Australian Energy Market Commission

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RULE

Consultation paper

National Gas Amendment (ECGS Supplier of last resort mechanism) Rule

Proponents

Energy Senior Officials
Victorian Minister for Energy and Resources

25 September 2025

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About the AEMC

The AEMC reports to the energy ministers. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the energy ministers.

Acknowledgement of Country

The AEMC acknowledges and shows respect for the traditional custodians of the many different lands across Australia on which we all live and work. We pay respect to all Elders past and present and the continuing connection of Aboriginal and Torres Strait Islander peoples to Country. The AEMC office is located on the land traditionally owned by the Gadigal people of the Eora nation.

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Citation

To cite this document, please use the following:
AEMC, ECGS Supplier of last resort mechanism, Consultation paper, 25 September 2025

Summary

1 One key challenge and opportunity during the energy transition is accommodating natural gas's changing role. A reliable east coast gas system (ECGS) has become essential to manage Australia's energy transition. AEMO's 2025 Gas Statement of Opportunities (GSOO) anticipates that gas consumption for commercial, residential and industrial users will decline over the coming decades. But it also observes that gas for electricity generation is critical for maintaining the reliable and secure operation of the national electricity market. Gas-powered generation (GPG) helps manage extended periods of low variable renewable energy generation, provides firming support and supports grid security as the coal generation fleet retires from the national electricity market.[1]

2 Upcoming coal retirements are expected to increase GPG gas consumption to levels above historical annual gas use, and this is likely to occur before the impacts of reduced residential, commercial and industrial gas use are material. As well as higher annual gas use, peak daily gas consumption from GPG in winter is forecast to grow well above historic peaks, driven by lower winter renewable energy output, coal generation closures, and the electrification of residential and commercial heating loads, especially in the coming few years. The ECGS will need to maintain high levels of reliability through a period of changing gas consumption patterns.

3 Considering the challenges of the gas sector as it transforms is relevant to assessing this rule change request which seeks to enhance the existing reliability and supply adequacy (RSA) framework for the ECGS). It proposes introducing a supplier of last resort (SoLR) mechanism, that comprises both supply-side and demand-side actions to enable AEMO to intervene if there are threats to reliability and supply adequacy in the ECGS.

4 The Commission also intends to consider the potential impact of any changes made in response to this request on the current interim buyer and supplier of last resort mechanism created in 2022 for the Dandenong LNG storage facility in the Victorian declared wholesale gas market (DWGM).[2]

5 Submissions responding to this consultation paper are requested by COB Thursday 30 October 2025.

This rule change is part of the stage two RSA framework reforms

6 During winter 2022, wholesale gas prices in the facilitated markets across the ECGS reached record highs, triggering administered price caps in some markets. In August 2022, Energy Ministers directed jurisdictional energy officials to progress a package of reforms aimed at supporting a more secure, resilient and flexible east coast gas market. This included introducing a reliability and supply adequacy (RSA) framework for the ECGS.[3]

7 Implementation of the RSA framework has been staged. The first tranche of changes (stage 1) was made in early 2023.[4] The stage 1 changes expanded the Australian Energy Market Operator's (AEMO) powers under the National Gas Law (NGL) and National Gas Rules (NGR) to enable better management of gas supply adequacy and reliability risks ahead of winter 2023 and beyond.[5]

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1 AEMO, *2025 Gas statement of opportunities*, pp 5-7.

2 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022.

3 Energy and Climate Change Ministerial Council (ECMC), Consultation on stage 2 of the reliability and supply adequacy framework for the east coast gas market, accessed 3 February 2025.

4 *National Gas (South Australia) (East Coast Gas System) Amendment Act 2023*; National Gas (East Coast Gas System) Amendments Regulations 2023; and National Gas Amendment (East Coast Gas System) Rule 2023.

5 ECMC, Regulatory amendments to extend AEMO's functions and powers to manage east coast gas supply adequacy, accessed 16 September 2025.

Relevantly to this rule change process, the stage 1 RSA reform package provided AEMO a trading fund for its new ability to trade in gas and gas services.

