr><td>Contractual arrangements</td><td>Storage agreement requirements
LNG storage agreement must be in place at all times and allow AEMO to:
• contract uncontracted LNG storage capacity in periods of relevant year and to the extent AEMO considers necessary or convenient to satisfy its buyer of last resort obligations
• relinquish capacity if a market participant acquires or proposes to acquire capacity.</td><td colspan="2">Terms of LNG storage agreement
To be on substantially the same terms as AEMO’s winter 2022 agreement, except to the extent changes:
• are reasonably necessary to:
◦ give effect to changes necessary for the facility’s safe and reliable operation
◦ ensure consistency with relevant rules
• reflect changes in inflation
• give effect to changes of law.
LNG storage provider must negotiate in good faith and comply with offer requirements.</td></tr>
<tr><td></td><td colspan="3">Role of AER: AER could take enforcement action if storage agreement requirements not met.</td></tr>
<tr><td>Cost recovery & proceeds distribution</td><td colspan="3">AEMO to be able to recover:
• Costs of acquiring LNG storage capacity through Participant Fees
• Losses /proceeds from use of LNG reserve through linepack account</td></tr>
<tr><td>Accountability & transparency</td><td colspan="3">AEMO to publish information on:
• the amount of storage capacity it contracts
• any storage capacity it relinquishes and any LNG stock transferred</td></tr>
</table>

2 FINAL RULE DETERMINATION

2.1 The Commission's final rule determination

The Commission's final determination is to make a more preferable final rule. Consistent with the Victorian Minister's proposal, the more preferable final rule will require AEMO to act as both buyer and supplier of last resort in relation to the Dandenong LNG facility between 2023 and 2025.

A number of amendments have been made to the proposed rule to establish more targeted, fit for purpose and proportionate arrangements that will, or are likely to, better contribute to the national gas objective (NGO).

This chapter outlines:

- the rule making test for changes to the NGR
- the reasons for making this final determination and more preferable rule
- the impact assessment that has been carried out.

Further information on the legal requirements for making this final rule determination is set out in appendix G.

The assessment framework used in making this final determination is outlined in appendix E and discussed in more detail in the consultation paper on this rule change process.[12]

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 NGO.[13] The NGO is:[14]

> 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 rule. The reasons are set out in chapters of this final determination and outlined in this chapter.

12 AEMC, *DWGM interim LNG storage measures*, consultation paper, 1 September 2022, pp. 17-18.
13 Section 291(1) of the NGL.
14 Section 23 of the NGL.

2.3 Summary of reasons

In reaching its final determination, the Commission has considered whether a rule change is required and, if so, whether the proposed rule or a more preferable rule should be made. These decisions have been made using the NGO and assessment framework. Further detail on these considerations is included in the subsequent chapters of this final determination.

2.3.1 Is a rule change required?

To determine whether a rule change is required, the Commission has had regard to both:

- the asserted problem with the arrangements currently applying to the Dandenong LNG facility
- the viability of the options that could be used to address the identified problem.

What is the problem with the arrangements currently applying to Dandenong LNG?

The key concern raised in the rule change request is that the arrangements currently applying to the Dandenong LNG facility do not provide for its effective use and pose a significant risk to system security, safety and the reliability of supply in Victoria.

Elaborating on this further, the Victorian Minister stated that LNG stock had reached "hazardously" low levels in 2021 and 2022 and that if this continues into winter 2023 when the supply-demand balance is expected to further tighten and system resilience is expected to deteriorate, there is a 15-35 per cent probability of curtailment occurring in Victoria.[15]

As Figure 1.1 shows, the amount of LNG stock held in the Dandenong LNG facility has fallen by over 45 per cent between January 2020 and November 2022 (or 70 per cent if the 140 TJ AEMO contracted for safe system shut down in 2022 is excluded from the calculation). The scale of this reduction is significant and has, as the ACCC observed, coincided with both:[16]

- a change in the LNG storage provider's contracting model, which resulted in a movement away from users procuring storage capacity rights with pro-rata access to vaporisation, to users procuring firm vaporisation rights with an associated storage capacity right[17]
- a 44-46 per cent increase in the prices charged by the LNG storage provider.

From a threat to system security perspective, the impact of the change in the contracting model has been particularly pronounced. This is because, under the prior contracting model, which provided for pro-rata access to vaporisation, market participants had an incentive to hold more LNG stock than they required to increase the likelihood of their LNG being injected.

While this may not have been economically efficient, it did mean there was always sufficient LNG in the Dandenong LNG facility to potentially address threats to system security. Following the change in the contracting model, market participants no longer appear to have

15 Rule change request, pp. 7-9.

16 ACCC, *Gas inquiry interim report*, July 2022, p. 89.

17 ACCC, *Gas inquiry interim report*, July 2022, p. 89. The standard service appearing on APA's website provides for three units of storage for every unit of firm vaporisation. See https://www.apa.com.au/our-services/gas-transmission/gas-storage/dandenonglng-gas-storage-facility/

an incentive to hold more LNG stock than they require because they can secure firm vaporisation rights.

Market participants noted in bilateral discussions that in response to the change in contracting model and the increase in storage charges, they had either reduced their LNG holdings or decided not to re-contract with the LNG storage provider. In doing so, they noted there are more cost-effective pipeline and underground storage options available in Victoria. Market participants acknowledged these alternatives may not be a perfect substitute for Dandenong LNG, but they can be refilled more rapidly and therefore used on more occasions to manage a market participant's exposure.

While pipeline and underground storage do offer a number of benefits over Dandenong LNG, they are located some distance from Melbourne which is the main demand centre in Victoria. They cannot, therefore, be relied upon in the same way as the Dandenong LNG facility to address threats to system security at this key location in a timely manner.

As one stakeholder observed, there is a real question as to who should be responsible for holding LNG stock to manage these threats. That is, threats to supply, public safety, gas quality and system pressures and flows that could affect the normal operating state of the DTS. Under the prior Dandenong LNG contracting model, market participants implicitly took on this responsibility.

However, this is no longer the case, as reinforced by the lack of response by market participants to the two Dandenong LNG related threats to system security notices issued by AEMO in 2021 and 2022.[18] Therefore, it is relevant to consider where the responsibility for system-wide events should sit.

This is a key issue that is to be examined as part of the Energy Ministers' broader gas market reform program, which, among other things, will consider whether:[19]

- a reliability standard should be implemented, along with a retailer reliability obligation (RRO) and/or a reliability and emergency reserve trader (RERT) mechanism
- a third party access regime should be implemented for storage facilities.

Work on these potential policy reforms is expected to commence in 2023, with potential implementation in 2024-2025. While one option may be to wait until this reform program is complete, it is clear from the ACCC and AEMO's projections (see Box 2) that doing so could pose a significant risk to the system security, safety and reliability of supply in Victoria and the operation of the DWGM.

The Commission has considered whether there are any interim solutions that could be used to address the problems with the current arrangements, while work on the reform program is undertaken.

18 AEMO, *Notice of a threat to system security*, 29 March 2021; AEMO, *Notice of a threat to system security*, 29 March 2022.

19 AEMO, *Notice of a threat to system security*, 29 March 2021; AEMO, *Notice of a threat to system security*, 29 March 2022.

What are the options to address the problem?

The two options that have been identified through the consultation process are to accord AEMO responsibility for managing these threats between 2023 and 2025 by either:

1. relying on AEMO's existing powers under the NGR, which allow it to use its LNG reserve to address threats to system security but provide no other detail on how it is to use the LNG reserve (option 1: no rule change)
2. amending the NGR as proposed in the rule change request, to require AEMO to act as buyer and supplier of last resort in relation to the Dandenong LNG facility and to set out how it is to perform these roles over this period (option 2: rule change).

However, to decide that option 1 is preferable, and make no rule, the Commission is aware that, to date, AEMO has only viewed its existing powers as allowing it to hold 140 TJ for LNG for safe system shutdown as required by its gas safety case with Energy Safe Victoria.

This could potentially be addressed by clarifying that AEMO can use the LNG reserve for any threat to system security. However, on its own, this clarification is unlikely to be sufficient. This is because the existing rules do not provide AEMO or market participants with any guidance on:

- how AEMO is to procure storage capacity and gas and how it is to use the LNG reserve
- how AEMO it is to interact with the market when using its LNG reserve
- how costs are to be incurred and recovered
- the transparency and accountability arrangements applicable to AEMO's actions.

Therefore, there is a risk that selecting option 1 could operate to the detriment of consumers and the broader market. It could also crowd out market participants or further reduce their incentive to hold LNG stock in the Dandenong LNG facility because AEMO would just be contracting storage capacity in its own right with no obligation to relinquish capacity.

Given the nature of the risks associated with this option and the adverse effects these risks could have on consumers and the market if they materialise, the Commission does not consider option 1, the 'no rule change option' to be a viable option.

In contrast to option 1, option 2:

- Requires AEMO to act as buyer and supplier of last resort in relation to the Dandenong LNG facility, which would provide for more LNG stock to be held in the facility to manage threats to system security, while also mitigating the risk that AEMO crowds out market participants, or otherwise affects their incentive to hold LNG.
- Sets out the contractual, cost recovery, proceeds distribution, accountability and transparency arrangements that would apply to AEMO's buyer and supplier of last resort activities over this period, which will benefit consumers and the broader market.

In the Commission's view, option 2 provides benefits to Victorian gas consumers that option 1 does not and is consequently more likely to be consistent with the NGO. It has therefore decided to amend the NGR to enable AEMO to act as both buyer and supplier of last resort for the Dandenong LNG facility. Consistent with the Victorian Minister's request, these rules

will be in place for 2023-2025 while work on the Energy Ministers' gas market reform program is undertaken.

In making its decision, the Commission has considered two key alternative views held by some stakeholders. First, that the proposed rule would not address the underlying source of the problem (which many see as the LNG storage provider's market power).[20] Second, that the proposed rule could give rise to higher costs or other unintended consequences.[21]

On these points, the Commission notes that:

- the short-term nature of the final rule is intended to act as an interim arrangement until the Energy Ministers' gas reforms noted above are implemented
- many stakeholders supported AEMO acting as buyer and supplier of last resort while the reform program is undertaken
- the risks of demand-supply issues should be addressed as best as possible
- the potential costs and impacts of the final rule have been minimised where possible through the detailed design of the rule.

The specific form of the final rule is outlined below.

2.3.2 Should the proposed rule or a more preferable rule be made?

Having considered the rule change request and feedback provided by stakeholders on the proposed rule, the Commission has decided to make a more preferable rule.

Consistent with the rule change request, the more preferable rule is intended to reduce the risks that the current arrangements are posing to the safety, security and reliability of supply in Victoria and the operation of the DWGM by requiring AEMO to act as buyer and supplier of last resort for the Dandenong LNG facility. However, having considered the extensive feedback provided by stakeholders, the more preferable rule, differs from the proposed rule and provides for:

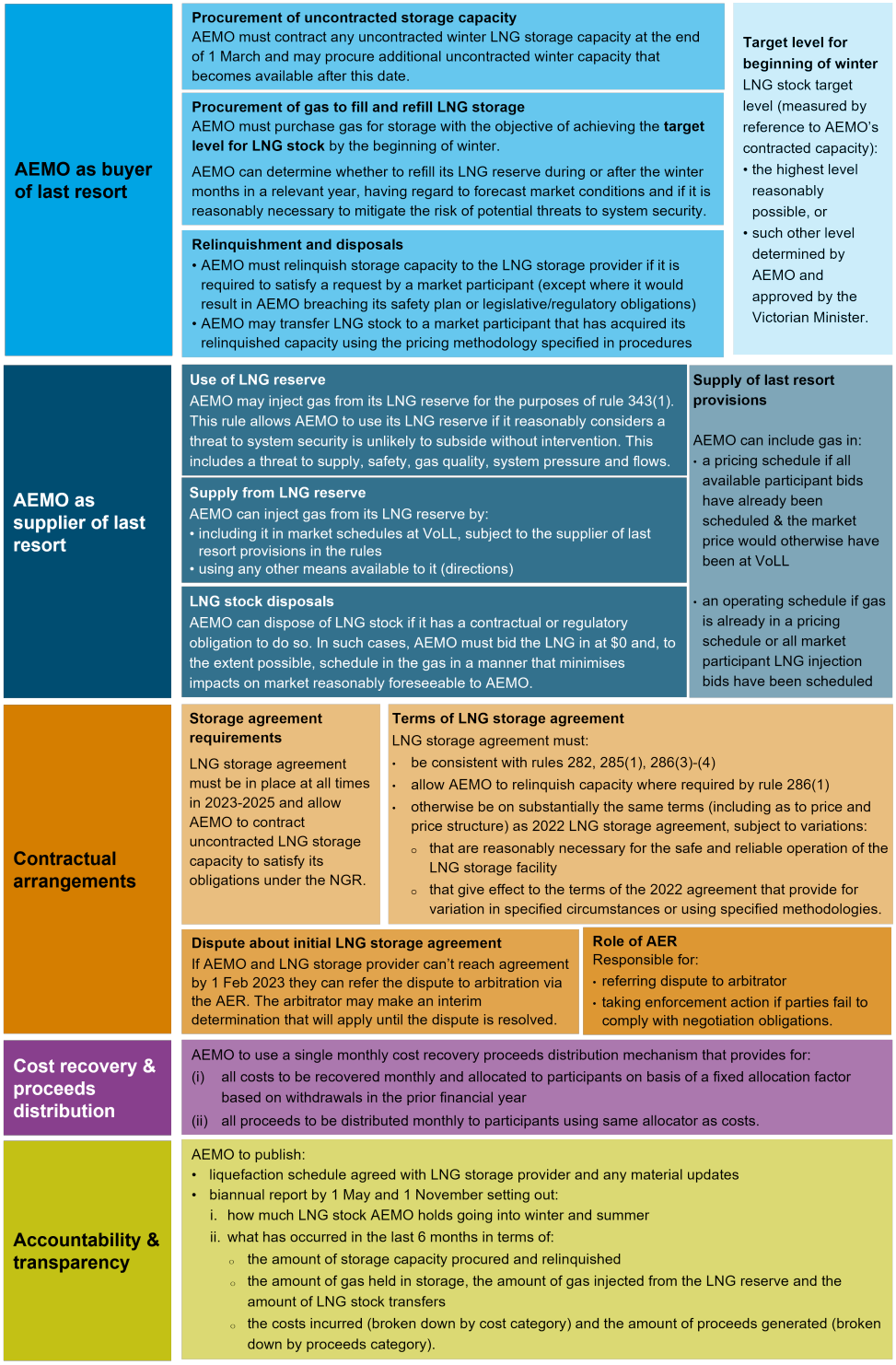
- a more targeted, fit for purpose and proportionate buyer and supplier of last resort framework for the Dandenong LNG facility
- a greater degree of transparency and accountability of AEMO's actions
- additional measures to mitigate the risk that market participants will be crowded out, or that their incentive to use the Dandenong facility will otherwise be affected.

The key features of the final rule are set out in Figure 2.1, while appendix A provides an overview of the key differences between the proposed rule and the more preferable rule.

20 Submissions to the consultation paper: ACCC, p. 3; Alinta, p. 1; Brickworks, p. 2; EnergyAustralia, p. 2. Similar views were also expressed in bilateral meetings with a number of market participants.

21 Submissions to the consultation paper: Private individual - Peter Dobney, p. 2; CSR, p. 1; Origin, p. 1.

Figure 2.1: Key features of the final rule



2.3.3 Will the more preferable rule promote the NGO?

Having regard to the assessment framework set out in appendix E, the Commission is satisfied that the more preferable rule will, or is likely to, contribute to the achievement of the NGO by:

- improving the safety, security and reliability of the supply of gas to Victorian consumers
- promoting economic efficiency by:
  - enabling the Dandenong LNG facility and the LNG stock contained therein to be used more efficiently
  - supporting the efficient operation of the DWGM
- embodying principles of good regulatory practice, including being:
  - targeted, fit for purpose and proportionate to the issues it is intended to address
  - providing for predictability, stability, transparency and accountability in the market and regulatory arrangements
- minimising the implementation and ongoing costs associated with the buyer and supplier of last resort roles
- supporting Energy Ministers' broader gas market reform program.

Improving the safety, security and reliability of supply of gas

The final rule is intended to improve the safety, security and reliability of supply in Victoria over the period 2023-2025 by allowing AEMO to more effectively manage threats to system security in the DWGM through its role as buyer and supplier of last resort for the Dandenong LNG facility.

As a number of stakeholders have observed, the Dandenong LNG facility is relatively small and has a relatively slow liquefaction rate. It cannot, therefore, be relied upon to eliminate all threats to system security that may arise in Victoria. It can, however, be used to address short-term imbalances between supply and demand.

The facility can also be used when there are more prolonged threats, supporting AEMO to resolve issues by 'buying time' until supply from other sources can be obtained, or, if required, by facilitating a safe system shutdown.

AEMO's use of the Dandenong LNG facility can therefore provide the benefit of helping to reduce the risk of curtailment and other threats to system security that could potentially arise in Victoria between 2023 and 2025 if, as projected, there is a shortfall in supply and system resilience continues to deteriorate (see Box 2).

Consistent with the NGO, the principal beneficiaries of any improvement in the safety, security and reliability of the supply of gas over this period will be Victorian gas users and consumers.

Promoting economic efficiency

The requirement for AEMO to act as both buyer and supplier of last resort over the period 2023-2025 is expected to provide the benefit of promoting economic efficiency by enabling the Dandenong LNG facility and the LNG stock held by AEMO to be used more efficiently over this period. Those aspects of the buyer and supplier of last resort roles that are expected to contribute to the efficient use of the Dandenong LNG facility and the LNG stock include:

- the requirement for AEMO to procure uncontracted capacity and sufficient gas to meet the target level going into winter, which together with the requirement for AEMO to determine whether to refill its LNG reserve having regard to forecast market conditions and potential threats, should result in more effective use of the facility to manage threats to system security
- the requirement for AEMO to relinquish capacity to the LNG storage provider if it is required to satisfy a request by a market participant, which should mitigate the risk that AEMO crowds out other more efficient uses of the facility
- the ability AEMO will have to transfer LNG stock where a market participant acquires its relinquished capacity, which should provide for the efficient use of the facility by avoiding unnecessary and inefficient withdrawals from and injections into the facility
- the clarification of the circumstances in which AEMO can act as a supplier of last resort and how it is to give effect to the supplier of last resort principles, which should mitigate the risk that AEMO's use of the facility crowds out market participants or otherwise affects their incentive to use the facility
- the ability AEMO will have, as supplier of last resort, to include gas from its LNG reserve into the market schedules at value of lost load (VoLL), which should provide for the efficient allocation of gas that is injected from the LNG reserve and provide market participants with a strong incentive to hold their own LNG stock.

As the latter points highlight, a number of steps have been taken to address the concerns that stakeholders have raised about the potential detrimental impact for AEMO to crowd out market participants, or otherwise affect their incentive to use the Dandenong LNG facility.

Together with the transparency and accountability measures, the Commission is satisfied that the final rule will not adversely affect the incentives market participants have to contract or use the Dandenong LNG facility. It is also satisfied that the final rule gives rise to an appropriate allocation of risks over the term of the rule.

In addition to promoting the efficient use of the Dandenong LNG facility, the final rule is expected to support the efficient operation of the DWGM. It is expected to do so by:

- allowing AEMO to better respond to threats to system security that could otherwise result in the curtailment of market participants, the market being suspended or having other adverse effects on the market
- providing more guidance on how AEMO is to interact with the market as buyer and supplier of last resort and more transparency of its actions, which will enable market participants to make more informed and efficient decisions.

Applying good regulatory practice principles

In developing the final rule, the Commission has taken a number of steps to establish a more targeted, fit for purpose and proportionate buyer and supplier of last resort framework. It has also aimed to provide predictability, stability, transparency and accountability in the market and regulatory arrangements. This is reflected in the Commission's decisions to:

- Improve the buyer of last resort arrangements, by:
  - providing more guidance in the rules on how AEMO is to carry out its buyer of last resort activities
  - only requiring the target level for AEMO's LNG stock to apply at the beginning of winter and allowing AEMO to determine if and when to refill its LNG reserve having regard to forecast market conditions and potential threats to system security
  - removing AEMO's discretion to relinquish storage capacity
  - requiring the LNG transfer pricing methodology to be specified in procedures
  - bringing forward the date for determining how much capacity AEMO is to procure and when it can commence filling in recognition of the technical limitations of the facility.
- Clarify the scope of the supplier of last resort arrangements, by:
  - setting out the circumstances in which AEMO can inject gas from its LNG reserve into the DWGM and otherwise dispose of its LNG stock
  - providing more guidance in the rules on how AEMO is to carry out its supplier of last resort activities, including how it is to interact with the market.
- Strengthen the LNG storage agreement rules, including by providing for the parties to have recourse to arbitration if they can't reach agreement.
- Simplify the cost recovery and proceeds distribution arrangements, by providing a single mechanism that will be used to recover all the costs and distribute all the proceeds associated with the buyer and supplier of last resort roles.
- Provide for greater transparency and accountability of AEMO's actions as buyer and supplier of last resort, by requiring more reporting on its activities.

Together these measures are expected to result in more robust and cost effective buyer and supplier of last resort arrangements, the benefits of which should flow through to Victorian consumers in the form of a smaller cost impact than would otherwise occur.

Minimising the implementation and ongoing costs

There will be costs associated with the implementation and ongoing operation of the final rule. These will be borne by AEMO in the first instance before being passed through to market participants and end users of gas.

To minimise the impact on end users, consideration has been given in the final rule to ways in which these costs can be limited or otherwise constrained. In particular:

- the AEMC has worked closely with AEMO to ensure the rule allows AEMO to use existing systems and procedures, where possible

- only requiring the target level for AEMO's LNG stock to apply at the beginning of winter and allowing AEMO to determine if and when to refill the LNG reserve having regard to market conditions and if it is reasonably necessary to manage threats to system security.

Recognising the Energy Ministers' gas reforms

In making the final rule the Commission has also acknowledged that the broader context includes the announced Energy Ministers' gas market reform program that will be developed and implemented over 2023-2025. The term of the final rule has been set with the understanding that the announced reform agenda will emerge. The final rule has been designed to address the immediate issues identified in the rule change request and by many stakeholders without limiting the options open to Energy Ministers for long-term reforms.

2.4 Impact assessment of the final rule

The final rule will have a regulatory impact over the term of the rule. The costs include both:

- The implementation costs, which include the costs AEMO will incur updating procedures, complying with reporting requirements, developing the cost recovery-proceeds distribution mechanism, and making other system changes.
- The buyer and supplier of last resort related costs, which include the costs of procuring the uncontracted storage capacity and the gas and liquefaction services required to fill the LNG reserve, as well as any ancillary charges AEMO incurs when using its LNG reserve. These costs may be offset to some extent by any proceeds AEMO receives from the injection of gas from its LNG reserve and/or transfer of its LNG stock.

These costs will be borne by AEMO in the first instance before being passed through to market participants and end users of gas.[22]

The principal benefit of the final rule is that it will enable AEMO to better manage the risk of curtailment and other threats to system security in Victoria over 2023-2025. As outlined in section 2.3.3, it will also yield some economic efficiency, consumer and market related benefits.[23]

While it is possible to quantify some of these costs and benefits, others can only be assessed qualitatively. Table 2.1 provides a summary of how each of the costs and benefits has been assessed and for those that can be quantified, includes the estimated cost or benefit. Further detail on these estimates can be found in appendix B.

22 The LNG storage provider and market participants may also incur some incremental costs in understanding how the new rule will operate, but these costs are not expected to be material. The LNG storage provider may also incur some costs in negotiating a new contract with AEMO. However, given the LNG storage provider's current contract with AEMO is due to expire in January 2023 and AEMO still needs to contract 140 TJ for safe system shutdown, the incremental costs associated with the rule change are not expected to be material.

23 The transparency measures should, for example, allow market participants to make more informed and efficient decisions about their potential use of the Dandenong LNG facility and market activities, while also imposing more discipline on AEMO in terms of the efficiency with which it incurs cost and uses the Dandenong LNG facility.

Table 2.1: **Costs and benefits associated with the final rule**

COSTS AND BENEFITS	ASSESSMENT	QUANTITATIVE ESTIMATE	
		TOTAL	PER GJ[A]
Costs			
Implementation costs[b]	Quantitative	$1 million	$0.004 per GJ
Buyer and supplier of last resort costs[c]	Quantitative	Average cost per annum: $9.4 to $12.7 million	$0.04 to $0.05 per GJ
Benefits			
Value of avoided curtailment	Quantitative	$272 million to $1.6 billion	$1.10 to $6.70 per GJ
Reduced risk of other system security threats	Qualitative	n/a	
Economic efficiency benefits	Qualitative	n/a	
Other consumer and market related benefits	Qualitative	n/a	

Source: AEMC.
Note: a. Based on AEMO's DWGM gas consumption estimate for 2022-23 (244,409). See AEMO, *2022-23 AEMO Budget and Fees.*
b. Estimate provided by AEMO.
c. This estimate does not account for any proceeds that AEMO may receive from the injection of gas from its LNG reserve and any relinquishment of capacity or transfer of LNG stock AEMO undertakes.

As noted in Table 2.1, AEMO has estimated the implementation costs to be around $1 million (or $0.004/GJ). The ongoing costs have been estimated by the AEMC to range from $9.4-$12.7 million p.a. (or $0.04-$0.05/GJ), depending on the assumptions made about how much uncontracted capacity and gas AEMO will procure, the prices AEMO will pay for storage capacity, gas and liquefaction and how often it will refill the LNG reserve (see appendix B).

The AEMC has also estimated the potential benefit of the final rule by the value of avoided curtailment in the electricity and gas markets.

Electricity curtailment is relevant to the valuation where a system black type of event has occurred in a region of the national electricity market (NEM) and the gas market is also finely balanced in that region, such that a shortage of gas for power generation may contribute to the curtailment of electricity load.

Gas curtailment is relevant where an event has occurred in the gas market, independently of any events in the electricity market, that might lead to the curtailment of gas load.

To estimate the value of avoided curtailment in the gas and electricity markets, a value of customer reliability is required. For the electricity curtailment valuation, the AEMC has had

regard to the Victorian electricity value of customer reliability (VCR) ($42,586/MWh)[24] and the value of RERT ($15,500/MWh - $23,842/MWh).[25] The use of these parameters produce a value of avoided curtailment of $439-$1,636 million.

Unlike electricity, there is no well-accepted value of customer reliability for gas. The AEMC has therefore used the DWGM market price cap of $800/GJ, which is the maximum price that market participants can currently pay to avoid curtailment in the DWGM. This gives a value of avoided curtailment of $272-$369 million.

The value of avoided curtailment in both of these cases is quite high because it assumes that gas from AEMO's LNG reserve is used to address a multi-day curtailment event, such as a system black type event in the NEM, or a major gas supply outage in the gas market.

Using these valuations, the AEMC has estimated what the probability of curtailment would have to be in any year for the benefits to equal the costs set out in Table 2.1. This resulted in probabilities of:

- 0.8-2.2% for electricity market curtailment (or once every 45-125 years)
- 3.5-3.6% for gas market curtailment (or once every 28 years).

This implies that the value of the final rule, which requires AEMO to act as buyer and supplier of last resort in relation to the Dandenong LNG facility, will be positive if gas in AEMO's LNG reserve is required to:

- avoid electricity market curtailment, associated with a system black type event, at least once every 45 years
- avoid gas market curtailment at least once every 28 years.

Put another way, if a system black event in the Victorian region of the NEM is conceivable more than once every 45 years (which analysis by Deloitte Access Economics suggests),[26] then there will be a net benefit in making the final rule. Similarly, if a major gas outage in east coast gas markets is conceivable more than once every 28 years, then the net benefit would also be positive.

These probabilities should be considered in light of the history of these events in the NEM and the projected outlook for the gas market (see Box 2). Both suggest that an electricity and/or gas market curtailment event may be feasible during the term of the rule.

Based on this analysis and the assessment set out in section 2.3.3, the Commission is satisfied that the more preferable rule will, or is likely to, contribute to the achievement of the NGO over the term of the rule.

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24 Reliability Panel, *Final Report: 2022 Review of the Reliability Standard and Settings,* 1 September 2022, p. 53.

25 There is currently no value of RERT for Victoria, but the average RERT cost for NSW and Queensland was $23,842/MWh in 2020-2021. An alternative to this value (or the lowest value of RERT that might be assumed) is the NEM price cap of $15,500/MWh. AEMO, *Reliability and Emergency Reserve Trader (RERT) end of financial year 2021-22 report*, August 2022, p. 6.

26 This analysis suggests that the probability of future system black type events in Victoria is 2.98%, or once in every 33 years. Deloitte Access Economics, *Economic assessment of system restart ancillary services in the NEM*, August 2016, p. ii.

3 AEMO AS BUYER OF LAST RESORT

This chapter focuses on the buyer of last resort element of the rule change request, which proposed for AEMO to:

- procure all the uncontracted LNG storage capacity that is available on 15 March
- purchase gas to be stored as LNG with the objective of achieving and maintaining LNG stock at the target level in the winter months
- be able to relinquish storage capacity if another market participant acquires or proposes to acquire the capacity and transfer LNG stock to the acquiring market participant.

Stakeholder feedback on this element primarily focused on how much capacity AEMO should be required to procure, the target level for AEMO's LNG stock, the time available to AEMO to fill its capacity and the LNG stock transfer process.

Each of these aspects is addressed below, setting out the Commission's consideration of the proposed rule, stakeholder feedback and its final determination on the changes to be made to the NGR. Further detail on the final rule can be found in appendix A.

3.1 How much capacity should AEMO be required to procure?

3.1.1 Proponent's view

The rule change request proposed that AEMO should be:

- required to contract any uncontracted LNG storage capacity that is available for the upcoming winter months of the relevant year (i.e. 2023-2025) at the end of 15 March[27]
- allowed to contract for the use of any other uncontracted LNG storage capacity for the winter months that becomes available after that date.[28]

3.1.2 Stakeholder views

While the majority of stakeholders supported AEMO acting as buyer of last resort,[29] differing views were expressed on how much storage capacity it should procure, with:

- APA supporting the proposal that AEMO procure all the uncontracted capacity.[30]
- ACCC, Alinta, AEC, Brickworks, EnergyAustralia, Origin and Shell expressing concerns about the costs associated with over-contracting and suggesting that AEMO only contract the amount it forecasts is required.[31]

27 Rule 282(4) of the proposed rule.
28 Rule 282(7) of the proposed rule.
29 The two exceptions to this were Origin and CSR. Submissions to the consultation paper: Origin, p. 1; CSR, p. 2.
30 APA, submission to the consultation paper, p. 12.
31 Submissions to the consultation paper: ACCC, p. 3; Alinta, p. 2; AEC, p. 2; Brickworks, p. 4; EnergyAustralia, p. 2; Origin, p. 3; Shell, p. 2.

3.1.3 Analysis

There are two key questions raised by the proposed rule and stakeholder feedback:

- Should AEMO be required to procure all the uncontracted capacity for the winter period?
- If so, how should uncontracted capacity be measured?

Should AEMO be required to procure all the uncontracted capacity prior to winter?

The Commission understands the concerns stakeholders have raised about the potential for the requirement for AEMO to procure all the uncontracted capacity to result in over-contracting, the costs of which would be borne by market participants and consumers.

While the Commission has considered the alternative forecasting approach proposed by stakeholders, it has two key concerns with forecasting.

The first is that there is insufficient time for AEMO to develop a robust forecast ahead of winter 2023. As outlined in section 3.3, AEMO will need to commence filling its capacity by the beginning of March to reach the target level by 1 May.

AEMO would, therefore, only have 2.5 months to develop a forecast that would ideally be consulted on with stakeholders. In the Commission's view, this is too short a period, noting that AEMO will also need to be updating its procedures for the new buyer and supplier of last resort roles during this time.

The second concern is that there is no well-accepted reliability standard that AEMO could use to develop a robust forecast of storage capacity requirements. While jurisdictional officials are considering implementing a reliability standard as part of the stage 2 extension of AEMO's functions and powers, it is unclear at this stage if or when this will occur.[32]

In addition, the Dandenong LNG facility is quite small, allowing a maximum of just 680 TJ of gas to be stored (compared to total annual forecast consumption of 210 PJ for 2022 and 175 PJ in 2026).[33] When coupled with the fact that both the ACCC and AEMO have identified that there is a real risk of a supply shortfall occurring in Victoria over the term of the rule (see Box 2), the risk of over-contracting appears relatively low.

The greater risk over the term of the rule, as recognised by the Victorian Minister, is that there will be insufficient gas in the Dandenong LNG facility to help AEMO manage threats to system security that may arise as a result of the projected shortfalls and/or planned Longford outages. This could, in turn, result in gas users having to be curtailed and pose other threats to system security and safety.

Because of its size and slow liquefaction rate, the Dandenong LNG facility cannot be used to address all threats to system security in the DWGM. It can, however, be used to address short-term peak supply shortfalls.

32 Jurisdictional officials, *Extension of AEMO functions and powers to manage supply adequacy in the east coast gas market*, consultation paper, September 2022, p. 30.

33 AEMO, *Victorian gas planning report update*, March 2022, p. 4.

For more prolonged threats, the facility can be used to 'buy time' and provide some gas into the market until supply from other sources can be obtained. It can therefore help reduce the risk of curtailment and the impacts of other threats to system security.

Taking into account the matters set out above and that this is an interim rule, the Commission has decided to amend the NGR to:

- require AEMO to contract any uncontracted LNG storage capacity that is available for the upcoming winter months of the relevant year (i.e. 2023-2025) by a specified date
- allow AEMO to contract for the use of any other uncontracted LNG storage capacity for the winter months that becomes available after that date.

It is important to recognise that the planned short life of this rule, along with the fact that there is currently no well-accepted gas reliability standard, and the capacity of the Dandenong LNG facility is quite small, has had a significant bearing on the Commission's decision in this case. This decision should not, therefore, be construed as establishing a precedent, for either a potential extension of this rule beyond 2025 or for the application of a similar rule in a different context.

How should uncontracted capacity be defined?

If AEMO is to procure all the uncontracted capacity of the Dandenong LNG facility over the term of the rule, then the rule will need to define what is meant by uncontracted capacity.

Under the proposed rule, the term has been defined as 'any available storage capacity in an LNG storage facility that is not subject to an LNG storage agreement'.

One potential issue with this definition is that if the LNG storage provider does not have a contract in place for the capacity it requires for the safe operation of the LNG facility and operational purposes (see Box 1), then it could result in AEMO procuring this capacity as well, which market participants and consumer would pay for.

To address this issue, the Commission has decided to amend the proposed definition of uncontracted LNG storage capacity to exclude:

- the storage capacity that is not available to be contracted to market participants because it is used for other purposes (such as truck loading), which is referred to in the final rule as 'non-market LNG storage capacity'
- the capacity the LNG storage provider requires for the safe operation of the LNG storage facility and its operational purposes, which is referred to in the final rule as 'operational storage capacity' and is taken to be 79 TJ unless otherwise agreed by AEMO and the LNG storage provider.[34]

34 The 79 TJ was specified by APA. APA, correspondence with AEMC via email, 24 November 2022.

3.1.4 Final determination

The Commission's final determination is to amend the NGR to:

- require AEMO to contract all the uncontracted storage capacity that is available for the winter months of the relevant year at the end of 1 March[35]
- allow AEMO to contract any other uncontracted capacity that becomes available for the winter months after 1 March[36]
- define uncontracted storage capacity to exclude the non-market LNG storage capacity and operational storage capacity, with the latter specified as 79 TJ unless otherwise agreed between AEMO and the LNG storage provider.[37]

In relation to the quantity that AEMO is to contract, the only difference between the Commission's final rule and the proposed rule is that operational and non-market LNG storage capacity will be excluded from the calculation of uncontracted capacity. As a result, the final rule is more preferable to the proposed rule because it limits the costs AEMO has to incur in undertaking its buyer of last resort role.

3.2 How should the target level apply?

3.2.1 Proponent's view

Under the proposed rule, AEMO would be required to purchase gas for storage as LNG in accordance with the NGR, with the objective of achieving and maintaining LNG stock over the winter months of the relevant year at the target level.[38]

The target level is defined as the highest level reasonably possible, or if AEMO considers there are extraordinary circumstances warranting a lower target level, such other level determined by AEMO and approved by the Victorian Minister.[39]

3.2.2 Stakeholder views

The ACCC, AEC, Brickworks, Origin and Shell noted that if AEMO is to forecast how much storage capacity to procure, the upper bound of the target should be the amount of storage capacity it contracts.[40]

Shell also noted the potential for the objective to maintain the target level over winter to lead to adverse and unnecessary competition for gas during this period. It suggested that the NGR either prevent AEMO from refilling in winter or only allow it to refill if its LNG stock falls below a set percentage.[41]

35 Rule 282(3) of the final rule.
36 Rule 282(6) of the final rule.
37 Rule 200 of the final rule.
38 Rule 282(4) of the proposed rule.
39 Rule 282(5) of the proposed rule.
40 Submissions to the consultation paper: ACCC, p. 3; AEC, p. 2; Brickworks, p. 4; Origin, p. 3, Shell, p. 2.
41 Shell, submission to the consultation paper, p. 2.

3.2.3 Analysis

As stakeholders have observed, there are a number of issues with the proposed scope and application of the target level to consider.

Proposed scope of the target level

In the rule change request, the target level is defined as the highest level reasonably possible, or such other level determined by AEMO and approved by the Minister.[42]

However, under this drafting it is unclear whether the target level for AEMO's LNG stock is intended to apply to the whole Dandenong LNG facility, or just to the capacity AEMO has contracted.

Given the policy intention is only for AEMO to be required to fill the storage capacity it has contracted, the Commission has decided to amend proposed rule 282(5) to make it clear that the target for AEMO's LNG stock only applies to the storage capacity held by AEMO.

Application of the target level

Under proposed rule 282(4), AEMO is required to purchase gas for storage 'with the objective of achieving and maintaining LNG stock over the winter months of the relevant year at the target level'. There are two key questions arising from this drafting.

The first is whether the target level should only apply in winter given the concerns raised in the rule change request about planned outages at Longford in late 2023 and 2025.

On this question, the Victorian Department of Environment, Land, Water and Planning (DELWP) has advised that the intent is that the target level only applies in winter because this is when the need for Dandenong LNG is considered greatest. DELWP does, however, expect AEMO to have the flexibility to refill and use its LNG capacity at other times of the year if required, including to address Longford outages.

The second question is whether the target level should apply throughout winter or only at the start of winter. As Shell observed, there is a risk that if AEMO is required to maintain its LNG stock at the target level throughout winter, this could:

- place further pressure on prices and supply if, as projected, there is a supply shortfall in winter (see Box 2)
- result in unnecessary costs being passed through to consumers.