8 The second package of reforms (referred to as the stage 2 RSA reforms) aims to build on the stage 1 reforms and is being progressed through the AEMC's rule change processes. In doing so, the requests seek to address a shared problem: risks of gas shortfalls in the ECGS.[6]

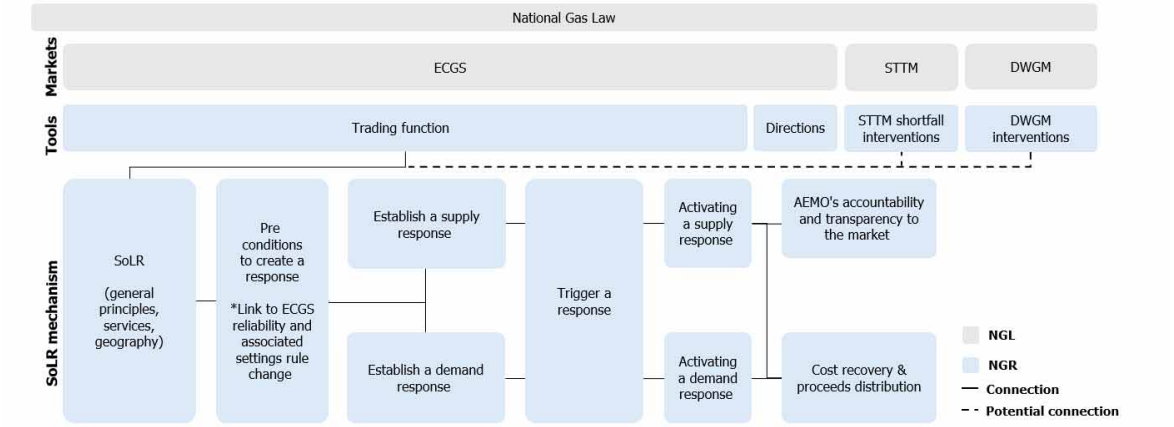
9 This third stage of the RSA framework to expand AEMO's powers to address supply shortfalls is being progressed by jurisdictional energy officials. The Commission will engage with officials as appropriate and consider any advice and actions that arise from this work program on the proposed rule change.

About this rule change request

10 The rule change request identifies several limitations with the current ECGS trading function, which AEMO can currently use to trade in gas or to purchase pipeline, compression or storage services. This includes that the current arrangements lack guidance for AEMO on using the $35 million trading fund associated with the function and provide few guardrails to check its use.

11 The request proposes a comprehensive arrangement of rules designed to support a supply-side and demand-side last resort function for AEMO to intervene in the ECGS to address threats to reliability and supply adequacy that market participants have been unable to resolve. The diagram below outlines the proposed scheme, identifying the key components on which the Commission is seeking stakeholder feedback.

Figure 1: Context and components of the proposed SoLR mechanism



Source: AEMC.

Approach to consultation and issues for feedback

12 This consultation paper works through the issues and proposed solutions identified in the rule change request, and identifies potential alternative arrangements that may also address the proponents' concerns. This approach seeks to assist stakeholders in forming a view about the details of the proposal and how the identified problems can be best addressed.

13 Consistent with the national gas objective, the Commission will consider stakeholder feedback

6 For additional information on the context of these reforms, see: AEMC, *ECGS reliability and supply adequacy rule change requests*, background paper, 20 March 2025.

and the rule change request to develop a draft rule determination. The assessment criteria we consider most relevant to assess whether the proposal would promote the national gas objective are:

- safety, security and reliability
- principles of market efficiency
- implementation considerations
- good regulatory practice.

14 In brief, the Commission is seeking stakeholder views on the issues identified below.

Comparing broad policy package options

15 This consultation paper sets out a range of policy package options, from making no change to the NGR through to introducing an integrated supply-side last response mechanism with an administered demand response mechanism. Some options include only a supply-side mechanism to procure services and products for the supply of gas. Other policy package options include forms of demand response. In addition, the request raises the option that a SoLR mechanism could apply to the southern states of the ECGS only.

16 Stakeholder feedback is sought on whether making rules to provide more guidance about AEMO's use of the trading function could be beneficial and whether the solution would be more successful if applied to a portion of the ECGS or across the entire ECGS.