To address this risk, the Commission has decided to amend proposed rule 282(4) to:

- only require the target level to be met at the beginning of winter (specifically, 1 May)
- allow AEMO to determine if and when the LNG tank should be refilled, having regard to forecast market conditions and what is reasonably necessary to address potential threats to system security.

In the Commission's view, this will provide for a more targeted and fit for purpose approach to the filling and refilling of AEMO's LNG reserve than was provided for under the proposed

42 Rule 282(5) of the proposed rule.

rule. It is also preferable to the limitations on refilling suggested by Shell, because there may be circumstances in which it is efficient for AEMO to refill its capacity during winter.

AEMO should not, therefore, be prevented from refilling in winter. If, however, it decides to do so, then it should have regard to market conditions and whether refilling is reasonably necessary to address potential threats to system security. The Commission is satisfied that AEMO is able to make a well-informed decision if such circumstances arise and that, as a result of the transparency aspects of the final rule, market participants will be appropriately informed.

3.2.4 Final determination

The Commission's final determination is to amend Part 19 of the NGR to:

- require AEMO to purchase gas for storage with the objective of achieving the target level by the start of the winter months in the relevant year[43]
- define the target level as the quantity of LNG stock held by AEMO (taking into account capacity contracted in accordance with this rule and any other capacity contracted by AEMO) that is:[44]
  - the total amount of storage capacity held by AEMO, or
  - such lower level determined by AEMO and approved by the Victorian Minister
- allow AEMO, if it considers that there are extraordinary circumstances warranting a lower target level than the highest level reasonably possible, to apply to the Victorian Minister for approval of a different target level[45]
- allow AEMO to refill its storage capacity during winter, or at other times of the year, having regard to forecast market conditions and whether it considers it reasonably necessary to mitigate the risk of potential threats to system security.[46]

The Commission considers that the final rule is more preferable to the proposed rule because it provides AEMO with more flexibility to consider whether the Dandenong LNG tank should be refilled having regard to market conditions and whether it is reasonably necessary to mitigate against potential threats to system security.

Absent this flexibility, the requirement for AEMO to maintain the target throughout winter could place additional pressure on the market and result in AEMO incurring unnecessary costs, which would be passed through to consumers.

43 Rule 282(3) of the final rule.
44 Rule 282(4) of the final rule.
45 Rule 282(5) of the final rule.
46 Rule 282(7) of the final rule.

3.3 How much time should AEMO have to fill its capacity?

3.3.1 Proponent's view

In the rule change request, the proponent proposed that the amount of uncontracted storage capacity that AEMO is to contract is to be determined at 15 March in 2023, 2024 and 2025.[47]

In addition, the proposed transitional rules also provide for AEMO and the LNG storage provider to agree on a liquefaction schedule by 1 March 2023 that would allow AEMO to commence storing LNG under its storage agreement on and from 15 March 2023.[48]

3.3.2 Stakeholder views

APA and the ACCC were the only stakeholders to comment on this aspect of the rule change request. Both noted that AEMO may need more time to fill its contracted capacity.[49]

APA stated that the 15 March timing would be 'challenging' given the slow liquefaction rate and suggested the date be brought forward to 1 March.[50]

The ACCC also noted the need for AEMO to potentially start filling its capacity prior to 15 March to ensure it reaches the target level ahead of winter and to avoid crowding out other market participants that are also trying to fill their storage capacity prior to winter.[51]

3.3.3 Analysis

As APA and the ACCC observed, there is a risk under the proposed rule that AEMO's LNG stock will not reach the target level ahead of winter because the liquefaction rate is low and there may be other market participants trying to fill their storage capacity over this period.

According to the Bulletin Board, the nameplate rating for the liquefaction facility is 8.2 TJ/day.[52] However, estimates appearing on APA's website suggest the firm liquefaction rate could be as low as 5.6 TJ/day.[53]

Using the 5.6 TJ/day rate, the AEMC has estimated that it could take 60 days for AEMO to fill the current estimate of uncontracted capacity as of March 2023 of 473 TJ,[54] if it keeps its current holdings of 140 TJ in the tank.[55]

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47 Rule 282(4) of the proposed rule.

48 Transitional rule 1 of the proposed rule.

49 Submissions to the consultation paper: APA, p. 9; ACCC, p. 4.

50 APA, submission to the consultation paper, p. 9.

51 ACCC, submission to the consultation paper, p. 4.

52 AEMO, *Bulletin Board data: Gas BB actual flow storage data and Gas BB nameplate rating data*, accessed 9 November 2022.

53 APA website, accessed 21 November 2022: https://www.apa.com.au/our-services/gas-transmission/gas-storage/dandenong-lng-gas-storage-facility

54 AEMO, *Bulletin Board data: Gas BB uncontracted capacity outlook data*, accessed 9 November 2022.

55 This estimate can be viewed as maximum amount of time needed. It assumes that market participants' contracts that are due to finish at the end of 2022 are not rolled over and that no other new contracts are entered into. If market participants recontract and/or new contracts are entered into, the amount of capacity AEMO has to procure would be lower and the time required to fill this capacity would be less. The time to fill AEMO's capacity would also be shorter if the liquefaction rate was closer to the nameplate rating.

While it is possible that the amount of time required to fill AEMO's capacity could be shorter, for the purposes of determining when the filling process should commence in relation to this final rule, the Commission has decided to use the more conservative estimate of 60 days.

The 60-day estimate exceeds the 47 days provided for by the 15 March timing in proposed rule 282(4) and proposed transitional rule (1). Therefore, there is a risk under the proposed rule that AEMO would not be able to reach the target level by the beginning of winter (1 May) if the 15 March date is retained.

To address this risk, the Commission has decided to bring forward the date used to determine the amount of uncontracted capacity that AEMO is to procure to 1 March. It has also decided to provide additional flexibility in 2023 by allowing AEMO and the LNG storage provider to agree to an earlier commencement date for filling. This flexibility is only required in 2023 because this is the only year in which the rules refer to the timing for filling to commence.[56] In all other years, this will be a matter for AEMO and APA to determine.

Importantly, these amendments to the proposed rule are not expected to affect the ability of market participants to contract their own LNG storage capacity. This is because the more preferable final rule provides for AEMO to relinquish storage capacity (see section 3.4.3). So even if a market participant hasn't entered into a contract by 1 March, it would still be able to do so.

3.3.4 Final determination

The Commission's final determination is to amend the NGR to:

- require the amount of uncontracted capacity to be procured by AEMO for winter 2023-2025 to be determined at the end of 1 March[57]
- include a transitional rule intended to enable AEMO to start filling its contracted storage capacity on 1 March 2023, or earlier if agreed by AEMO and the LNG storage provider[58]
- require AEMO and the LNG storage provider to use reasonable endeavours to agree a liquefaction schedule by 14 February 2023.[59]

The final rule is more preferable to the proposed rule and consistent with achieving the NGO because it recognises the technical limitations of the liquefaction facility that could impede AEMO's ability to meet the target level ahead of winter and any other market participant trying to fill the tank over this period. This aspect of the final rule is expected to support the efficient use of the Dandenong LNG facility which will limit the cost impact on Victorian gas consumers.

As noted above, bringing forward the date is not expected to alter the ability of market participants to procure storage capacity, so the change is not expected to crowd out market participants.

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56 Proposed transitional rule 1.
57 Rule 282(4) of the final rule.
58 Transitional rule 91(2) of the final rule.
59 Transitional rule 91(2) of the final rule.

3.4 How should capacity relinquishment and LNG stock transfers occur?

3.4.1 Proponent's view

Under the proposed rule AEMO may, in accordance with the *LNG reserve procedures*:[60]

- relinquish to an LNG storage provider LNG storage capacity acquired by AEMO if a market participant acquires or proposes to acquire the capacity
- transfer to a market participant LNG stock held on behalf of AEMO if the market participant has acquired the right to store the stock in an LNG storage facility.

3.4.2 Stakeholder views

The majority of stakeholders accepted the proposal of AEMO being able to relinquish storage capacity to the LNG storage provider and transfer any associated LNG stock to the acquiring market participant. The one exception to this was Brickworks, which stated that AEMO, as a market operator, should not manage any contractual arrangements with market participants.[61]

While most stakeholders recognised AEMO being able to transfer LNG stock, the ACCC, EnergyAustralia and CSR did suggest that the NGR provide further detail on how these transfers are to occur.[62] Specifically:

- the ACCC noted that LNG stock transfers should only occur as part of capacity relinquishment and that LNG stock should be sold at the prevailing market price[63]
- EnergyAustralia stated that the NGR should set out how transfers of LNG stock are to occur and at what price. It also questioned what would happen if multiple participants are seeking the storage capacity and LNG stock[64]
- CSR stated that details around relinquishment and transfers should be specified in the NGR and that AEMO should not be in a position where it is competing with other market participants that are looking to relinquish capacity.[65]

3.4.3 Analysis

The relinquishment of storage capacity and LNG stock transfer provisions in proposed rule 286(1)-(2) are important components of the proposed rule that are intended to:

- mitigate the risk that AEMO crowds out market participants that want to use the Dandenong LNG facility

60 Rule 286(1)-(2) of the proposed rule.

61 Brickworks, submission to the consultation paper, p. 5.

62 In bilateral discussions, some stakeholders noted the potential for gaming if market participants can enter into short-term DLNG contracts in response to imminent potential market events. However, APA advised the AEMC that this is not possible because it requires a minimum 12-month contract term for use of the Dandenong LNG facility.

63 ACCC, submission to the consultation paper, p. 4.

64 EnergyAustralia, submission to the consultation paper, p. 6.

65 CSR, submission to the consultation paper, p. 8.

- avoid unnecessary and inefficient withdrawals from and injections into the Dandenong LNG facility, by allowing AEMO to transfer its LNG stock to the market participant that acquires its relinquished capacity.

While the intent of these provisions is clear, the Commission has identified a number of amendments that are required to properly give effect to this intent. The required amendments are:

- Proposed rule 286(1), which states that AEMO 'may' relinquish its capacity to the LNG storage provider if a market participant acquires or proposes to acquire that capacity, has been amended to state that AEMO 'must' relinquish its capacity in these circumstances. Absent this change, the rule could be construed as giving AEMO discretion on whether it will relinquish capacity, which could undermine the intent of AEMO not crowding out market participants.
- Proposed rule 286(2), which states that AEMO may transfer LNG stock if a market participant has acquired a right to store the stock in an LNG storage facility, has been amended to make it clearer that this only applies if the market participant has acquired the capacity relinquished by AEMO. This is consistent with the stated intent of this rule, with the rule change request noting that:[66]

  > This rule should not allow for AEMO to on-sell LNG stock to other market participants unless it is part of AEMO relinquishing storage capacity. This is because AEMO's on-selling of LNG stock could provide a disincentive for market participants to contract and create wealth transfer issues.

In relation to the concerns raised by stakeholders about the method to be used to determine the price for LNG transfers, the Commission understands that the intent was for AEMO's *LNG reserve procedures* to include some detail, but for the price to be negotiated bilaterally.[67] It would appear, however, from stakeholder feedback that it would be beneficial in providing more guidance on the price for LNG transfers in the NGR. The Commission has decided therefore to clarify in the final rule:

- that AEMO's *LNG reserve procedures* must set out the LNG stock transfer pricing methodology
- the pricing methodology is to reflect the market price for gas, the cost of liquefaction and any other direct costs reasonably expected to be avoided by a market participant as a result of the LNG transfer (e.g. transportation costs).

This aspect of the final rule is expected to reduce transaction costs by removing the need for AEMO and market participants to negotiate the price for the LNG transfer. It is also expected to mitigate the risk of gaming by market participants, which could occur if the price does not reflect the cost they would face if they had to procure their own gas and fill the facility. For these reasons, it is consistent with the NGO.

66 Rule change request, p. 14.
67 ibid.

As to EnergyAustralia's question about what would occur if multiple participants are seeking storage capacity and LNG stock, this will be a matter for the LNG storage provider to resolve. That is, it will be up to the LNG storage provider to determine which market participant(s) it will contract with. Once that is determined, a market participant that acquires AEMO's relinquished capacity will be able to take an LNG transfer from AEMO if there is any LNG stock associated with the relinquished capacity.

3.4.4 Final determination

The Commission's final determination is to amend the NGR to:

- require AEMO to relinquish capacity to the LNG storage provider if requested by the LNG storage provider to satisfy a request for services to be provided to a market participant and subject to any legal obligation on AEMO to hold that capacity[68]
- allow AEMO to transfer LNG stock to a market participant that has acquired its relinquished capacity[69]
- require the *LNG reserve procedures* to set out the LNG stock transfer pricing methodology, which must:[70]
  - reflect the market price for gas over a defined period
  - provide for AEMO to recover the costs of liquefaction and other direct costs reasonably expected to be avoided by a market participant as a result of the LNG transfer.

The final rule is more preferable to the proposed rule because it will provide AEMO and market participants greater guidance on how LNG transfers are to occur, mitigate the risk of gaming by market participants and result in lower transaction costs.

3.5 Conclusion on AEMO as buyer of last resort

The Commission's final determination provides for AEMO to be the buyer of last resort in relation to the Dandenong LNG storage capacity over the period 2023-2025 and, in this capacity, requires the following:

- **How much storage capacity should AEMO procure:** AEMO must procure all the uncontracted capacity (excluding operational and non-market LNG storage capacity) that is available for winter in the relevant year at the end of 1 March. AEMO may also procure any other uncontracted winter capacity that becomes available for after 1 March.
- **How much LNG stock should AEMO hold:**
  - Beginning of winter: AEMO must purchase gas for storage with the objective of achieving the target level by the beginning of winter (1 May). The target level is measured by reference to AEMO's contracted storage capacity and is the highest level reasonably possible, or such a lower amount approved by the Victorian Minister.

68 Rules 286(1) and (2) of the final rule.
69 Rule 286(3) of the final rule.
70 Rules 286A(2)-(3) of the final rule.

  - Other times: AEMO can determine if and when its LNG reserve should be refilled in winter, or at other times of the year, having regard to forecast market conditions and if it considers it reasonably necessary to mitigate potential threats to system security.
- **How much time should AEMO have to fill its LNG capacity:** In 2023, AEMO will be able to start filling its LNG capacity from 1 March, or earlier if agreed with the LNG storage provider. At all other times, it will be up to AEMO to determine when to fill its capacity.
- **How should capacity relinquishment and LNG stock transfers occur:**
  - AEMO must relinquish storage capacity to the LNG storage provider if a market participant acquires or proposes to acquire that capacity, subject to any legal obligation to hold the capacity
  - AEMO may also transfer LNG stock to a market participant that has acquired its relinquished capacity. The method used to determine the LNG stock transfer price must be set out in AEMO's *LNG reserve procedures* and must reflect the market price for gas, the cost of liquefaction and any other direct costs reasonably expected to be avoided by a market participant as a result of the LNG transfer.

Together these aspects of the final rule determination are expected to promote the NGO by providing for the following over the term of the rule:

- a safer, more secure and reliable source of supply to consumers
- the more efficient use of the Dandenong LNG facility over the period 2023-2025
- more guidance on how AEMO is to interact with the market in its capacity as buyer of last resort.

While there will be direct costs associated with AEMO taking on this role, the Commission has taken steps to reduce these costs to achieve the above benefits. It has sought to provide for a more targeted, fit for purpose and proportionate buyer of last resort regime compared to that proposed that minimises the impact on market participant incentives, by:

- excluding the LNG storage provider's capacity requirements from the amount of capacity to be procured by AEMO
- limiting the application and scope of the target level and allowing AEMO to determine whether to refill its storage capacity in winter, or at other times of the year
- requiring AEMO, when deciding whether to refill its LNG reserve, to have regard to forecast market conditions and whether refilling is reasonably necessary to mitigate potential threats to system security
- removing AEMO's discretion to relinquish capacity
- requiring the LNG transfer pricing methodology to be specified in procedures rather than being negotiated
- providing for more flexibility in relation to the filling and refilling process.

4 AEMO AS SUPPLIER OF LAST RESORT

This chapter focuses on the supplier of last resort element of the rule change request, which is intended to:

- allow AEMO to inject gas from its LNG reserve to mitigate the risk of curtailment and system security issues
- give effect to the supplier of last resort principles, which require AEMO to place bids for injections of gas from its LNG stock at VoLL and give effect to the principle that its LNG stock should ordinarily be scheduled after the LNG stock held by market participants.

As reflected in the discussion below, stakeholder feedback primarily focused on:

- the circumstances in which AEMO should be able to use its LNG reserve
- how gas from AEMO's LNG reserve is to be supplied into the market
- the circumstances in which AEMO may otherwise need to dispose of gas from is LNG reserve.

The Commission's consideration of the proposed rule and stakeholder feedback is set out below for each of these issues, along with its final determination on the changes to be made to the NGR. Further detail on the final rules can be found in appendix A.

4.1 In what circumstances should AEMO be able to use its LNG stock?

4.1.1 Proponent's view

The proposed rule states that AEMO may utilise the LNG reserve by issuing scheduling instructions to an LNG Storage Provider to vaporise LNG stock held by the LNG Storage Provider on AEMO's behalf at such times and in such quantities as it may reasonably consider necessary or desirable to ensure the security of the DTS and to satisfy AEMO's operational requirements.[71]

Elaborating on this further, the Victorian Minister noted that AEMO may need to use its LNG stock to "mitigate against the risk of curtailment and system security issues":[72]

> While AEMO can contract to fulfil its system security and safety roles, neither the current NGR nor Victorian legislation currently provide any certainty on whether, when and how AEMO is to procure, maintain and dispose of additional LNG stock from a declared LNG facility, in order to support reliability of supply and mitigate against the risk of curtailment…. Both AEMO and market participants, and ultimately end users, would benefit from such certainty with regard to Dandenong LNG usage.

71 Rule 285(1) of the proposed rule.
72 Rule change request, pp. 2; 10.

4.1.2 Stakeholder views

Stakeholders were generally supportive of AEMO using gas from its LNG reserve to fulfil its system security and safety roles but held mixed views on whether AEMO should also be able to do so for reliability purposes.

The ACCC, AEC, APA, Origin and Shell supported AEMO using gas from the LNG reserve in all of these circumstances.[73] Origin did, however, note that the size of the Dandenong LNG facility means that it is only likely to play a limited role in supporting reliability of supply in practice and is better suited for security type services.[74]

EnergyAustralia and Brickworks were opposed to the use of AEMO's LNG stock for reliability. This was because in their view, market participants have a strong incentive to manage reliability.[75]

In contrast to these stakeholders, CSR stated that the NGR already make clear that AEMO can inject gas from its LNG reserve to address threats to system security.[76]

4.1.3 Analysis

The NGL and NGR already contemplate AEMO having a role in relation to reliability, system security and public safety in the DTS.

In the NGL:

- s. 91BA(2) states that AEMO may trade in natural gas to the extent necessary or desirable for the safety, security or reliability of the DTS, or in an emergency
- s. 91BC allows AEMO to give written directions with respect to the DTS or a declared distribution system for one or more of the following purposes:
  - maintain and improve the reliability of supply of natural gas
  - maintain and improve the security of the DTS or a declared distribution system
  - in the interests of public safety.

Rule 343(1) of the NGR, which sets out the circumstances in which AEMO can intervene in the market, including by injecting gas from its LNG reserve, allows AEMO to do so if there is a threat to system security that is unlikely to subside without intervention.

While the term 'threat to system security' is not defined in the NGR, it is defined in the *Wholesale market system security procedures* as arising if a 'normal operating state' for the DTS cannot be maintained.[77] The definition of 'normal operating state' in these procedures implies that a threat to system security includes a threat to:[78]

- the supply of gas customers (i.e. the threat of curtailment)
- public safety

73 Submissions to the consultation paper: ACCC, p. 10; AEC, p. 2; APA, p. 14; Origin, p. 3; Shell, p. 1.
74 Origin, submission to the consultation paper, p. 3.
75 Submissions to the consultation paper: EnergyAustralia, p. 2; Brickworks, p. 3.
76 CSR, submission to the consultation paper, p. 8.
77 AEMO, *Wholesale market system security procedures*, 2016, pp. 9-10.
78 ibid, p. 9.

- system pressures and flows on the DTS falling outside operating limits specified in the *Wholesale market critical location pressures*
- the DTS operating in accordance with the *Gas quality guidelines*.

In effect, rule 343(1) of the NGR, in conjunction with the *Wholesale market system security procedures*, already allows AEMO to use gas from its LNG reserve to address threats of curtailment and threats to system pressures, gas quality and public safety, where it reasonably considers the threat is unlikely to subside without intervention.

The Commission understands that, to date, AEMO has only procured the amount of LNG storage capacity and gas required for safe system shutdown as required by its gas safety case with Energy Safe Victoria. This means that, even if AEMO has the power under rule 343(1) of the NGR to inject gas from its LNG reserve, in practical terms, at present, its LNG stock will only be used for safe system shutdown.

In AEMO's new role as buyer of last resort for uncontracted LNG storage capacity, AEMO will hold LNG stock above the amount required for safe system shutdown. The rule change request provided for utilisation of this LNG stock 'at such times and in such quantities as AEMO may reasonably consider necessary or desirable to ensure the security of the declared transmission system and to satisfy AEMO's operational requirements'.

In the Commission's view, AEMO and market participants would benefit from more clarity on the circumstances in which AEMO may inject gas from the LNG reserve.

To provide this guidance, the Commission has amended proposed rule 285 of the NGR to link the supplier of last resort role with rule 343(1) of the NGR. The change means that AEMO will only be able to perform the supplier of last resort role where there is a threat to system security (as defined in the *Wholesale market system security procedures*) that AEMO reasonably considers unlikely to subside without intervention.

As a result, the supplier of last resort role will sit within the existing intervention framework in rule 343 of the NGR. AEMO has advised this arrangement is consistent with how it envisaged the supplier of last resort role would operate:[79]

> At a high level, AEMO can foresee two general scenarios where its LNG reserve may need to be scheduled on the assumption that there is an insufficient quantity of bids from market participants.
>
> 1. A general shortfall where there is insufficient supply across the DWGM to meet demand.
> 2. A temporal or locational issue that needs to be resolved by injecting gas from DLNG to maintain minimum pressures.
>
> Both of these scenarios already fall within the threat to system security framework in the NGR. Time permitting, AEMO would first seek a market response and would then look to constrain on supply at DLNG — including supply from AEMO's inventory if there is insufficient supply available from market participants. This action would be an NGR

79 *AEMO, response letter to AEMC*, 8 December 2022, p. 2.

343 intervention and would be subject to the relevant rule requirements.

Apart from providing more guidance on the circumstances in which AEMO can act as supplier of last resort, linking this role with rule 343 of the NGR should also help address the concerns raised by EnergyAustralia and Brickworks. That is, by making it clear that AEMO can only use gas from its LNG reserve to help address a threat of curtailment where it reasonably considers the threat is unlikely to subside without intervention.

The term 'help address' has been used in the preceding paragraph because, as Origin noted in its submission, the relatively small size of the Dandenong LNG facility, coupled with its slow liquefaction rate, means it cannot be used to eliminate all threats to system security.

It can, however, be used to address short-term peak or locational supply shortfalls that may otherwise result in curtailment or other directions under rule 343(1) of the NGR. It can also be used to provide some gas into the market for a short time (i.e. 'buy time') until supply from other sources can be obtained.

As a result, the Dandenong LNG facility is able to help reduce the risk of curtailment and the impacts of other threats to system security.

4.1.4 Final determination

The Commission's final determination is to amend the NGR to allow AEMO to inject gas from its LNG reserve where it reasonably considers that a threat to system security is unlikely to subside without intervention.[80]

The final rule is more preferable to the proposed rule because it provides AEMO and market participants greater clarity on the circumstances in which AEMO can inject gas from its LNG reserve.

4.2 How is gas from AEMO's LNG reserve to be supplied to the market?

4.2.1 Proponent's view

The proposed rule requires procedures relating to the utilisation of the LNG stock to be set out in the gas scheduling procedures and give effect to the proposed supplier of last resort principle.[81] The supplier of last resort principle is reflected in the proposed rule as a requirement that the gas scheduling procedures must:[82]

- give effect to the principle that gas from AEMO's LNG reserve should ordinarily be scheduled after LNG stock held on behalf of market participants
- provide for AEMO to place bids for injections of gas from the LNG reserve at a price equal to VoLL (i.e. $800/GJ).[83]

80 Rule 285(1) of the final rule and rule 343(1) of the NGR.
81 Rule 282(2) of the proposed rule.
82 Rule 282(3)(a)-(b) of the proposed rule.
83 Rule 285(2)(b) of the proposed rule.

The rule change request noted that the application of this principle will, in the proponent's view, ensure that:

- AEMO's gas will not be scheduled before any alternative gas that could be injected
- market participants have an incentive to use the Dandenong LNG facility.[84]

4.2.2 Stakeholder views

Most stakeholders supported AEMO acting as a supplier of last resort. However, there were mixed views on how gas from AEMO's LNG reserve should be injected into the market. Brickworks, Origin and APA considered that this gas should be directed in rather than bid in.[85]

Brickworks, for example, stated:[86]

> AEMO should not bid its LNG into the market in the same way that market participants place bid to schedule gas injections. This may result in AEMO setting the market price at $800 and results in market participants incurring net additional costs or net additional revenue as a result of AEMO injecting LNG that was bid at $800 depending on whether they were long or short in the market at the time. This is an unacceptable outcome to market participants and is entirely unnecessary…
>
> While AEMO will need to schedule the injections as a last resort, it could do this outside of needing to bid as a market participant would.

Origin similarly stated that:[87]

> Injection of AEMO's contracted LNG capacity should also be treated as an intervention and operationalised through directions as a last resort measure, and not through participation in dispatch processes. This would minimise the impact of the injections on market outcomes and is consistent with the view outlined by AEMO in its March 2022 Declared Wholesale Gas Market — Intervention Report…
>
> Bidding contracted capacity at the MPC is also unlikely to materially impact reliability, given voluntary load curtailment is likely to occur at that price in any case.

In contrast, Alinta, EnergyAustralia and Shell, were comfortable with gas from AEMO's LNG reserve being bid in, but suggested that steps need to be taken to ensure that AEMO does not compete with other market participants at $800/GJ.[88] Two of the potential solutions that they identified included:[89]

- requiring AEMO to bid in at a price just above VoLL (e.g. $800.01), or
- capping market participant bids at just below VoLL (e.g. $799.99).

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84 Rule change request, p. 13.
85 Submissions to the consultation paper: APA, p. 13; Brickworks, p. 4; Origin, p. 3.
86 Brickworks, submission to the consultation paper, p. 4.
87 Origin, submission to the consultation paper, p. 3.
88 Submissions to the consultation paper: Alinta, p. 2; EnergyAustralia, p. 6; Shell, pp. 1-2.
89 Submissions to the consultation paper: EnergyAustralia, p. 6; Shell, pp. 1-2.

Shell also suggested that consideration be given to adopting a different market price for gas that is dispatched for the secure operation of the DTS compared to gas dispatched for reliability.[90]

CSR did not express a view on whether gas from AEMO's reserve should be bid in or directed in, but did state that AEMO should not be able to set the market price and that the market should be administered if AEMO is injecting its own gas. CSR also considered there would be a need for adequate ring-fencing if AEMO is trading in natural gas.[91]

Another area of concern that APA raised is how gas from AEMO's LNG reserve is to be scheduled relative to other market participants' LNG holdings. As outlined above, the proposed supplier of last resort principle refers to AEMO's gas being 'ordinarily' scheduled after other market participants' LNG.[92]

APA noted that the use of the term 'ordinarily' could result in gas from AEMO's LNG reserve being scheduled ahead of other market participants and, in so doing, undermine participants' firm vaporisation rights. To address this, APA suggested the term 'ordinarily' be replaced with 'must'.[93]

APA also noted that dispatch of AEMO's gas at VoLL may result in market participants' and AEMO's LNG being pro-rated, which may mean market participants have to purchase Melbourne zone entry capacity certificates.[94] It suggested that this risk be addressed by allocating free Melbourne zone entry capacity certificates to market participants that have purchased the Dandenong LNG firm vaporisation service.[95]

4.2.3 Analysis

There are three questions to be considered when determining how gas from AEMO's LNG reserve is to be supplied into the market. Each is addressed below:

- Should AEMO direct gas from its LNG reserve into the market, or should it be able to include it in the pricing and/or operating schedules (jointly 'market schedules')?
- If it is to be included in the market schedules, at what price should it be included?
- What steps should be taken to ensure AEMO is supplier of last resort and does not compete with other market participants?

Should AEMO's gas be directed in or included in the market schedules?

A key question arising from stakeholders is whether gas from AEMO's LNG reserve should be directed in or included in the market schedules at VoLL. The Commission sought AEMO's view on these options and it was advised of the following:[96]

90 Shell, submission to the consultation paper, p. 2.
91 CSR, submission to the consultation paper, p. 6.
92 APA, submission to the consultation paper, pp. 6-7.
93 ibid.
94 APA, submission to the consultation paper, p. 7.
95 ibid, pp. 7-8.
96 AEMO, *response letter to AEMC*, 8 December 2022, p. 2.

From a system operation perspective, AEMO does not necessarily have a preference between these options. However, AEMO does note that if its gas is to be directed into the market then:

- This gas would not be priced at the market price. AEMO would potentially need to seek compensation via the dispute resolution process for amounts injected into the market (noting the current Rules would need to be amended to allow this), with proceeds then allocated back to market participants.
- This gas would not be included in the regular scheduling process and would in effect be unpriced. Once injected, the additional supply would have potential market impacts at subsequent schedules.
- In the most extreme event, AEMO expects, if there was a large gas supply shortfall (e.g. exceeding 100TJ/d), this may mean AEMO is unable to produce a feasible pricing and/or operating schedule.

Either option will ultimately impact market dynamics, including settlement outcomes for market participants. What is important is that an AEMO intervention is transparent and predictable to the market so far as practicable. The supplier of last resort framework, where AEMO bids its gas in at VoLL, proposed in the rule change should achieve this outcome.

As AEMO observed, directing gas in from its LNG reserve is not transparent and could have a range of unintended effects on the operation of the market. It could also undermine the incentive market participants have to hold LNG because, in the absence of a compensation claim, it effectively results in gas from AEMO's LNG reserve being supplied at $0/GJ.

In contrast to directions, the inclusion of gas from AEMO's LNG reserve in the market schedules provides for a range of market operation and transparency benefits as identified by AEMO.

The Commission has decided to allow AEMO, when injecting gas from its LNG reserve for the purposes of rule 343(1) of the NGR, to include that gas in the operating and, where applicable, pricing schedules. The way in which AEMO will be able to carry this out is discussed in more detail below.

While AEMO will be allowed to include gas from its LNG reserve in the market schedules, it will still be able to direct gas from its LNG reserve into the market when it considers it appropriate to do so. It could, for example, use this option if a safe system shutdown is required.

What price should be used for gas from AEMO's LNG reserve in market schedules?

Having concluded that gas from AEMO's LNG reserve should be included in market schedules, the next question is the price at which AEMO's gas should be included in those schedules.

While one option may be to leave this to AEMO, stakeholders have expressed significant concerns about the potential for AEMO to be competing with market participants and noted the potential need for ring-fencing if AEMO is trading. The Commission is therefore of the

view that it would be preferable for the NGR to specify the price at which AEMO is to include its gas in the market schedules.

Of the prices that could potentially be used, VoLL has the strongest economic basis and will promote allocative efficiency. This is because, in the limited circumstances in which AEMO would be able to use its LNG reserve (i.e. where there is a threat to system security that is unlikely to subside without intervention), the next best alternative to using LNG is likely curtailment, which is what VoLL is intended to represent.

The use of VoLL as the price for AEMO's gas also reflects the scarcity value of the LNG held in the Dandenong facility. As outlined above, the Dandenong LNG facility is a relatively small facility with a slow liquefaction rate, so its use may need to be rationed, which is what VoLL would provide.

The other benefits of using VoLL are that it would provide market participants with:

- an opportunity to bid their gas in before gas from AEMO's LNG reserve is used, which is consistent with the intent of AEMO's supplier of last resort role
- a financial incentive to hold and use their own capacity in the Dandenong LNG facility.

Relative to other options that have been suggested, including AEMO directing in at $0/GJ, the use of VoLL would also provide for more of a causer pays approach, which is what stakeholders, including Brickworks and Origin, have advocated (see chapter 6).

On Shell's suggestion that different prices potentially be used for DTS system security and reliability, AEMO has advised that it would be difficult to distinguish between what is a reliability or DTS security issue in most instances. It did, however, note that if there is an emergency and AEMO has to direct its 140 TJ of gas from the LNG reserve into the market to facilitate a safe system shutdown, the market would likely be suspended under rule 347 of the NGR.[97]

The final point to note about the use of VoLL is that if gas from AEMO's LNG reserve is injected into the market across two consecutive scheduling intervals then the cumulative price threshold is likely to be reached.

If this occurred, the market price would be capped at the administered price cap of $40/GJ. If the administered price cap is reached, AEMO would continue to include its gas in the market schedules at VoLL but the price payable by participants would be capped at $40/GJ.

For the reasons set out above, the Commission has decided to require gas from AEMO's LNG reserve that is included in the DWGM pricing or operating schedules to use a price equal to VoLL.

What steps can be taken to limit the extent to which AEMO competes with others?

While in principle the use of VoLL could result in AEMO competing with other market participants that are also bidding in at VoLL, the circumstances in which AEMO can inject gas from its LNG reserve at VoLL means the likelihood of it doing so is low.

97 AEMO, *response letter to AEMC*, 8 December 2022, p. 3.

As noted in section 4.1, AEMO's use of the LNG reserve will fall within the scope of rule 343(1) of the NGR. It will therefore only be able to inject gas from its LNG reserve into the market at VoLL if it reasonably considers that a threat to system security is unlikely to subside without intervention.

The threshold embodied in rule 343(1) of the NGR means that AEMO should only be injecting gas from its LNG reserve once market participants' bids have been exhausted. The likelihood of AEMO competing with market participants is therefore expected to be low.

Although the likelihood of competition is low, there is still a possibility that it may occur. This risk can be addressed by:

- making it clear in the rules that AEMO can only include gas from its LNG reserve in a pricing schedule if all available market participant bids have already been scheduled
- requiring AEMO to explain the steps it will take to ensure that, where it includes gas from the LNG reserve in the market schedule, its gas will be scheduled last.

On the latter point, while some stakeholders suggested that this could be achieved by requiring AEMO to bid in at $800.01 or capping market participant bids at $799.99, AEMO has advised that implementing either of these arrangements would require costly changes to the market clearing engine. Alternatively, AEMO suggested that bid accreditation constraints be used to control the amount of gas from its LNG reserve that may be scheduled in any scheduling interval:[98]

> ...AEMO has the ability to manually alter bid accreditation constraints ahead of publishing a schedule. Under this approach, to prevent AEMO's gas from being scheduled into the market, AEMO would by default apply a maximum hourly quantity constraint of zero GJ per hour to its bid. This constraint would mean AEMO's bid would never ordinarily be scheduled. If AEMO determines that its LNG reserve is required due to a threat to system security, AEMO would manually adjust its bid accreditation constraint to ensure the appropriate quantity of its injection is scheduled after all market participant bids have been scheduled.

To enable AEMO to use the lower cost accreditation option to achieve the objective of AEMO being supplier of last resort, provision has been made in the final rule for the gas scheduling procedures to allow AEMO to:

- use LNG injection bids and accreditation as a means by which gas from its LNG reserve is incorporated in market schedules
- impose conditions in relation to the scheduling of gas from its LNG reserve.

To address the concerns raised by APA about the potential for gas from AEMO's LNG reserve to be injected ahead of other market participants' LNG, the final rule only allows AEMO to:

- include gas from the LNG reserve in a pricing schedule if all market participant bids (including market participant LNG injection bids) have already been scheduled

98 AEMO, *response letter to AEMC*, 8 December 2022, p. 3.

- include gas from the LNG reserve in an operating schedule if the gas is already included in the relevant pricing schedule or all market participant LNG injection bids have already been scheduled.

In effect, this means that AEMO will not be able to schedule gas from its LNG reserve ahead of other market participant LNG injection bids.

The Commission considers this approach will provide sufficient protection to market participants with LNG stock. It does not, therefore, consider it necessary to allocate these participants free Melbourne zone entry capacity certificates, as suggested by APA.

4.2.4 Final determination

The Commission's final determination is to amend the NGR to:

1. Allow AEMO, where gas is to be injected from the LNG reserve under rule 343(1) of the NGR to:[99]
   - include the quantity in the applicable operating schedule and, where applicable, pricing schedule
   - use other means available to it to inject the gas.
2. Only allow AEMO to include gas from its LNG reserve in:[100]
   - a pricing schedule if:
     - all available market participant bids have already been scheduled (but allowing for rounding to whole gigajoules), and
     - the market price in the pricing schedule would otherwise have been at VoLL
   - an operating schedule if:
     - the gas is already included in the relevant pricing schedule, or
     - all market participant LNG injection bids have already been scheduled (but allowing for accredited constraints and rounding to whole gigajoules).
3. Requiring any gas that is placed in a pricing or operating schedule to be included at VoLL.[101]
4. Require the gas scheduling procedures to set out the procedures relating to injections from the LNG reserve and:[102]
   - requiring the procedures to explain what steps AEMO will take to ensure that gas from its LNG reserve will be scheduled last as provided for in rule 285(2)
   - enabling the procedures to allow AEMO to:
     - use LNG injection bids and accreditation as a means by which gas from the LNG reserve is incorporated into a market schedule
     - impose conditions in relation to the scheduling of gas from the LNG reserve

99 Rule 285(1) of the final rule.
100 Rule 285(2) of the final rule.
101 Rule 285(2)(c) of the final rule.
102 Rule 285(3)-(4) of the final rule.

— provide a demand forecast for gas it withdraws from the market for liquefaction.

The final rule is more preferable to the proposed rule because it will provide AEMO and market participants with more guidance on and transparency of:

- how gas from AEMO's LNG reserve can be supplied into the market and the circumstances in which it can be included in the market schedules
- how AEMO is to interact with the market, in terms of:
  - the price to be used when its gas is included in the market schedules
  - giving effect to the supplier of last resort principles
  - the measures that AEMO will employ to address the risk that it may compete with other market participants at VoLL.

4.3 Should AEMO be able to dispose of its LNG stock for other reasons?

4.3.1 Proponent's view

The proposed rule does not contemplate AEMO being able to dispose of gas from its LNG reserve for any reason other than to mitigate against the risk of curtailment or to ensure the security of the DTS.