Preconditions to be met before using a SoLR mechanism

17 The Commission is considering the requirements that must be met before AEMO can create a reserve for a SoLR mechanism (preconditions). The proposed preconditions require AEMO to have identified a forecast breach of the proposed gas reliability standard in the latest GSOO or PASA and communicated this breach by a risk or threat notice. The proposal to introduce a gas reliability standard is being considered through the ECGS reliability standard and associated market settings rule change process. At this stage, the Commission's direction is to instead implement a probabilistic risk and threat signalling framework. Accordingly, this consultation paper explores if this alternative approach would be the more appropriate way to provide relevant information to identify the risk or threat to all market participants and provide them with the opportunity to respond.

Triggering the use of a SoLR mechanism

18 The Commission is considering how AEMO makes a decision to use a reserve it has established as part of a SoLR mechanism (trigger). The trigger should incentivise and provide the opportunity for market participants to respond first before AEMO intervenes. The rule change request proposed that AEMO should have regard to the nature and size of the forecast breach of the reliability standard and the adequacy or feasibility of the response (or likely response) from market participants at the time its assessment is undertaken.

19 The Commission is considering the extent to which the trigger should include operational factors (such as pressure conditions) and the degree of AEMO's discretion under a trigger mechanism.

Operating a SoLR mechanism

20 The key features of operating a SoLR mechanism that are relevant across policy package options include how to guide AEMO's ability to enter into or vary contracts with market participants,

requiring AEMO to relinquish its stock of gas or capacity procured through its use of a SoLR mechanism to other market participants, and using a willingness to pay metric (or an alternative) to guide AEMO's cost-effective use of the SoLR.

21 In addition, the Commission is also considering how a SoLR mechanism should respond to the physical and operational needs of transporting gas and the ability for AEMO to leverage existing mechanisms for gas transport. The request proposed measures to limit the risk of AEMO crowding out market participants when interacting with the facilitated markets, including using intermediaries when purchasing gas and bidding at the market price cap. Such features will be an important component of creating a successful mechanism that does not significantly impact the operation of the existing markets.

Introducing an administered demand response mechanism

22 The Commission is considering whether the proposed RERT-style administered demand response mechanism has the potential to address threats to reliability and supply adequacy. However, its success will be dependent on the availability of flexible gas as well as how such a mechanism can operate in the context of any physical, operational and contractual barriers that impact gas users' ability to provide demand response. These issues, as well as how gas users can be incentivised to participate in a mechanism, and the interaction with existing market mechanisms that are used to resolve demand-supply gaps, are explored for stakeholder feedback using three design options included in this paper.

How to recover costs and distribute proceeds arising from using the SoLR mechanism

23 The rule change request proposes removing the $35 million cap for the trading fund and replacing it with a more transparent cost recovery and proceeds distribution mechanism. The Commission is considering whether a standard cost recovery and proceeds distribution process would be a better fit than an ex ante trading fund. However, the consequence would be that AEMO's costs to be recovered from market participants would not be limited.

24 There are a range of cost allocation approaches, including: beneficiary or causer pays AEMO's SoLR costs, requiring market participants to pay based on their demand for gas, or requiring all gas market participants to pay. Similarly, these methodologies could also be applied to how any proceeds to AEMO from the SoLR mechanism (for example, in selling gas or storage capacity) are redistributed.

25 Irrespective of the cost and proceeds allocation methodologies employed, transparency about the method and its operation will be important for market participants. There are benefits in having key transparency requirements around the operation of the process included in the NGR. These could relate to the triggers for cost recovery and proceeds distribution, who is involved, cost recovery and allocation, and proceeds distribution.

Keeping market participants informed and AEMO accountable

26 In addition to transparency about cost recovery and distributing proceeds, a SoLR mechanism should include general transparency and accountability requirements on AEMO for the benefit of market participants and the operation of the mechanism itself.

27 The proponents' proposed system of five 'action-based' notices where AEMO publishes sequential notices to communicate the escalation of SoLR mechanism actions AEMO is taking, aims to address the current uncertainty market participants face with AEMO using the trading function. This system could provide market participants with greater visibility and more timely information

and could align with the threat signalling framework described in the ECGS Reliability standard and market settings rule change directions paper. Together, the notices should effectively communicate evolving reliability risk and threat levels to the market and support AEMO operational decision-making.

28 The rule change request builds on existing accountability measures for RERT and the Dandenong LNG storage facility to propose publications and reporting requirements for AEMO. The Commission recognises the importance of simplicity and transparency in reporting that reflects principles of good regulatory practice. Stakeholder views on what measures would best inform market participants, having regard to the administrative costs, will enable the Commission to establish a fit-for-purpose arrangement suitable for a SoLR mechanism.

How a SoLR mechanism could impact the Dandenong LNG interim arrangements

29 As noted above, the Commission is considering the potential impact of any changes made in response to this request on the current interim buyer and supplier of last resort mechanism for the Dandenong LNG storage facility. On this, there are several issues discussed throughout this consultation paper:

- how the current objective trigger for AEMO to fill the LNG storage facility could be impacted by a SoLR mechanism trigger that is framed differently
- the effect, if any, of the difference in the aims of the two mechanisms: the proposed SoLR mechanism is intended to address ECGS reliability and supply adequacy threats while the Dandenong LNG interim arrangements are intended to address DWGM system security issues
- differences in the operational details, and potentially the degree of discretion for AEMO, between the mechanisms (including cost recovery and proceeds distribution, relinquishment of gas and capacity held by AEMO, and use of the DWGM market price cap)
- how to transition from the Dandenong LNG interim arrangements to a SoLR mechanism (if that is the outcome of this rule change process).

Submissions are due by 30 October 2025

30 Written submissions responding to this consultation paper must be lodged with the AEMC by COB Thursday 30 October 2025 via the AEMC's website, www.aemc.gov.au. There will be other opportunities to engage with the AEMC throughout this rule change process. Please contact us through the project page (project code GRC0077) on the AEMC website.

Full list of consultation questions

Question 1: Defining the problem

1. Do you agree that these are problems to be addressed by this rule change process?

Question 2: Policy options

1. What do you consider to be the best policy option outlined? Why?
2. Are there other potential benefits and costs of the policy options identified?

3. Are there any variations to the policy options outlined that would better address the problem?

Question 3: Principles to guide AEMO's use of a SoLR mechanism

1. Should there be principles to guide AEMO's use of a SoLR mechanism?
2. What is the appropriate set of principles for the SoLR mechanism? Why?
3. Should these principles be mandatory or part of AEMO's broader discretion?
4. Do you have any views on how any principles should complement other more prescriptive obligations in the NGR or the ECGS Procedures?

Question 4: Services AEMO could procure through a SoLR mechanism

1. Should the NGR identify particular types of SoLR reserves AEMO could access? If so, what types of reserves?
2. Which matters regarding the types of SoLR reserves are best left to the ECGS Procedures?

Question 5: Constraining AEMO's SoLR costs

1. What are the interim and ongoing metrics that should be applied to constrain the amount AEMO pays when using the SoLR mechanism? Why?

Question 6: Geographic and seasonal scope for a SoLR mechanism

1. What is the relevant geographic scope for a SoLR mechanism?
2. Should a SoLR mechanism only be used for threats over winter or should it be available at any time of the year?

Question 7: Existing preconditions and triggers for AEMO intervention

1. Do the existing NGL and NGR preconditions and trigger for the trading function lack transparency and clarity? Is this a significant issue? Why?

Question 8: Using a risk or threat signalling framework as a precondition

1. Do you consider that a risk or threat signalling framework that uses tiers and a probabilistic metric would be a useful and relevant precondition for AEMO to decide whether to establish a SoLR reserve?

2. If a tiered risk or threat signalling framework was used, what tiers and probabilities would be appropriate signals for making decisions on using a SoLR mechanism?
3. Would a tiered system of shortfall risk provide a clear signal to the market about when AEMO would consider whether to intervene?

Question 9: Operational factors could form part of a trigger

1. To what extent should the preconditions for a SoLR mechanism include operational factors? Why?
2. What operational conditions should be part of the trigger for a SoLR mechanism?
3. Are there any other factors or information that could provide greater transparency and predictability about how and when a SoLR mechanism could be triggered?