4.3.2 Stakeholder views

Some stakeholders suggested the NGR to allow AEMO to dispose of some of its gas from the LNG reserve at the end of winter, including:

- the ACCC and Brickworks noted this could reduce the costs for consumers[103]
- the AEC noted that if the disposal would reduce AEMO's contracting cost without jeopardising system security, safety and supply, then it would support this approach[104]
- CSR agreed this should be considered, but noted it could give rise to higher costs if AEMO has to buy and sell at prescribed times that participants can take advantage of.[105]

In bilateral discussions, some stakeholders also suggested that the Commission consider allowing AEMO to dispose of some of its gas from the LNG reserve if the LNG storage provider needs to undertake maintenance.

4.3.3 Analysis

Based on the feedback provided by stakeholders, the Commission has considered whether provision should be made in the rules for AEMO to be able to dispose of gas from its LNG reserve at the end of winter, or for any other reason.

103 Submissions to the consultation paper: ACCC, p. 4; Brickworks, p. 7.
104 AEC, submission to the consultation paper, p. 2.
105 CSR, submission to the consultation paper, p. 8.

Should provision be made for disposals at the end of winter?

Some stakeholders suggested that disposals by AEMO at the end of winter could result in lower costs. However, while AEMO may make money on the sale of LNG stock, it would continue to incur storage capacity charges under its contract with APA. AEMO would also incur costs refilling the capacity at a later date.

The requirement to continue to pay for storage capacity that is not being used and to incur the costs of refilling the capacity at a later date means that it is quite possible that a post-winter disposal could result in higher costs, rather than lower costs.

The Dandenong LNG facility's relatively slow liquefaction rate also means that if AEMO disposes of LNG stock at the end of winter, there is a risk that it may not have sufficient LNG to manage threats to system security that arise at other times of the year, including as a result of Longford's planned outages in late 2023 and 2025.

This risk is not unique to AEMO. Rather, as outlined in Box 2, the facility's slow liquefaction rate affects how all participants use the facility. This can be seen in Figure 1.1, which shows that participants tend not to dispose of stock at the end of winter. Rather, they maintain similar levels of LNG storage throughout the year.

Given the potential costs and risks associated with post-winter disposals, the Commission has decided not to specify in the final rule that AEMO dispose of its LNG stock at the end of winter.

Are disposals required in any other circumstances?

Some stakeholders suggested that AEMO may need to dispose of some of its gas in the LNG reserve if the LNG storage provider needs to undertake maintenance. AEMO may also need to dispose of LNG stock if a market participant acquires some of its relinquished capacity but decides not to acquire the associated LNG stock. AEMO may need to dispose of some or all of its LNG stock at the end of the interim rule.

Under the proposed rule, AEMO would be prevented from disposing of its LNG stock in any of these circumstances. This is because the proposed rule only allowed AEMO to use its LNG reserve to mitigate against the risk of curtailment or to ensure the security of the DTS. It also required the price for any injection of LNG stock to be equal to VoLL, which may limit AEMO's ability to dispose of gas from its LNG reserve stock in these instances.

As a result, there is a risk under the proposed rule that if AEMO had to dispose of gas from its LNG reserve to satisfy a contractual or regulatory obligation that it would have to breach either the NGR to do so or its agreement with the LNG storage provider (i.e. by not disposing of the amounts required).

The Commission has decided to amend the NGR to address this risk. The final rule recognises that AEMO may have obligations that could require it to dispose of some of its LNG stock. In such instances, the gas should be bid into the market at $0/GJ to reduce the potential impact that AEMO may otherwise have on market participants and the operation of the market.

4.3.4 Final determination

The Commission's final determination is to amend the NGR to:

1. Allow AEMO to dispose of gas from its LNG reserve where it has a contractual obligation or an obligation under a regulatory instrument to do so, by including the quantity to be injected in the applicable pricing and operating schedule.[106]
2. Require AEMO when injecting gas for any of those reasons, to use a bid price of $0/GJ and, to the extent reasonably possible, schedule in the gas at times and over a period that minimises any impact on the market reasonably foreseeable to AEMO.[107]

The final rule is consistent with achieving the NGO and is more preferable to the proposed rule because it recognises that some flexibility for disposing of AEMO's LNG stock will be required in a limited set of circumstances but also provides guidance on how the disposal is to occur in these circumstances. This provides clarity to AEMO and market participants.

Absent this amendment, AEMO could be in breach of the NGR and/or its LNG storage agreement if it disposed of its LNG holding for reasons other than mitigating curtailment, managing system security or safe shutdown.

4.4 Conclusion on supplier of last resort rule

The Commission's final rule establishes AEMO as supplier of last resort in relation to gas held in the Dandenong LNG facility over the period 2023-2025. As a result, the final rule specifies:

- **Use of the LNG reserve:** Consistent with the existing intervention power in rule 343(1) of the NGR, AEMO will be able to inject gas from its LNG reserve if it reasonably considers a threat to system security is unlikely to subside without intervention.[108] Consistent with the current *Wholesale market system security procedure*s, the term 'threat to system security' includes a threat to supply, public safety, gas quality and system pressures and flows.
- **Supply from LNG reserve:** AEMO will be able to inject gas from its LNG reserve by including it in the applicable operating schedule and, where relevant, pricing schedule at a price equal to the VoLL, subject to a number of supplier of last resort constraints in the rules.[109] AEMO will also be able to inject the gas using any other means available to it (e.g. through a direction).[110] The final rule also requires AEMO to set out a number of matters in the gas scheduling procedures relevant to these provisions.[111]
- **LNG stock disposals:** Outside rule 343(1) of the NGR, AEMO will only be able to dispose of LNG stock if it has a contractual or regulatory obligation to do so. In these

106 Rule 286(4) of the final rule.
107 Rule 286(5) of the final rule.
108 Rule 285(1) of the final rule.
109 Rule 285(2) of the final rule.
110 Rule 285(1) of the final rule.
111 Rule 285(3)-(4) of the final rule.

cases, AEMO will be required to use a bid price of zero and, to the extent reasonably possible, seek to minimise any impacts on the market that are reasonably foreseeable.[112]

Together these aspects of the final rule are expected to promote the NGO over the term of the rule by providing greater guidance and transparency on how and when AEMO can use its LNG reserve and how it is to interact with the market in its capacity as supplier of last resort. This is expected to provide the following benefits:

- provide for a safer and more secure and reliable source of supply to consumers in Victoria
- promote the efficient use of the Dandenong LNG facility
- support the efficient operation of the DWGM.

112 Rule 286(4)-(5) of the final rule.

5 CONTRACTUAL ARRANGEMENTS

This chapter discusses the LNG storage agreement element of the rule change request, which requires AEMO and the LNG storage provider to have an LNG storage agreement in place for the term of the rule that allows AEMO to perform the new roles and is on substantially the same terms as their 2022 agreement.

Stakeholder feedback on this element of the rule change request primarily focused on how the terms of the new LNG storage agreement would be determined, the risks AEMO may be exposed to and what would occur if an agreement could not be reached.

The Commission's consideration of the rule change request and stakeholder feedback is set out below, along with its final determination on the changes to be made to the NGR. Further detail on the final rules can be found in appendix A.

5.1 Proponent's view

In its rule change request, the Victorian Minister proposed to require AEMO and the LNG storage provider to have an LNG storage agreement in force at all times during the relevant years (2023-2025), under which AEMO may:[113]

- contract for the use of the uncontracted storage capacity during periods of the relevant year, and to the extent that in AEMO's reasonable opinion are necessary or convenient to satisfy AEMO's obligations[114]
- relinquish its capacity to the LNG storage provider if a market participant acquires, or proposes to acquire that capacity.[115]

The proposed rule also requires the LNG storage agreement and any amendments to be consistent with proposed rules 282-286A and on substantially the same terms (including as to price and price structure) as the 2022 storage agreement, except to the extent changes:[116]

- are reasonably necessary to:
  - give effect to changes in operational and technical requirements necessary for the facility's safe and reliable operation
  - ensure the agreement is consistent with the relevant rules
- reflect indexation in line with changes in the consumer price index (CPI)
- give effect to changes in law.

The proposed transitional rules require the LNG storage agreement to be in place by 15 March 2023 and also require the LNG storage provider to comply with obligations relating to the timing of offers, negotiations and proposed rule 282(2).[117] The proposed transitional rules also state that AEMO's acceptance of an offer will not be evidence that it satisfies rule 282(2)

113 Rule 282(1) of the proposed rule.
114 Rule 282(4) of the proposed rule.
115 Rule 282(1)(b) of the proposed rule.
116 Rule 282(2) of the proposed rule.
117 Transitional rules (1) and (2) of the proposed rule.

of the NGR. The rationale for this transitional rule was described in the rule change request as follows:[118]

> To protect the interests of consumers, these requirements may be enforced if required by the Australian Energy Regulator (AER). Recognising the pressures AEMO will be under to operationalise the rule, the rule clarifies that any enforcement action by the AER will not be affected by AEMO having entered into an LNG storage agreement on terms offered by the facility owner.

Proposed rule 282(3) also provides for any amendment requested by AEMO to be negotiated in good faith and for the LNG storage provider to respond to any request within 10 business days.

5.2 Stakeholder views

The ACCC, APA, Brickworks, EnergyAustralia and the AER were the only stakeholders that expressed a view on this element of the proposed rule.

The ACCC and APA supported the proposed approach,[119] while Brickworks and EnergyAustralia expressed concerns about the potential for the LNG storage provider to exercise market power in negotiations with AEMO.[120] Brickworks, for example, stated:[121]

> We note that there appears to be no restriction on how APA contracts LNG services or the pricing it will charge. This represents a significant risk to consumers who will ultimately pay the cost incurred by AEMO. There needs to be a consumer cost protection written into the rule to ensure AEMO is not being obligated to contract for LNG services at any cost.

EnergyAustralia made a similar observation:[122]

> The rule proposal requires that APA negotiate in good faith with AEMO and on broadly the same terms as the 2022 agreement between APA and AEMO, but this does not stop APA from increasing its prices for other market participants which lack good faith protection.
>
> Nor is it clear that the change in law provisions within the 2022 agreement between APA and AEMO will be sufficient to stop APA from exercising its market power in its dealings with AEMO, given that APA may already have had market power at the time that contract was entered into, and there are "Regulatory Change" provisions in the contract that may allow APA to renegotiate terms in the agreement affected by this rule change.

118 Rule change request, p. 12.
119 Submissions to the consultation paper: ACCC, p. 5; APA, p. 14.
120 Submissions to the consultation paper: Brickworks, p. 5; EnergyAustralia, p. 3.
121 Brickworks, submission to the consultation paper, p. 5.
122 EnergyAustralia, submission to the consultation paper, p. 3.

In turn, this can be expected to increase prices for consumers directly, given that APA is now selling its services at higher prices and there are additional costs in AEMO contracting storage, which must be borne by consumers.

In contrast to these stakeholders, APA noted that the existing contract with AEMO had been recently negotiated and that it supported the requirement for a new agreement to be on substantially the same terms as that agreement.[123]

However, APA did note that there remains ongoing uncertainty regarding the future contracting behaviour of market participants. It, therefore, sought scope to reopen elements of the contract with AEMO to support the ongoing commercial operation of the tank if there is a material change in circumstances, similar to that provided for under proposed rule 282(3) for changes requested by AEMO.[124]

The AER primarily focused on the drafting of the proposed rules and suggested:[125]

- that more precise language be used to improve enforceability
- allowing the parties to have recourse to a dispute resolution mechanism if they are unable to reach agreement
- classifying any positive obligations on the LNG storage provider as civil penalty provisions to enable the AER to take effective enforcement action.

5.3 Analysis

This element of the rule change request comprises three key requirements:

1. AEMO and APA must have an LNG storage agreement in place over the term of the rule that allows AEMO to perform the buyer and supplier of last resort roles from March 2023
2. the LNG storage agreement must be on substantially the same terms as the 2022 agreement, except to the extent changes are necessary for specific matters
3. AEMO requested changes to the LNG storage agreement must be negotiated in good faith.

The Commission's analysis of each of these requirements is set out below.

5.3.1 Having an LNG storage agreement in place

To be able to perform its buyer and supplier of last resort roles in the manner described in chapters 3-4, AEMO will need to have a storage agreement in place with the LNG storage provider that allows it to contract for the use of the uncontracted LNG storage capacity and, where required, to relinquish capacity over the term of the rule.

As outlined in section 3.3, the agreement will also need to be in place prior to 1 March 2023 to enable AEMO to fill its storage capacity prior to winter 2023. The latest date by which an agreement could be put in place to meet this timeframe is 28 February 2023.

123 APA, submission to the consultation paper, p. 8.
124 ibid.
125 AER, submission to the consultation paper, pp. 1-2.

While it may be possible for AEMO and the LNG storage provider to enter into the required agreement without any specific obligations in the NGR, there is a risk with this approach that:

- no agreement is reached, in which case AEMO would be unable to perform its buyer and supplier of last resort roles over the term of the rule
- an agreement is not reached by 28 February 2023, in which case AEMO's ability to perform its buyer and supplier of last resort roles in winter 2023 may be constrained
- if an agreement is reached, the terms of the agreement may not allow AEMO to perform its buyer and supplier of last resort roles in the manner set out in the rules.

There is also a risk that AEMO, with no other choice but to procure all the uncontracted capacity from the LNG storage provider, would be a price taker in the negotiations. This could, in turn, mean that AEMO is more susceptible to exercises of market power by the LNG storage provider, the costs of which would be borne by consumers.

The Commission also notes that as a result of the obligation on AEMO to procure all available uncontracted capacity of the Dandenong LNG facility, the LNG storage provider will have certainty in revenue for the facility compared to a situation without the final rule.

Given the nature of these risks and the impact that they could have on the operation of the rule and the price payable by consumers, the Commission considers the final rule should differ slightly from the proposed rule and provide for the following:

- Require an LNG storage agreement to be in force at all times between 2023 and 2025 that allows AEMO to contract for the use of the uncontracted LNG storage capacity.
- Require the LNG storage agreement to:
  a. be consistent with the rules relating to AEMO's buyer and supplier of last resort roles
  b. allow AEMO to relinquish capacity to the LNG storage provider if requested by the LNG storage provider to satisfy a market participant's request for services
  c. otherwise be on substantially the same terms (including as to price and price structure) as the 2022 agreement, subject to variations reasonably necessary for the safe and reliable operation of the LNG facility, or to give effect to variations provided for in that agreement (e.g. CPI, change of law and change in nature of the market).[126]

  The requirements in (c) are discussed in further detail in section 5.3.2.
- Set out the obligation that AEMO and the LNG storage provider have to negotiate in good faith from the commencement of the rule and the obligation the LNG storage provider has to provide AEMO with an offer (or revised offer) within five business days if requested by AEMO.

As noted in the rule change request, there is a risk that even if these matters are specified in the NGR, AEMO and the LNG storage provider may be unable to reach an agreement by 1 March. Under the proposed rule, this risk was assumed to be addressed by requiring an LNG

126 APA and AEMO, *LNG services agreement (AEMO)*, 2022.

storage agreement to be in place by 15 March 2023 and relying on the AER to take enforcement action if the LNG storage agreement requirements were not complied with.

However, the Commission's assessment is that this approach may not result in an effective resolution of any dispute that may arise between AEMO and the LNG storage provider when negotiating the LNG storage agreement. As a result, under the transitional rule:

- AEMO and the LNG storage provider may refer the dispute to arbitration by notice to the AER if they are unable to reach an agreement by 1 February 2023[127]
- the arbitrator to be able to make an interim determination that will apply until the final determination is made.

Apart from providing for a more effective resolution of any dispute that may arise, giving the parties recourse to arbitration should help to reduce the imbalance in bargaining power that AEMO may otherwise face in negotiations with the LNG storage provider.

While the proposed enforcement mechanism has been replaced with an arbitration mechanism in the final rule, the AER will still have a role to play in enforcing other obligations under the LNG storage agreement rules.

The AER will, for example, be able to take enforcement action if AEMO or the LNG storage provider fails to negotiate in good faith[128] or if the LNG storage provider fails to provide offers in accordance with the NGR.

5.3.2 The new contract must be on substantially the same terms as the 2022 contract

The proposed rule specifies that the LNG storage agreement to be on substantially the same terms as those set out in AEMO and the LNG storage provider's 2022 agreement, except to the extent changes:

- are reasonably necessary to give effect to changes in operational and technical requirements necessary for facility's safe and reliable operation and ensure the agreement is consistent with the relevant rules
- reflect indexation in line with changes in CPI
- give effect to changes in law.

While there are a number of other ways in which the terms and conditions of the LNG storage agreement could be determined, they would take a considerable time to implement and posed a risk to an agreement being in place prior to winter 2023. Therefore, there is merit in the proposal to use the existing contract as the starting point for the LNG storage agreement to apply in 2023-2025.

As both the Victorian Minister and APA have observed, the existing contract can be considered a reasonable starting point for the LNG storage agreement that is to apply over

127 After notifying the AER, the parties are to agree on the arbitrator within five business days. If this is not achieved, the AER must consult with the parties to select an arbitrator and use reasonable endeavours to refer the dispute to the selected arbitrator within 15 business days of receiving the notice of the dispute.

128 While the AER suggested that the obligation to negotiate in good faith be replaced with an obligation to use best endeavours in negotiations, equivalent obligations throughout the NGR are all framed as an obligation to negotiate in good faith. Using different language in this rule could therefore be viewed as imposing a different standard, which is not the intent.

the term of the rule because it was recently agreed to and can be taken to reflect terms that are mutually acceptable to APA and AEMO.[129]

Allowing the existing contract to be varied for safe and reliable operation allows the parties to address any matters that may have arisen since the 2022 agreement was entered into, although the Commission notes that none have been raised with it during the course of this rule change process. Allowing the existing contract to be varied to reflect indexation and change in law is also consistent with standard commercial practice and will mean both parties' interests are appropriately taken into account.

Based on the Commission's review of the 2022 agreement, it would appear that the latter of these types of variations is already provided for. Specifically, the 2022 agreement includes:[130]

- a CPI escalation mechanism, which provides for annual escalation each February using December quarter CPI (all groups, weighted average of eight capital cities)
- a change in law provision, which in general terms allows the net financial effect associated with any change in law that results in a non-trivial increase or decrease in the LNG storage provider's costs to be passed through to AEMO
- a change in the nature of the market provision, which states that if the DWGM rules, the NGR or NGL are changed in a way that materially affects the operation of any provision of the agreement, the parties will renegotiate in good faith any terms that are no longer operational, or no longer operate as originally intended.

Having considered the above, the Commission has simplified the drafting of the final rule compared to the proposed rule to require the LNG storage agreement to be on substantially the same terms (including price and price structure) as the 2022 LNG storage agreement, subject to variations that:

- are reasonably necessary for the safe and reliable operation of the LNG storage facility
- give effect to terms of the 2022 LNG storage agreement providing for variation in specified circumstances (e.g. for changes in law) or applying specified methodologies (e.g. the CPI escalation mechanism).

As to the concerns that Brickworks and EnergyAustralia have raised about the LNG storage provider's market power, the final rule is intended to limit the opportunities for the LNG storage provider to exercise its market power by:

- requiring the LNG storage agreement to be on substantially the same terms as the existing agreement
- allowing AEMO to have recourse to arbitration, which it could do if it is concerned the LNG storage provider is exercising its market power during the negotiation of the LNG storage agreement.

129 Rule change request, p. 12. APA, submission to the consultation paper, p. 8.

130 APA and AEMO, *LNG Services Agreement (AEMO)*, 2022, https://www.aemc.gov.au/sites/default/files/2022-08/AEMO_APA%20LNG%20services%20agreement%20-%20redacted.pdf

5.3.3 AEMO's ability to request changes to the agreement

Under proposed rule 282(3), AEMO would be able to request changes to the LNG storage agreement. If that occurs, the LNG storage provider must respond within 10 business days and negotiations must be undertaken in good faith.