Question 10: AEMO's discretion under a trigger mechanism

1. To what extent should AEMO retain some discretion as part of the trigger for SoLR? Why?

Question 11: The trigger for contingency gas in the STTM

1. Should the trigger to use contingency gas in the STTM be separate and mutually exclusive from a SoLR mechanism in the ECGS? Why?
2. Are there any issues the AEMC should consider if an STTM contingency gas mechanism and an ECGS SoLR mechanism are to co-exist?
3. Is guidance required (in the NGR or procedures) on the order of priority of market intervention tools? How much discretion should be provided to AEMO in its decisions on what tools to use?

Question 12: The trigger for intervening in the DWGM

1. Should the trigger to intervene for system security reasons in the DWGM be amended if a SoLR mechanism for reliability and supply adequacy threats is introduced for the ECGS? Why?
2. Should the trigger for AEMO to use the Dandenong LNG storage facility be amended if a SoLR mechanism for the ECGS is introduced? Why?
3. Are there any issues the AEMC should consider if the DWGM intervention powers and an ECGS SoLR mechanism are to co-exist?

Question 13: Key steps in operating a SoLR mechanism

1. Do stakeholders see any additional steps not identified in the consultation paper that should be included in AEMO's use of a SoLR mechanism (if introduced)?
2. Does the operational sequence outlined in the consultation paper align with stakeholder expectations of how AEMO would use a SoLR mechanism?

Question 14: Arrangements to transport gas to address a reliability threat

1. Drawing on the issues and scenarios above, how do you think AEMO would acquire, transport and pay for gas through a SoLR mechanism?
2. To what extent should intermediaries be involved in transporting gas procured under the SoLR mechanism? Why?
3. Would using AEMO's directions power be appropriate for transporting gas procured under the SoLR mechanism? Why?

Question 15: Conditions required to enter or vary reserve contracts

1. What requirements should be in place to enable AEMO to enter into and vary contract conditions for a SoLR mechanism?
2. Is publishing a reserve establishment notice a sufficient precondition for AEMO to enter into or vary a contract using a SoLR mechanism?

Question 16: How to relinquish capacity and transfer gas from a SoLR storage reserve

1. To reduce risks of crowding out, should the NGR specify a mandatory, discretionary or hybrid approach to the relinquishment of capacity and transfer of gas for SoLR storage reserves?
2. Which type of approach balances the need to minimise market distortion while supporting reliability and cost-effective outcomes for consumers?

Question 17: Buying and selling gas through facilitated markets

1. Should a SoLR mechanism include requirements that AEMO bid to buy and offer to sell gas in the facilitated markets at the relevant market price cap?
2. Should a SoLR mechanism include requirements regarding how AEMO buys and sells gas through the GSH and DAA? If so, is it appropriate to require AEMO to use a broker, or should additional or different requirements be imposed?
3. What, if any, requirements should be in place for AEMO buying and selling gas outside the DWGM, STTM, GSH or DAA?

Question 18: Role of demand response in gas market arrangements

1. How responsive are gas users to price given underlying bilateral contracts or GSAs? What are the barriers to gas users reducing consumption based on higher prices?
2. How do current market arrangements across the ECGS (both the facilitated markets and outside of those markets) enable gas users to reduce demand to meet supply? For example, in the STTM, how effective are MOS, MSV, and contingency gas arrangements in this respect?
3. What are the barriers to reducing consumption using existing gas market arrangements?

Question 19: Using flexible demand to address supply shortfalls

1. How much capacity could be made available through an administered demand response mechanism implemented across the ECGS?
2. Does the potential amount of responsive demand vary between jurisdictions or is it evenly distributed across the ECGS?
3. Does the potential amount of responsive demand vary between seasons?

Question 20: Factors that may impact demand response participation

1. What are the factors that could impact gas users' ability to participate in an administered demand response mechanism?
2. What impact would the terms of gas supply and transport agreements have on gas users' ability to participate in an administered demand response mechanism? Would these contracts require amending to enable participation in demand response mechanism?
3. Would an availability fee help overcome some barriers and enable greater participation in an administered demand response mechanism?
4. Would an alternative approach of making demand response-relevant information available to AEMO enable it to make informed decisions that support a demand response in the ECGS?