APA expressed concern that this rule was one-sided. The Commission has considered this point and observes that it is always open to contracting parties to mutually agree to amend the terms of their agreement. Therefore, there does not appear to be any need to make provision for AEMO or APA requested changes to the contract in the final rule. Proposed rule 282(3) has therefore been excluded from the final rule.

5.4 Final determination

The Commission's final determination is to amend the NGR to provide for the following:

- **Requirement to have an LNG storage agreement in place:** An LNG storage agreement must be in force at all times over the relevant years that allows AEMO to contract for the use of the uncontracted LNG storage capacity.[131]
- **Terms of the LNG storage agreement:** The LNG storage agreement must:[132]
  - be consistent with rules 282, 285(1) and rules 286(3)-(4)
  - allow AEMO to relinquish its capacity from time to time where required by rule 286(1)
  - otherwise be on substantially the same terms (including as to price and price structure) as the 2022 LNG storage agreement, subject to variations that:
    - are reasonably necessary for the LNG storage facility's safe and reliable operation
    - give effect to terms of the 2022 LNG storage agreement providing for variation in specified circumstances or applying specified methodologies.
- **Establishment of the LNG storage agreement:** From the commencement of the rule, AEMO and the LNG storage provider must negotiate in good faith with a view to reaching agreement as soon as practicable after the commencement date. If requested to do so after 5 January 2023, the LNG storage provider must within five business days provide AEMO with an offer that satisfies the requirements in the rules and is capable of acceptance. The LNG storage provider must also provide AEMO with a revised offer that reflects the outcomes of good faith negotiations within five business days of a request.[133]
- **Arbitration:** If an LNG storage agreement is not entered into by 1 February 2023, the parties may have recourse to arbitration, which will involve the following:[134]
  - **Notification of a dispute:** AEMO or the LNG storage provider can give notice to the AER of the dispute and must also notify the other party
  - **Selection of the arbitrator:**

131 Rule 282(1) of the final rule.
132 Rule 282(2) of the final rule.
133 Transitional rule 92 of the final rule.
134 Transitional rule 93 of the final rule.

  - AEMO and the LNG storage must negotiate in good faith to agree on the identity of the arbitrator and notify the AER if agreement is reached.
  - If the AER does not receive notification within five business days, it must select the arbitrator after consultation with AEMO and the LNG storage provider.
  - The arbitrator must be independent and properly qualified and may be a person that is also a member of a pool of arbitrators under another part of the NGR
  - The AER must use reasonable endeavours to refer the matter to an arbitrator within 15 business days of the original notice.
- **Dispute process:** The dispute must be heard and determined in Victoria. The arbitration will also be subject to the procedural provisions of the *Commercial Arbitration Act 2011* of Victoria.[135]
- **Role of the arbitrator:** The arbitrator must determine the terms and conditions of the LNG storage agreement. It may also make an interim determination that will apply until the final determination is made. If it does so, the arbitrator can, as part of the final determination, decide on any adjustment to account for the difference between the interim and final determinations.
- **Effect of the arbitrator's decision**: Where the arbitrator determines the terms and conditions of the LNG storage agreement, an agreement is taken to come into effect on and from the date specified in the determination.

Together these aspects of the final rule determination are expected to promote the NGO by:

- Mitigating the risk that the contractual arrangements required to enable AEMO to perform the buyer and supplier of last resort roles are not put in place, which could otherwise operate to the detriment of consumers in terms of safety, reliability and security of supply.
- Reducing the imbalance in bargaining power AEMO may otherwise face in negotiations and posing more of a constraint on the LNG storage provider's behaviour, which could otherwise operate to the detriment of consumers in terms of the price paid for storage.

The key differences between the final rule and the proposed rule are reflected in the description of the requirements for the new agreement, the less prescriptive negotiation timetable and the addition of the arbitration mechanism. These aspects of the final rule are intended to provide for a more targeted, fit-for-purpose and proportionate framework by:

- avoiding any unnecessary overlap between the rules and the existing agreement, which could otherwise give rise to confusion and slow the negotiation process and, if relevant, an arbitration process
- providing for a more effective resolution of any dispute that may arise between AEMO and the LNG storage provider when negotiating the LNG storage agreement while still allowing AEMO to perform its buyer and supplier of last resort roles.

The final rule is therefore considered more preferable to the proposed rule and, in the Commission's view, better achieves the NGO.

135 Section 270B of the NGL and regulation 7C of the National Gas (South Australia) Regulations.

6 COST RECOVERY AND PROCEEDS DISTRIBUTION

This chapter focuses on the cost recovery and distribution of proceeds element of the rule change request.

Stakeholders expressed a number of concerns with this element of the rule change request. Most stakeholders advocated the adoption of more of a causer or beneficiary pays approach and greater transparency of the cost recovery and proceeds distribution arrangements.

The Commission's consideration of the rule change request and stakeholder feedback is set out below along with its final determination on the changes to be made to the NGR. Further detail on the final rules can be found in appendix A.

6.1 Proponent's view

The rule change request proposed to require AEMO to:

- Recover the costs of acquiring storage capacity through participant fees, with a transitional arrangement to enable AEMO to recover these costs prior to the general determination through an additional participant fee, consulted on using the standard consultative procedure.[136]
- Include any losses or proceeds arising from the utilisation of the LNG reserve, including on account of any imbalances, deviations, ancillary or uplift payments in the linepack account, which must be cleared each billing period.[137]

6.2 Stakeholder views

Except for APA, who supported the proposed approach to cost recovery and proceeds, the majority of stakeholders noted the need for:

- greater transparency of the cost recovery and proceeds distribution arrangements[138]
- more of a causer or beneficiary pays approach to cost recovery.[139]

The ACCC, for example, noted that AEMO should provide more detail on how it is to recover costs and:[140]

> As a matter of principle and to the extent possible, AEMO should seek to recover costs in the first instance from market participants who contribute to system security and reliability issues and otherwise through market participants who benefit most from AEMO's role as buyer and supplier of last resort.

Brickworks also suggested the use of a causer pays approach for the variable costs associated with AEMO's use of the LNG reserve, noting that the fixed costs for the LNG

136 Transitional rule (4) of the proposed rule. This transitional rule defines the commencement of proposed rule 282 as a major gas project for the purposes of rule 135CB(1) of the NGR.

137 Rule 285(4) of the proposed rule.

138 Submissions to the consultation paper: ACCC, p. 5; AEC, p. 2; Alinta, p. 2; Brickworks, pp. 3, 6; Shell, p. 3.

139 Submissions to the consultation paper: ACCC, p. 5; AEC, p. 2; Brickworks, p. 6; CSR, p. 9; Origin, p. 3; Shell, p. 3.

140 ACCC, submission to the consultation paper, p. 5.

service could be recovered through participant fees, and any variable costs incurred from injecting LNG or restocking LNG levels should be recovered using a new causer-based cost allocation. This approach, in its view, would provide greater transparency to market participants on the actual costs incurred by AEMO for using its LNG and avoid any unintended cost impact on market participants.[141]

CSR suggested a similar approach to Brickworks. It noted that while storage costs could be recovered through participant fees, other costs associated with the use of the LNG reserve should, to the extent possible, be recovered using a causer pays approach. CSR considered that the use of the linepack account for these costs would not achieve this outcome.[142]

Origin and Shell also advocated the use of a causer pays approach and suggested this could be achieved by allocating costs based on winter demand (or net withdrawals).[143]

Origin noted this approach is similar to the procurer of last resort approach under the National Electricity Rules (NER) and would mean costs are only recovered from participants notionally creating the need for the LNG reserve. As an alternative, Origin suggested that market participants with LNG storage capacity be allocated a lower portion of costs.[144]

AEC expressed a similar view. It stated that if not correctly targeted, the cost recovery mechanism could undermine the current incentives for participants to hold LNG storage if AEMO is going to charge them irrespectively of what LNG storage they have contracted for.[145]

6.3 Analysis

As the feedback from stakeholders reveals, there are interrelated questions that need to be considered when designing the cost recovery-proceeds distribution mechanism for the buyer and supplier of last resort roles. Broadly, the questions that need to be considered are:

- whether it is necessary to have two cost recovery mechanisms
- how any proceeds that AEMO generates should be distributed
- if a causer and/or beneficiary pays approach can be employed.

6.3.1 Is it necessary to have two cost recovery mechanisms?

The rule change request proposes the use of two cost recovery mechanisms: participant fees for storage costs and the linepack account for all other costs.

The rationale for the different treatment of costs was not explained in the rule change request. However, subsequent discussions with AEMO indicated that the main concern with market participant fees is that they can only be updated on an annual basis. This could give rise to cash flow issues for AEMO if gas prices and other costs associated with the buyer and

141 Brickworks, submission to the consultation paper, p. 3.
142 CSR, submission to the consultation paper, p. 9.
143 Submissions to the consultation paper: Origin, p. 3; Shell, p. 2.
144 Origin, submission to the consultation paper, p. 3.
145 AEC, submission to the consultation paper, p. 2.

supplier of last resort roles are higher than forecast. For that reason, it viewed the linepack account as one way to overcome this shortcoming with participant fees.

While the Commission understands the cash flow related concerns raised by AEMO, it has identified a number of issues with the proposed use of two cost recovery mechanisms. The first is that the use of the two cost recovery mechanisms would result in the costs incurred by AEMO being allocated to participants on a different basis, without any clear economic basis for doing so. Specifically if the proposed rule was implemented:

- storage costs would be allocated to participants on the basis of their actual withdrawals in the year
- the cost of acquiring the gas to fill the LNG reserve and other costs associated with the use of the LNG reserve would be allocated on the day they are incurred on the basis of participants' actual withdrawals on that day.

Other issues with the proposed approach are that the linepack account:

- would not provide sufficient transparency of the costs that AEMO is incurring and how they are being allocated to participants
- could result in a lumpy cost recovery profile, with significant costs being allocated on the day they are incurred.

For these reasons, the Commission has considered whether another cost recovery mechanism could be implemented that would address the concerns that AEMO has raised about cash flow, while also providing transparency and the consistent treatment of costs associated with the buyer and supplier of last resort roles.

As AEMO noted, market participant fees are established on an annual basis and cannot be updated on an intra-year basis. Therefore, the Commission has decided to implement a new cost recovery mechanism as part of the final rule. This bespoke mechanism requires all costs to be treated in the same manner and recovered from participants on a monthly basis using the allocation method set out in section 6.3.3.

The use of this simplified approach is expected to result in all costs associated with the buyer and supplier of last resort roles being treated in the same way. It will also provide the benefit of greater transparency of the costs and a smoother recovery profile, with costs recovered on a monthly basis rather than on the day they are incurred.

6.3.2 How should proceeds be distributed?

The rule change request proposes that any proceeds AEMO generates from the use of the LNG reserve to be distributed through the linepack account. This means that the proceeds would be allocated to participants on the day they are generated on the basis of actual withdrawals on that day.

The Commission has two concerns with this proposed approach to distributing proceeds. The first is that it would result in those parties that have withdrawn gas on the day receiving a share of the proceeds. If a party's withdrawals are not covered by injections then it may have contributed to the need for gas from the LNG reserve to be used on the day but would still

receive a share of proceeds. The potential reward to those that have contributed to the problem on the day is a perverse outcome that would undermine the price signal and incentives that the use of VoLL is intended to provide (see section 4.2).

The second concern with the use of the linepack account is that it does not provide for proceeds to go back to those participants in the same proportion to which costs were allocated, which could result in winners and losers.

This can be seen in the following simplified example, which assumes AEMO incurred $5 million in costs, which it recovered on the basis of yearly withdrawals and then generated $5 million in proceeds on a single day. These proceeds were distributed on the basis of withdrawals on the day the proceeds were generated. In this example:

- party A's annual withdrawals are assumed to account for 20% of the total withdrawals, while its withdrawals on the day the LNG reserve was used were only 10%
- party B's annual withdrawals are assumed to account for 10% of the total withdrawals, while its withdrawals on the day the LNG reserve was used were 20%.

In this case, party A would incur $1 million of the costs but only receive $0.5 million in proceeds. Party B would incur $0.5 million of the costs and receive $1 million in proceeds.

To address these concerns with the linepack account, the Commission has decided that the final rule should require any proceeds that AEMO generates to form part of the same cost recovery mechanism described in section 6.3.1. This will result in proceeds arising from the injection of AEMO's LNG stock into the market being rebated back to participants on a monthly basis using the same allocation method as that used for costs (see section 6.3.3). This includes proceeds that AEMO generates from the injection of gas from its LNG reserve or from any LNG stock it transfers to a market participant that acquires relinquished capacity.

6.3.3 Can a causer and/or beneficiary pays approach be implemented?

Who should pay if the LNG reserve is used?

As outlined above, some stakeholders have suggested that more of a causer pays approach be employed. However, this is already provided for through the market design, under which those participants short in the market will pay the market price for gas, and through the principles used to allocate uplift.

Who should pay if the LNG reserve is not used?

The question of who should pay for the costs associated with establishing the LNG reserve if it is not used must also be considered. In principle, these costs should be recovered from those that benefit from AEMO holding the LNG reserve as an 'insurance policy' that can be drawn upon to address threats to system security if they arise.

Discussions with stakeholders indicates that it is difficult to identify a particular group of participants in the DWGM that would benefit more than others from the maintenance of the LNG reserve for the purpose of mitigating threats to system security.

For example, stakeholders noted that, while market participants located in Melbourne and those using the Longford-Melbourne pipeline may appear to be the principal beneficiaries of the LNG reserve, the Dandenong LNG facility can be used to 'buy time' where a gas supply issue has emerged in other locations across the DWGM. This suggests that the benefit of AEMO holding LNG reserve is not limited to a particular geographical area within the DWGM, even though it may first appear so.

It is similarly difficult to draw a seasonal distinction between potential beneficiaries of the LNG reserve as an insurance policy. This is because while the LNG reserve is principally being established for winter, AEMO will be able to use it at other times of the year. It will, for example, be able to use its LNG reserve during the planned outages at Longford, which are expected to occur during summer of 2023 and 2025.

The Commission has also considered whether there are particular types of gas users that may benefit more than others from AEMO holding an LNG reserve. The DWGM curtailment tables may suggest that large industrial users and gas powered generators would be the most likely to benefit from a reduced risk of curtailment.

However, given the conditions expected to prevail in 2023-2025 (see Box 2) it is possible that wider spread curtailment could be required in the absence of AEMO's LNG reserve. All types of gas users in the DWGM could therefore benefit from the maintenance of the LNG reserve as an insurance policy.

Having considered these different aspects, it appears that AEMO's ability to hold and use LNG at Dandenong for the purpose of mitigating the risk of curtailment of DWGM users provides a system-wide benefit across the DWGM. Accordingly, the Commission has decided that on balance:

- the costs associated with AEMO's buyer and supplier of last resort roles should be recovered from all market participants on the basis of gas withdrawals
- to the extent there are any proceeds arising from the use of the LNG reserve or LNG stock transfers, they should be distributed back to market participants on the same basis.

To enable proceeds to go back to market participants on the same basis as the costs were recovered, a fixed allocation factor based on gas withdrawals will be required for both cost recovery and proceeds distribution.

While there are different ways in which that fixed allocation factor could be calculated, the simplest and most transparent approach is to base it on actual withdrawals in the prior financial year. The Commission considers that having regard to the planned term of the rule, this approach is fit for purpose.

Implementation of the above approach will result in the costs incurred and proceeds generated in 2023 being allocated on the basis of actual withdrawals in 2021-2022. Similarly, the allocation in 2024 and 2025 would be on the basis of actual withdrawals in 2022-2023 and 2023-2024, respectively. The use of this approach will result in all participants, including those that hold LNG stock, contributing to the costs and sharing in the benefit of any proceeds that are generated.

In establishing this methodology, the Commission did consider whether to exclude participants holding LNG stock from the cost recovery arrangements. However, the basis for doing so was not strong.

This is because participants that hold LNG stock may still benefit from the use of gas from AEMO's LNG reserve if they do not hold sufficient LNG stock to cover all of their curtailment related risk, or if another threat to system security arises.

In addition, excluding these participants, would mean they would not share in any of the proceeds that may be generated if gas from the LNG reserve is used.

Finally, the Commission notes that the costs of AEMO holding LNG at the Dandenong facility are projected to be relatively low compared to current market participant fees (around $0.04-$0.05/GJ — see Table 2.1) and so are not expected to affect the incentive participants have to hold their own LNG stock.

6.4 Final determination

The Commission's final determination is to amend the NGR to require:

- AEMO to maintain an LNG storage measure account that must be cleared each month by charging, or making payments to, market participants, with such amounts to be included in settlement statements for the billing period following the end of the relevant month.
- the interim LNG storage measure account to include:
  - all the costs incurred by AEMO in performing its buyer of last resort rule and amounts payable by AEMO as a result of including its gas in a pricing and/or operating schedule
  - the proceeds received by AEMO from including its gas in a pricing and/or operating schedule, or from transferring LNG stock
- AEMO to determine and notify to each market participant, the allocation factor that will be used to allocate costs and proceeds to the market participant for each year in accordance with the LNG reserve procedures
- The LNG reserve procedures to specify the methodology to be used by AEMO to determine the allocation factor for each year, which must:
  - be based on the market participant's share of total actual withdrawals from the DWGM in the prior financial year and fixed for all months in the year, unless an adjustment is required because a person ceases to be a market participant
  - allow the LNG storage measure account to be cleared each month.

Together these aspects of the final rule are more preferable to that included in the proposed rule. They are expected to promote the NGO by providing a simpler cost recovery-proceeds distribution mechanism that is more transparent and provides for a more equitable allocation of costs and proceeds.

The final rule is also more targeted, fit for purpose and transparent than the proposed rule. The Commission is therefore satisfied that the more preferable rule will, or is likely to, better contribute to the achievement of the NGO.

7 ACCOUNTABILITY AND TRANSPARENCY

This chapter focuses on the accountability and transparency elements of the rule change request, which proposed that AEMO report to the market on its buyer and supplier of last resort activities.

Stakeholders identified potential gaps in the proposed information reporting regime and suggested strengthening the accountability and transparency framework.

The Commission's consideration of the rule change request and stakeholder feedback is set out below, along with its final determination on the changes made to the NGR. Further detail on the final rules can be found in appendix A.