Question 21: Potential designs for an administered demand response mechanism

1. In reference to the outlined design options in Table 7.1, what potential design options could be successful for an ECGS administered demand response mechanism? Why?
2. Are there other design options the AEMC could consider?

Question 22: Removing the trading fund and its $35 million cap

1. Should the trading fund:
   a. be retained as is
   b. be retained in an amended form, and if so, what amendments should be made, or

c. be removed and replaced with a cost recovery and proceeds distribution mechanism as proposed?

Question 23: Triggering the cost recovery and proceeds distribution process

1. Do you consider that the appropriate trigger for using the cost recovery and proceeds distribution process is when AEMO establishes a SoLR reserve? Is there a more preferable alternative?
2. Should guidance on using the cost recovery and proceeds distribution process be provided? Should this be through the NGR and/or AEMO procedures?

Question 24: How costs could be allocated

1. Do you agree with the proposed cost allocation methodology — that costs be recovered from relevant entities based on their share of gas demand at the locations where a SoLR reserve is established and in each month that the SoLR reserve is in place? Or are other alternative approaches preferred? Why?
2. Are there other benefits and costs of the proposed cost allocation method that the AEMC should consider?

Question 25: How proceeds could be distributed

1. Do you agree with the proposed proceeds distribution methodology — that proceeds be distributed to relevant entities in a timely manner based on their share of gas demand at the locations where a SoLR reserve is established? Or are other alternative approaches preferred? Why?
2. Are there other benefits and costs of the proposed proceeds distribution method that the AEMC should consider?

Question 26: Providing transparency about cost recovery and proceeds distribution

1. Which aspects of the cost recovery and proceeds distribution process should be in the NGR, and which aspects should be in the ECGS Procedures to support transparency to market participants? Why?

Question 27: Establishing financial separation for the SoLR mechanism

1. Do you agree with the proposal that AEMO establish a separate financial account for its use of the SoLR mechanism? Why?

Question 28: Improving the market notices to better inform the market

1. Are the number of market notices and the information they contain provide appropriate transparency to market participants about AEMO's actions in using a SoLR mechanism?
2. Are the potential links between the risk and threat signalling levels and the SoLR-related market notices appropriate?

Question 29: Publishing a post-intervention report

1. Should AEMO be required to publish a post-intervention report within one month of an intervention in the market?
2. Should AEMO also have the discretion to provide a supplementary report at the four-month mark, if it considers it would be appropriate?

Question 30: Publishing biannual reports

1. Would regular reporting from AEMO on its market intervention activities (in addition to post-intervention reports) be valuable to market participants?
2. If so, should AEMO be required to report on its SoLR activities on an annual or biannual basis?

Question 31: Reporting to energy ministers and affected jurisdictions

1. Should AEMO continue to be required to provide an annual report to energy ministers about any SoLR activities, if the proposed additional reporting requirements are introduced?

Question 32: Implementation costs

1. Do you have any concerns about the implementation costs of AEMO procedures and/or guidelines?
2. Are there other implementation costs the AEMC should consider and is there a way to minimise them?

Question 33: Closing the trading fund

1. Do you agree with the proposed approach to closing the trading fund?
2. Are there any other issues that may arise in a transition away from the trading fund that the AEMC should consider?

Question 34: Updating ECGS procedures and guidelines

1. Is the proposed six months for updating ECGS procedures and guidelines achievable? What impact could this timeframe have on AEMO and market participants?
2. If a six-month timeframe is not appropriate, what should be the alternative timeframe and/or approach?
3. Are there other processes or information (in addition to those identified by the proponents) that AEMO should include in its procedures or guidelines? Why?

Question 35: Changing the Dandenong LNG interim arrangements

1. What are your views on how a SoLR mechanism should apply to the DWGM Dandenong LNG storage facility arrangements?
2. Should the current Dandenong LNG interim arrangements cease as anticipated in 2029, leaving AEMO to use the ECGS SoLR mechanism to address reliability and supply adequacy threats for the DWGM? What issues should the AEMC consider to achieve this?
3. Should an ECGS SoLR mechanism and the DLNG arrangements co-exist? What changes to the current DLNG arrangements, and the proposed design of the SoLR mechanism, would be required in this case?