7.1 Proponent's view

The rule change request proposed AEMO publish information on:[146]

- the amount of storage capacity it contracts and any capacity it relinquishes[147]
- any LNG stock transferred to a market participant.[148]

The rule change request noted that the publication of this information, in conjunction with the information storage facility operators will soon be required to publish about the storage prices paid by users, is intended to make AEMO accountable in its role as buyer of last resort.[149]

These new requirements are also expected to assist market participants that are considering contracting storage capacity held by AEMO from the LNG storage provider.[150]

7.2 Stakeholder views

The majority of stakeholders that commented on this aspect of the proposed rule sought greater transparency of AEMO's actions than proposed.[151] The one exception was APA, which stated that the proposed rule provides for sufficient transparency and accountability.[152]

Those stakeholders advocating for more transparency suggested that AEMO be required to:

- inform market participants when it intends to procure gas to fill its storage capacity[153]

146 Rules 282(4) and 282(7) of the proposed rule.

147 Rule 282(8) of the proposed rule.

148 Rule 286(3) of the proposed rule.

149 A new Part 18A of the NGR will require storage facility operators (including the operator of the Dandenong LNG facility) to report on the prices actually paid by users, contracted volumes and other key terms and conditions in these contracts. This new part of the NGR is anticipated to commence in 2023. See https://www.energy.gov.au/government-priorities/energy-ministers/energy-ministers-publications/energy-ministers-agree-finalpackage-gas-pipeline-regulatory-amendment

150 Rule change request, p. 14.

151 Submissions to the consultation paper: EnergyAustralia, p. 6; Origin, p. 3; Shell, p. 3; Alinta, p. 2; CSR, p. 9.

152 APA, submission to the consultation paper, p. 15.

153 Submissions to the consultation paper: EnergyAustralia, p. 6; Origin, p. 3, Shell, p. 3.

- publish information on the price and volume of storage capacity procured[154] and relinquished, and the price and volume of gas purchased, sold and LNG transferred[155]
- publish a summary operational report prior to winter and a post-winter summary of costs and their allocation.[156]

CSR also suggested that injections of gas from AEMO's LNG reserve be subject to an independent review.[157]

7.3 Analysis

Before considering the accountability and transparency arrangements that should apply to the buyer and supplier of last resort roles, it should be noted that because injections of gas from AEMO's LNG reserve will constitute an intervention under rule 343(1) of the NGR (see section 4.1), AEMO will be required to:

- issue a threat to system security notice prior to injecting gas from its LNG reserve[158]
- prepare and publish an intervention report if it injects gas from its LNG reserve.[159]

Market participants will therefore have a good understanding of when AEMO is considering injecting gas from its LNG reserve. The requirement to publish an intervention report will also provide for a greater degree of accountability in terms of the use of AEMO's LNG reserve.

In addition to these measures, it will be important for market participants to have a good understanding of the activities and costs associated with AEMO's buyer and supplier of last resort roles, and any interactions AEMO may have with the market in these roles.

While the proposed rule provided for transparency of some buyer of last resort activities, there are, as a number of stakeholders observed, gaps in the proposed reporting requirements that should be assessed on whether they need to be addressed.

The proposed rule does not, for example, require AEMO to report on when it may be interacting with the market to procure gas to fill its LNG reserve or the amount of gas it has procured. Nor does it require AEMO to:

- notify the market of how much LNG stock it holds going into winter, or at other times
- publish any information on the costs incurred or proceeds received in undertaking the buyer and supplier of last resort roles.

In the Commission's view, these are material gaps in the proposed accountability and transparency framework that should be addressed by requiring AEMO to:

- publish each liquefaction schedule (including any material updates) it agrees with the LNG storage provider so that market participants have an indication of when it intends to procure gas

154 Alinta, submission to the consultation paper, p. 2.
155 Shell, submission to the consultation paper, p. 3.
156 ibid.
157 CSR, submission to the consultation paper, p. 9.
158 Rule 341 of the NGR.
159 Rule 351 of the NGR.

- prepare and publish a pre-winter and pre-summer report that provides market participants with an overview of how much LNG stock AEMO holds going into these periods and what has occurred over the last six months in terms of:
  - AEMO's use of the Dandenong LNG facility, including information on:
    - the amount of storage capacity procured and relinquished by AEMO
    - the quantity of gas procured by AEMO, the quantity of gas injected from the LNG reserve into the market and the amount of any LNG stock transferred to a market participant that has procured AEMO's relinquished capacity
  - the costs that AEMO has incurred in procuring storage capacity, gas and associated services, as well as any market related costs (e.g. deviation or imbalance charges), broken down by category
  - the proceeds AEMO has received from the injection of gas from its LNG reserve and from any LNG stock transfers, broken down by category.

The inclusion of these measures in the final rule is intended to strengthen the accountability and transparency framework in a targeted and proportionate manner by relying on information that AEMO will have ready access to and only requiring detailed reporting twice a year. The costs associated with these measures are therefore expected to be relatively low.

As to CSR's suggestion regarding an independent review, the Commission does not consider this to be necessary given the other accountability measures that will be in place and the policy development work to be undertaken to establish longer term approaches to improve the efficient use of infrastructure such as the Dandenong LNG facility.

As outlined above, under the current provisions of the NGR AEMO will be required to publish an intervention report if it injects gas from the LNG reserve. This report will contain an assessment of the appropriateness of its actions and the costs incurred by AEMO and registered participants as a consequence of its use.

AEMO will also be required to report biannually on its use of the Dandenong LNG facility. In the Commission's view, these measures provide for sufficient accountability of AEMO's actions.

7.4 Final determination

The Commission's final determination is to amend the NGR to require AEMO to:

- Publish each liquefaction schedule it agrees with the LNG storage provider, including any material updates.[160]
- Publish a report by 1 May in 2023 to 2026 and 1 November in 2023 to 2025, that sets out:[161]
  - how much LNG stock AEMO holds at the start of the period
  - the following information about the prior six-month period:
    - the amount of storage capacity procured by AEMO and any capacity relinquished
    - the quantity of gas procured by AEMO, the quantity of gas injected from the LNG reserve and any LNG stock transferred to a market participant
    - the costs incurred by AEMO in procuring LNG storage capacity, gas and associated services, or in connection with injections of gas from its LNG reserve, with a breakdown by cost category
    - any amount received by AEMO from the injection of gas from its LNG reserve or from the transfer of LNG stock to a market participant, with a breakdown by cost category.

The final rule is preferable to the proposed rule because it provides for greater transparency of all of AEMO's buyer and supplier of last resort activities and, in so doing, makes it more accountable for its actions in these two roles.

The transparency and accountability measures in the final rule, coupled with the existing transparency measures under rules 341 and 351, are expected to contribute to the achievement of the NGO by:

- Allowing market participants to make more informed and efficient decisions about their use of gas and the Dandenong LNG facility (through the publication of information on when AEMO intends to procure gas, when it may use its LNG reserve and how much storage capacity and LNG stock it holds).
- Imposing additional discipline on AEMO in terms of the costs it incurs and the efficiency with which it uses the Dandenong LNG facility (through the publication of biannual reports and the inclusion of information on AEMO's LNG stock in the LNG monitor report).

These benefits are expected to outweigh the reporting costs that AEMO will incur, which as noted above, are expected to be relatively low because AEMO will have ready access to the information and is only required to prepare and publish reports twice a year.

160 Rule 286C(1) of the final rule.
161 Rule 286C(2) of the final rule.

8 IMPLEMENTATION OF THE FINAL RULE

This chapter explains how the final rule will be implemented and what will occur at the end of the term of the rule.

8.1 Commencement of the final rule

The final rule commences on 15 December 2022. Before AEMO can commence its buyer and supplier of last resort roles, the following needs to occur:

- the LNG storage provider and AEMO will need to:
  - negotiate the LNG storage agreement
  - agree to a liquefaction schedule that enables AEMO to start filling its LNG reserve by 1 March 2023, or earlier if agreed by the parties
- AEMO will need to develop procedures by 1 March 2023.

8.1.1 Transitional arrangements

The transitional rules commence on 15 December 2022 and are set out in Schedule 1 Part 19 of the NGR and provide for the following:

- **LNG storage agreement:**
  - While rule 282 requires the LNG storage agreement to be in place through all relevant years, including 2023, AEMO and the LNG storage provider may need time in the first weeks of 2023 to reach agreement on its terms. To allow this, AEMO and the LNG storage provider are not required to have an LNG agreement in place until 28 February 2023.[162]
  - No specific negotiation timetable is set, but the parties must negotiate in good faith from the time the rule is made and the LNG storage provide must give AEMO an offer capable of acceptance within five business days, if requested by AEMO after 5 January 2023.[163]
  - If the parties are unable to reach agreement by 1 February 2023, they have recourse to arbitration.[164]
- **Liquefaction schedule:** AEMO and the LNG Storage Provider must use reasonable endeavours to agree by 14 February 2023 a liquefaction schedule that will allow AEMO to start storing LNG on and from 1 March 2023, or earlier if agreed.[165]
- **Procedures:** AEMO must make and publish the initial *LNG reserve procedures* by 1 March 2023.

162 Transitional rule 91(1) of the final rule.
163 Transitional rule 92 of the final rule.
164 Transitional rule 93 of the final rule.
165 Transitional rule 91(2) of the final rule.

8.2 End of the final rule

The final rule is intended to be an interim measure to allow AEMO to act as both buyer and supplier of last resort between 2023 and 2025. From 1 January 2026, these aspects of the final rule will cease to operate since they are expressed to apply during the relevant years. Other aspects of the final rule will remain in place until 30 June 2026 to facilitate the efficient transition from these roles. Table 8.1 sets out when key aspects of the final rule will cease to operate, which will be given effect through amendments commencing on 2 July 2026 that remove relevant rules.

Table 8.1: Effective end dates for key elements of the final rule

RULE NUMBER	DESCRIPTION OF RULE	EFFECTIVE END DATE	RATIONALE FOR END DATE
281	LNG storage capacity register	30 June 2026	Required to show impact of any disposal of AEMO's LNG stock.
282	Obligation to contract	1 January 2026	The rule will remain in place until 30 June 2026 but is only operable during 2023-2025.
285	Utilisation of the LNG reserve	1 January 2026	The rule will remain in place until 30 June 2026 but is only operable in 2023-2025.
286	Relinquishment of LNG reserve and disposal of LNG stock	30 June 2026	Required to remain on foot to enable AEMO to dispose of LNG stock.
286A	LNG reserve procedures	30 June 2026	Required to remain on foot because it contains information on cost recovery and proceeds.
286B	Cost recovery and return of proceeds	30 June 2026 and a transitional rule to confirm settlement adjustments may be made after this date if required	Required to allow AEMO to rebate any proceeds that it may generate from disposals or to recover any outstanding costs.
286C	Information about the use of AEMO's LNG reserve	30 June 2026	Required to allow AEMO to prepare a final report on its use of the LNG reserve in the prior six months.

ABBREVIATIONS

ACCC	Australian Competition & Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Commission	See AEMC
CPI	consumer price index
DELWP	Department of Environment, Land, Water and Planning
DTS	Declared Transmission System
DWGM	declared wholesale gas market
GJ	gigajoules
GSOO	Gas Statement of Opportunities
LNG	liquified natural gas
MCE	Ministerial Council on Energy
NEM	national electricity market
NER	National Electricity Rules
NGL	National Gas Law
NGO	national gas objective
NGR	National Gas Rules
PJ	petajoules
RERT	reliability and emergency reserve trader
RRO	retailer reliability obligation
TJ	terajoules
VCR	value of customer reliability
VGPR	Victorian gas planning report
VoLL	value of lost load
WORM	western outer ring main

A KEY DIFFERENCES BETWEEN THE PROPOSED RULE AND THE FINAL RULE

This appendix provides an overview of the key differences between the proposed rule and the more preferable final rule.

Table A.1: **Key differences between the proposed rule and the final rule**

PROPOSED RULE	FINAL RULE
Buyer of last resort	
Capacity to procure: AEMO must procure all the uncontracted winter capacity available as of 15 March. It may also procure uncontracted winter capacity that becomes available after this date.	AEMO must procure all the uncontracted winter capacity (excluding operational and non-market LNG storage capacity) available as of 1 March. It may also procure uncontracted winter capacity that becomes available after this date.
LNG stock to be held: AEMO must purchase gas for storage with the objective of achieving the target level over winter, with the target level being the highest level reasonably possible, or such a lower amount approved by the Minister.	The target level for LNG stock will only apply at beginning of winter and will relate to AEMO's LNG reserve. AEMO will have the ability to refill the LNG reserve at other times, having regard to forecast market conditions and if it considers it reasonably necessary to mitigate potential threats to system security.
Target date for winter 2023 filling to commence: 15 March.	1 March 2023, or earlier if agreed.
Relinquishment & LNG stock transfers: AEMO may relinquish storage capacity to the LNG storage provider if a participant proposes to acquire it. It may also transfer LNG stock to the participant acquiring the capacity. The LNG reserve procedures would provide the terms and conditions of transfer.	AEMO must relinquish storage capacity to the LNG storage provider if it is required to satisfy a request by a market participant (except where it would result in AEMO breaching its safety plan or any other legislative or regulatory instrument). AEMO may also transfer LNG stock to the participant acquiring the capacity using the pricing method in LNG reserve procedures, which must use the market price and provide for recovery of avoided costs.
Supplier of last resort	
Use of LNG reserve: AEMO can use the LNG reserve to mitigate against the risk of curtailment and threats to	AEMO can inject gas from its LNG reserve under rule 343(1), which applies where AEMO reasonably considers a threat to system security is unlikely to subside without

PROPOSED RULE	FINAL RULE
system security.	intervention. This includes a threat to supply, safety, gas quality, system pressure and flows.
Supply from LNG reserve: AEMO must give effect to the supplier of last resort principles specified in the rules, including by placing LNG injection bids from the LNG reserve at VoLL.	When AEMO is intervening under rule 343(1), AEMO can inject gas from its LNG reserve by: • including it in market schedules at VoLL, subject to the supplier of last resort rules • using any other means available to it (e.g. directing its gas in).
LNG stock disposals: not applicable.	AEMO can dispose of LNG stock where it has a contractual or regulatory obligation to do so. In these cases, AEMO must use a bid price of $0/GJ and schedule the gas in a manner that minimises impacts on the market reasonably foreseeable to AEMO.
Contractual arrangements	
Requirement for LNG storage agreement: AEMO and LNG storage provider must have LNG storage agreement in place at all times in 2023-2025 that allows AEMO to contract uncontracted capacity and relinquish capacity.	The same requirement applies.
Terms of LNG storage agreement: LNG storage agreement must be on substantially the same terms as 2022 storage agreement except for changes specified in the rules.	Largely the same as the proposed rule but the drafting of rules is simplified.
Changes to LNG storage agreement: AEMO may request changes to the agreement, which is to be negotiated in good faith.	Not included in the final rule.
Backstop if agreement not reached: AEMO may enter into agreement even if concerned it does not comply with the rules. The AER can take enforcement action if the rules are not complied with.	AEMO and LNG storage provider can have recourse to arbitration if they are unable to reach agreement by 1 February 2023. The parties can agree an interim arrangement or can ask the arbitrator to determine one. The AER may take enforcement action.

PROPOSED RULE	FINAL RULE
Cost recovery and proceeds distribution	
AEMO to recover: • storage costs through participant fees • losses/proceeds arising from use of LNG reserve through linepack account.	AEMO must recover all costs and distribute all proceeds on a monthly basis through a new cost recovery proceeds distribution mechanism that allocates costs and proceeds using a fixed allocation factor based on participant withdrawals from the prior financial year.
Accountability and transparency	
AEMO to publish information on: • the amount of storage capacity it contracts and any capacity it relinquishes • any LNG stock transferred.	AEMO must publish liquefaction schedules and biannual reports specifying how much LNG stock AEMO holds going into winter and summer, and its activities over the last 6 months.

Source: AEMC.

B QUANTIFICATION OF COSTS AND BENEFITS

This appendix sets out how the costs and benefits in section 2.4 have been estimated.

B.1 Implementation costs

AEMO has estimated the implementation costs associated with the final rule to be around $1 million (or $0.33 million p.a. for the term of the rule). This includes the costs associated with updating procedures, complying with the new reporting requirements, developing the cost recovery-proceeds distribution mechanism, and making other system changes.

B.2 Buyer and supplier of last resort costs

The costs associated with the buyer and supplier of last resort roles include:

- the cost of procuring the uncontracted storage capacity
- the cost of procuring the gas and liquefaction services required to fill the LNG reserve
- any other market charges that AEMO incurs when either supplying gas into the Dandenong LNG facility or when injecting gas from its LNG reserve.

To estimate the costs of AEMO procuring and operating the additional Dandenong capacity, the AEMC had to make assumptions about the following inputs, all of which are subject to a significant degree of uncertainty:

- the amount of uncontracted capacity and gas that AEMO will need to procure
- the prices that AEMO will pay for storage, liquefaction and gas
- whether AEMO will incur any other market charges.

These are the assumptions used for each of these inputs.

- **Storage capacity and gas to be procured:** It is unclear how much uncontracted capacity and gas AEMO will need to procure, so a range of 340 TJ - 461 TJ has been assumed.
  - The lower bound of this range (340 TJ) assumes AEMO has to procure half the Dandenong LNG facility capacity
  - The upper bound of this range (461 TJ) assumes AEMO has to procure all the Dandenong LNG facility capacity but excludes:
    - the amount of capacity the LNG storage provider requires for operational purposes (79 TJ)
    - the amount of LNG that AEMO has already procured for safe system shutdown. (140 TJ)
- **Storage cost:** based on the price in the 2022 LNG storage agreement.
- **Liquefaction cost:** based on the liquefaction rates published in the ACCC's January 2022 interim report.[166]

166 ACCC, *Gas inquiry interim report*, January 2022.

- **Gas cost:** based on average DWGM price between Jan 2022 – Oct 2022.
- **Other market charges:** assumes no uplift or deviation charges payable.

Using these assumptions, the average cost to AEMO of procuring and operating this capacity ranges from $9.4 million to $12.7 million per annum over the three-year term of the rule, depending on how much capacity and gas it is assumed to procure. This represents around 35-47 per cent of AEMO's DWGM budgeted expenditure in 2022-2023.

These costs will be borne by AEMO in the first instance before being passed through to market participants and end users of gas.

B.2.1 Offsetting the costs with proceeds

As buyer and supplier of last resort, AEMO may generate proceeds that can be used to offset some or all of the costs outlined above. The source of these proceeds include:

- injections of gas from AEMO's LNG reserve into the DWGM
- transfers of LNG stock to a market participant that acquires AEMO's relinquished capacity.

For injections of gas from AEMO's LNG reserve that occur via a market schedule, AEMO will receive $800/GJ, unless the market is operating under an administered price cap, in which case AEMO will receive $40/GJ.

The administered price cap can be triggered if the cumulative price threshold of $1,400/GJ is reached over the cumulative price period (i.e. 35 scheduling intervals). The administered price cap could be triggered if AEMO has to inject gas from its LNG reserve at $800/GJ over two consecutive scheduling intervals, or over two scheduling intervals within the 35 scheduling intervals.

The proceeds AEMO generates from injecting gas from its LNG reserve into the market will depend on how much gas it injects and whether the cumulative price threshold is triggered. This can be seen in the following simplified examples:

- **Example 1:** AEMO injects 340 TJ of gas from its LNG reserve over a 2.5-day period (or 5.7 TJ/hour) commencing at 6 am when the administered price cap has not been triggered. In this case, the proceeds would be $30.8 million, with:
  - the 22.7 TJ scheduled in the first scheduling interval receiving $800/GJ ($18.1 million)
  - the remaining 317.3 TJ receiving $40/GJ ($12.7 million) because the cumulative price threshold would be triggered.
- **Example 2:** AEMO injects 340 TJ of gas from its LNG reserve over a 2.5-day period (or 5.7 TJ/hour) when the market is already subject to an administered price cap. In this case, the proceeds would be $13.6 million (340 TJ x $40/GJ).
- **Example 3**: AEMO injects 340 TJ of gas from its LNG reserve at various times between 2023 and 2025 and does not trigger the cumulative price threshold. In this case, the proceeds would be $272 million (340 TJ x $800/GJ).

It is difficult at this stage to determine with any degree of certainty how much gas AEMO will inject from the LNG reserve over the term of the rule and/or whether the cumulative price

threshold will be triggered. It is similarly difficult to know how much LNG stock AEMO may transfer to market participants using the LNG facility.

No provision has been made for proceeds in the net benefit analysis set out in the following section. Rather, it has been assumed that the LNG reserve is used solely as an insurance policy and that AEMO's LNG reserve is not used over 2023-2025.

However, given the conditions expected to prevail in Victoria over the term of the rule, this appears unlikely. Consequently, the estimates set out in appendix B.3 can be viewed as conservative in relation to the net benefit because they assess the insurance value only and do not account for any injection proceeds to offset the costs of procuring capacity and gas.

B.3 The net benefit of the value of avoided curtailment

The benefit of the final rule is that AEMO is able to use gas it has stored in the Dandenong LNG facility to mitigate the risk of curtailment. To estimate the value of avoided curtailment or the insurance value as noted above, the impact of electricity curtailment and the impact of gas curtailment on consumers in each of these markets can be considered.

Electricity curtailment is relevant to the valuation where a system black type of event has occurred in a region of the NEM and the gas market is also finely balanced in that region, such that a shortage of gas for power generation may contribute to the curtailment of electricity load. Gas curtailment is relevant to the valuation of benefits of the final rule where an event has occurred in the gas market, independently of any events in the electricity market, that might lead to the curtailment of gas load.

B.3.1 Value of avoided curtailment in the electricity market

To estimate the value of avoided curtailment, a value of customer reliability is required. For this purpose, the AEMC has had regard to both:

- The Victorian electricity value of customer reliability ($42,586/MWh):[167] The use of this value reflects the consumer benefit foregone due to load shedding that would be avoided by injection of gas from AEMO's LNG reserve and use by gas powered generation to avoid lost load.
- The value of the reliability and emergency reserve trader (RERT) in the NEM ($15,500/MWh-$23,842/MWh):[168] The use of this value recognises that gas from AEMO's LNG reserve could be used, in supplying gas powered generation to provide RERT, as an alternative resource to avoid unserved energy in the NEM where there are low reserve conditions.

Using these parameters, the AEMC has estimated the value of avoided curtailment assuming that AEMO holds either 340 TJ or 461 TJ of gas in its LNG reserve and uses it to help manage a 2-3 day event. Such an event could be driven by a system black style event in the NEM.

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167 Reliability Panel, *2022 Review of the Reliability Standard and Settings,* final report, 1 September 2022, p. 53.

168 There is currently no value of RERT for Victoria, but the average RERT cost for NSW and Queensland was $23,842/MWh in 2020-21. An alternative to this value (or the lowest value of RERT that might be assumed) is the NEM price cap of $15,500/MWh. AEMO, *Reliability and Emergency Reserve Trader (RERT) end of financial year 2021-22 report*, August 2022, p. 6.

This produced a range of $439-$1,636 million (see Table B.1). Using these values, the AEMC then estimated what the probability of curtailment would have to be in any year for the benefits to equal the costs set out in sections C.1-C.2 (see Table B.1). This produced probabilities of:

- 0.8% using the Victorian VCR (or once every 125 years)
- 1.4-2.2% using RERT (or once every 45-70 years).

This implies that if a system black event occurs in Victoria more than once every 45-125 years, the net benefit of the rule change is positive. These estimated probabilities are lower than Deloitte Access Economics' estimate of the probability of a future system black event in the Victorian region of the NEM (of 2.98% or once every 33 years).[169] Based on this forward-looking view, the net benefit of the rule change, which requires AEMO to act as buyer and supplier of last resort, is positive.

Table B.1: Value of avoided curtailment, probability of occurrence and net benefit under different price assumptions

	RERT		VICTORIAN VCR
	NEM MPC	HISTORIC RERT	
Price	$15,500/MWh	$23,842/MWh	$42,586/MWh
AEMO LNG reserve: Lower bound — 340 TJ			
Value of avoided curtailment[a]	$439 million	$676 million	$1,207 million
Probability of occurrence such that benefit equals cost[b]	2.2% (once every 45 years)	1.4% (once every 70 years)	0.8% (once every 125 years)
Net benefit if the probability of system black event is 2.98%[2]	$3.4 million	$10.4 million	$26.3 million
AEMO LNG reserve: Upper bound — 461 TJ			
Value of avoided curtailment[a]	$595 million	$916 million	$1,636 million
Probability of occurrence such that benefit equals cost[b]	2.2% (once every 45 years)	1.4% (once every 70 years)	0.8% (once every 125 years)
Net benefit if the probability of system black event is 2.98%[b]	$4.7 million	$14.25 million	$35.7 million

Source: AEMC.

Note: a. In the case of the electricity parameters, the values have been estimated assuming a heat rate of 12 GJ/MWh.
b. The net benefit and probability of occurrence calculations reflect the implementation costs ($0.33m p.a.) and the buyer and supplier of last resort costs ($9.4m to $12.7m p.a.).

169 Deloitte Access Economics, *Economic assessment of system restart ancillary services in the NEM*, August 2016, p. ii.

B.3.2 Value of avoided curtailment in the gas market

In contrast to electricity, there is no well accepted value of customer reliability for gas customers. The AEMC has therefore used the DWGM market price cap of $800/GJ to estimate the value of avoided curtailment in the gas market.

Using the DWGM market price cap and assuming that AEMO uses 340 TJ or 461 TJ of gas from its LNG reserve over a 2-3 day period (e.g. to help manage a prolonged supply outage impacting the gas market, such as a Longford or Moomba outage), the AEMC has estimated the value of the avoided curtailment in the gas market to be $272-$369 million.

Using these values, the AEMC estimated what the probability of curtailment would have to be in any year for the benefits to equal the costs set out in sections C.1-C.2. This produced probabilities of 3.5-3.6% (or once every 28 years). This implies that if a prolonged gas outage is likely more than once every 28 years then the net benefit of the rule change is positive.

B.3.3 Conclusion

The results set out above imply that the value of the final rule, which requires AEMO to act as buyer and supplier of last resort in relation to the Dandenong LNG facility, will be positive if gas in AEMO's LNG reserve is required to:

- avoid electricity market curtailment, associated with a system black type event, at least once every 45 years
- avoid gas market curtailment at least once every 28 years.

Put another way, if a system black event in the Victorian region of the NEM is conceivable more than once every 45 years (which analysis by Deloitte Access Economics suggests),[170] then there will be a net benefit in making the final rule. Similarly, if a major gas outage in east coast gas markets is conceivable more than once every 28 years, then the net benefit would also be positive.

These probabilities should be considered in light of the history of these events in the NEM and the projected outlook for the gas market (see Box 2), both of which suggest that an electricity and/or gas market curtailment event may be feasible during the term of the rule.

170 This analysis suggests that the probability of future system black type events in Victoria is 2.98% or once every 33 years. See Deloitte Access Economics, *Economic assessment of system restart ancillary services in the NEM*, August 2016, p. ii.

C SUMMARY OF OTHER ISSUES RAISED IN SUBMISSIONS

This appendix sets out the issues raised 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 table.

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

STAKEHOLDER	ISSUES	AEMC RESPONSE
AER (p. 2)	The AER suggested the AEMC: • Consider amending rule 279(1), which requires the LNG storage provider to ensure that its LNG storage facility is utilised with the objective of maintaining LNG stock at the highest level possible so that the obligations under the rule are clearer. • Amend rule 285 to include a positive obligation on the LNG storage provider to comply with scheduling instructions and gas scheduling procedures.	The AEMC has not amended rule 279(1) because it falls outside of the scope of the proposed rule change and is not necessary or consequential to the rule. In relation to rule 285, this obligation is already captured by rule 279(2), so it has not been reflected in final rule 285.
Alinta (p. 2)	Alinta suggested the AEMC: • Investigate interactions between DWGM storage facilities to ensure a strategic approach to managing security of supply issues is warranted over the longer term. • Consider treating Dandenong LNG as part of DTS and regulated in the same manner.	These suggestions are beyond the scope of this rule change. However, they could be considered as part of the Energy Ministers' supply adequacy and reliability reform program and the review of whether a third-party access regime for storage facilities should be implemented.[a]
CSR (p. 6)	• The Victorian curtailment guidelines should be enhanced. • A demand response and/or supply profiling mechanism should be implemented. •	These suggestions are beyond the scope of this rule change: • AEMO is consulting on the Emergency Procedures, Gas Load Curtailment and Gas Rationing and

STAKEHOLDER	ISSUES	AEMC RESPONSE
	• avoiding any perceived conflicts of interest by according some of the functions that AEMO currently performs to the AEMC (parameter review) and the AER (setting and determination of fees).	Recovery Guidelines and Curtailment List.[b] • As part of the Energy Minister's supply adequacy and reliability reform program, consideration is to be given to implementing demand response and similar mechanisms.[a]
Private individual — Peter Dobney (p. 3)	• AEMO should be given the power to manage the east coast gas market and be able to curtail LNG exports to address the projected supply shortfall and also ensure that there is contingent gas available in the event gas powered generation is required. • Market price caps across facilitated gas markets should be lowered.	These suggestions are beyond the scope of this rule change: • the first of these matters is being considered to some extent through the Energy Minister's supply adequacy and reliability reform program[a] • AEMO is currently consulting on the market price caps to be employed in each of the facilitated gas markets.[c]
St Vincent de Paul (bilateral discussion)	Retailers should consider how costs will be passed through to consumers and the period over which costs will be recovered to smooth out the impacts for residential consumers noting that concessions for vulnerable customers are only available during the winter period.	This suggestion is beyond the scope of this rule change and beyond the AEMC's rule making power (noting that Victoria is not subject to the National Electricity Retail Rules).

Note: a. Energy Ministers, *Priority reforms for a more secure, resilient and flexible east coast gas market*, August 2022.
b. AEMO, *Emergency Procedures (Gas) Consultation*, https://www.aemo.com.au/consultations/current-and-closed-consultations/emergency-procedures-gas-consultation
c. AEMO, *Gas market parameter review 2022*, https://aemo.com.au/consultations/current-and-closed-consultations/gas-market-parameter-review-2022

D RULE MAKING PROCESS

This appendix outlines the rule change process and stakeholder engagement activities carried out by the AEMC.

D.1 Initiation

On 1 September 2022, the Commission published a notice advising of its commencement of the rule making process and consultation in respect of the rule change request.[171] A consultation paper identifying specific issues for consultation was also published.

Given the complex issues associated with the rule change request, the Commission also decided at this time to extend the time between the publication of the consultation paper and the final rule determination from eight weeks to twelve weeks. This time extension was made to provide stakeholders and the Commission more time to consider these issues.

The Commission accepted that the rule change request was a request for an urgent rule as defined in s. 290 of the NGL. Accordingly, the Commission commenced an expedited rule change process, subject to any written requests not to do so. The closing date for receipt of written requests was 15 September 2022.

D.2 Objections to the use of the expedited process

The AEMC received one objection to the use of the expedited process, which was from CSR.[172] Having regard to the requirements in s. 304 of the NGL, the Commission concluded the objection to the use of the expedited process was misconceived or lacking in substance.

In its response to the objection, the Commission noted that the scope of AEMO's powers in relation to the contracting and use of the Dandenong LNG facility are uncertain, which when set against a backdrop of projected peak day supply shortfalls from winter 2023, poses an imminent threat to the effective operation of the DWGM and the supply of gas in Victoria.[173] The Commission decided therefore to continue to consider the proposal as an urgent rule under the expedited rule making process under s. 290 of the NGL.[174]

D.3 Additional extension of time

On 27 October 2022, the Commission published a notice under s. 317 of the NGL to further extend the publication date of the final determination to 15 December 2022. The Commission considered that this extension was necessary to provide more time to investigate stakeholder concerns and to identify potential solutions, in consultation with stakeholders.

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171 This notice was published under s. 303 of the NGL.

172 CSR, *Letter to AEMC — DWGM interim LNG storage measures*, 15 September 2022.

173 AEMC, *Letter to CSR: Response to objection to the use of an expedited process for the rule change request on DWGM interim LNG storage measures*, 26 September 2022.

174 ibid.

D.4 Stakeholder engagement

On 2 September 2022, the AEMC held an information session that provided an overview of the issues discussed in the consultation paper.

Submissions to the consultation paper closed on 29 September 2022. The Commission received 11 submissions. Issues that are not discussed in the body of this document have been summarised and responded to in appendix C.

In addition, AEMC staff have held over 20 meetings with various market participants as well as regular meetings with AEMO and DELWP staff to discuss operational issues relating to the rule change request.

On 28 October, the AEMC conducted a workshop with stakeholders to test some key policy options. Subsequent meetings were also held between AEMC staff and stakeholders to obtain greater clarity on points raised in the workshop. Supplementary written submissions were also provided by some market participants and AEMO.

The Commission has considered all the issues raised in submissions, the stakeholder workshop and meetings in developing this final determination and final rule.[175]

175 Submissions to the consultation paper can be found on the project page on our website.

E ASSESSMENT FRAMEWORK

To determine whether the proposed rule should be made, it has been assessed against the NGO. In doing so, the Commission has considered the following criteria:

- **Safety, security and reliability:** Will the proposed rule change provide for the reliable, secure and safe provision of gas at an efficient cost to consumers?
- **Promoting economic efficiency:**
  - Concepts of efficiency:
    - Will the proposed rule change promote efficient investment in, operation and/or use of the Dandenong LNG facility and/or other infrastructure in the DWGM?
    - Will the proposed rule change promote the efficient operation of the DWGM?
  - Risk allocation: Does the proposed rule change appropriately allocate risks to those parties best placed to manage the risk?
  - Incentives: Will the proposed rule change affect the existing incentives market participants have to contract and use the Dandenong LNG facility?
- **Principles of good regulatory practice:**
  - Is the proposed rule change targeted, fit for purpose and proportionate to the issues it is intended to address?
  - Does the proposed rule change provide for predictability, stability, simplicity and transparency of market and regulatory arrangements?
- **Implementation considerations:**
  - Costs and complexity: What effect will the rule change have on regulatory and administrative costs for market participants, consumers and market bodies?
  - Timing and uncertainty: What will happen at the end of the term of the rule change and will it impede or support the Energy Ministers' broader gas reform program?

F CURRENT REGULATORY ARRANGEMENTS APPLYING TO DANDENONG LNG

The service provider of the Dandenong LNG facility is a declared LNG storage provider for the purposes of the NGL and NGR.[176]

It is currently registered in both the 'storage provider' and 'market participant — storage provider' registrable categories and subject to the market related rules in Part 19 of the NGR.[177]

The facility is also subject to a number of specific provisions in Part 19 Division 3 Subdivision 2 of the NGR,[178] which require the LNG storage provider to:[179]

- ensure the facility is utilised with the objective of maintaining LNG stock at the highest level possible
- operate the LNG storage facility in accordance with AEMO's scheduling instructions
- inform AEMO of all operational matters or circumstances that may affect its ability to schedule LNG injections and use its LNG reserve
- provide AEMO with a range of information on LNG stock holdings and a register of LNG storage capacity.

Rule 343 of the NGR recognises that AEMO may hold an LNG reserve and use it to address threats to system security. This rule, which builds on AEMO's direction power under s. 91BC of the NGL, states that if AEMO reasonably considers a threat to system security is unlikely to subside without intervention, it must intervene by taking any measures it believes are reasonable and necessary to overcome the threat to system security. This includes (without limitation) injecting gas from AEMO's LNG reserve or making directions.

The term 'threat to system security' is defined in AEMO's *Wholesale market procedures* as arising if a 'normal operating state' for the DTS cannot be maintained. That is, where there is a threat to: (a) the supply of gas customers (i.e. a threat of curtailment), (b) DTS system pressures falling outside operating limits, or (c) public safety.

AEMO is also authorised under s. 91BA(2) of the NGL to trade in natural gas to the extent necessary or desirable for the safety, security or reliability of the DTS, or in an emergency.

176 Sections 91BI and 91BJ of the NGL. APA is currently the Dandenong LNG service provider. The NGL also enables rules to be made to regulate a declared storage provider and the LNG stored by the provider (clause 55F, Schedule 2 of the NGL).

177 AEMO, Gas market participant lists: https://aemo.com.au/en/energy-systems/gas/gas-market-participants

178 This subdivision was the subject of a rule change in 2010, which resulted in the removal of the rules that had:
— required the LNG storage provider to provide AEMO with 3,000 tonnes (~165 TJ) of storage capacity (LNG reserve) and other provisions relating to AEMO's management and use of the LNG reserve
— required LNG injected into the LNG storage facility to be allocated between storage holders through a fixed formula
— regulated the transfer of storage capacity and LNG stock between market participants.
AEMC, *Dandenong liquefied natural gas storage facility*, final determination, 16 December 2010.

179 Rules 279-281 of the NGR.

G LEGAL REQUIREMENTS UNDER THE NGL

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

G.1 Final rule determination

In accordance with ss. 311 and 312 of the NGL, the Commission has made this final rule determination in relation to the rule proposed by the Victorian Minister for Energy, Environment and Climate Action.

The Commission's reasons for making this final rule determination are set out in section 2.3.

A copy of the more preferable final rule is attached to and published with this final rule determination. Its key features are described in section 2.3.

G.2 Power to make the rule

The Commission is satisfied that the more preferable final rule falls within the subject matter about which the Commission may make rules. Specifically, the more preferable final rule falls within s. 74 of the NGL as it relates to AEMO's declared system functions and the operation of a declared wholesale gas market.[180]

G.3 Commission's considerations

In assessing the rule change request the Commission considered:

- its powers under the NGL to make the rule
- the rule change request
- submissions and other information received during the consultation period
- stakeholder feedback provided at the workshop on 28 October 2022 and in various meetings
- 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.[181]

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 system functions.[182] In regard to the more preferable final rule, the Commission is

180 Section 74(1)(a)(v) of the NGL.

181 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. In December 2013, the amalgamated council became known as the COAG Energy Council. In May 2020, the Energy National Cabinet Reform Committee and the Energy Ministers' Meeting were established to replace the former COAG Energy Council.

182 Section 295(4) of the NGL.

satisfied that it is compatible with AEMO's declared system functions. In particular, the Commission considers the more preferable rule supports AEMO's function of controlling the operation and security of the declared transmission system and is compatible with AEMO's function to operate and administer the DWGM because of the limited circumstances in which AEMO may inject gas from the LNG reserve.

G.4 Civil penalties

The Commission cannot create new civil penalty provisions. However, it may recommend to the Victorian Minister for Energy, Environment and Climate Action that new or existing provisions of the NGR be classified as civil penalty provisions under the *National Gas (Victoria) (Declared System Provisions) Regulations*.

The final rule does not amend any clauses that are currently classified as civil penalty provisions under the *National Gas (Victoria) (Declared System Provisions) Regulations*. The Commission does not propose to recommend to the Victorian Minister for Energy, Environment and Climate Action that any of the proposed amendments made by the more preferable final rule be classified as civil penalty provisions.

G.5 Conduct provisions

The Commission cannot create new conduct provisions. However, it may recommend to the Victorian Minister for Energy, Environment and Climate Action that new or existing provisions of the NGR be classified as conduct provisions.

The Commission's more preferable final rule amends rule 281 of the NGR. This rule is currently classified as a conduct provision under the National Gas (Victoria) (Declared System Provisions) Regulations. The amendment extends rule 281 to require that an LNG storage provider provides information on the amount of uncontracted LNG storage capacity on a register. The Commission considers that the amended provision should continue to be classified as a conduct provision.

The Commission's more preferable final rule also includes the addition of rule 286B(5) into the NGR, which the Commission is recommending to the Victorian Minister for Energy, Environment and Climate Action as a conduct provision. The new provision requires market participants to pay AEMO the amount determined in accordance with the rule for cost recovery purposes.

The Commission considers that the new provision should be classified as a conduct provision because the risk of a market participant failing to pay amounts owed to AEMO rests ultimately with other market participants. Classification as a conduct provision allows the market participants who have suffered loss due to payment failure to seek a remedy against the market participant that caused it.