Question 36: Assessment framework

1. Do you agree with the proposed assessment criteria?
2. Are there additional criteria that the Commission should consider or criteria included here that are not relevant?

How to make a submission

Making a submission

Stakeholders can help shape the solutions by participating in the rule change process. Engaging with stakeholders helps us understand the potential impacts of our decisions and, in so doing, contributes to well-informed, high quality rule changes.

We have included questions in each chapter to guide feedback, and the full list of questions is above. However, you are welcome to provide feedback on any additional matters that may assist the Commission in making its decision.

We recommend stakeholders also read the background paper to gain an understanding of the context for this rule change and the relevant features of the ECGS and gas markets.[7]

Due date: Written submissions responding to this consultation paper and the rule change request are sought by COB Thursday, 30 October 2025.

How to make a submission: Go to the AEMC's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code GRC0077.[8]

You may, but are not required to, use the stakeholder submission form published with this consultation paper.

Tips for making submissions are available on our website.[9]

Publication: The Commission publishes submissions on its website. However, we will not publish parts of a submission that we agree are confidential, or that we consider inappropriate (for example offensive or defamatory content, or content that is likely to infringe intellectual property rights).[10]

Other opportunities for engagement

During this consultation phase we will hold an information session on this rule change request and consultation paper. Details about this information session and how to register for it will be available on the AEMC website.[11]

7 AEMC, *ECGS reliability and supply adequacy rule change requests*, background paper, 20 March 2024.
8 If you are not able to lodge a submission online, please contact us and we will provide instructions for alternative methods to lodge the submission.
9 See: https://www.aemc.gov.au/our-work/changing-energy-rules-unique-process/making-rule-change-request/submission-tips
10 Further information is available here: https://www.aemc.gov.au/contact-us/lodge-submission
11 https://www.aemc.gov.au/rule-changes/ecgs-supplier-last-resort-mechanism

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1 The context for this rule change request

This consultation paper seeks feedback on the rule change request submitted by Energy Senior Officials and the Hon Lily D'Ambrosio MP, Minister for Climate Action, Minister for Energy & Resources and Minister for the State Electricity Commission of Victoria (the proponents) on 8 July 2024.

The proponents propose changes to the National Gas Rules (NGR) to:[12]

- address concerns about how the Australian Energy Market Operator (AEMO) uses the trading function provided in the National Gas Law (NGL)[13]
- introduce a new supplier of last resort mechanism for the east coast gas system (ECGS), which could include an administered demand response mechanism. This is intended to address those concerns and provide a last resort tool for AEMO to use if market participants have failed to resolve a threat to reliability and supply adequacy in the ECGS.

The Commission also intends to consider the potential impact of any changes made in response to this request on the current interim buyer and supplier of last resort mechanism that the AEMC created in 2022 for the Dandenong LNG storage facility in the Victorian declared wholesale gas market (DWGM).[14]

This rule change request aligns with the AEMC's priorities relating to:[15]

- future market design by getting market design right for secure and reliable changing energy systems through progressing work relating to the settings, services and signals that will support the future net zero system
- gas transition by clarifying the future roles of gas in the net zero transition through progressing work relating to the coordinated and transparent role of gas as the energy system transitions.

The AEMC seeks to progress the design of the market frameworks to provide the appropriate reliability settings, enable efficient provision of services and provide clear operational and investment signals for market participants in the context of Australia moving towards a net zero future.[16]

Considering the challenges of the gas sector as it transforms is also relevant for this rule change process. According to AEMO's 2025 Gas statement of opportunities (GSOO) 'while annual gas consumed by GPG is forecast to rise, the peak daily consumption from GPG in winter is also forecast to grow to levels well above historical peaks. Lower winter renewable energy output, coal generation closures, and concurrent electrification of residential and commercial heating loads are primary drivers of increasing peak day GPG forecasts.'[17] The challenges that may arise, including the increasing cost of gas and the decreasing number of gas users, are key contextual considerations for this rule change request.[18]

12 Rule change request, pp 11-12.

13 See AEMC, *ECGS reliability and supply adequacy rule change requests*, background paper, 20 March 2025, pp 20-21 for more on AEMO's current trading function.

14 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022.

15 Our Priorities | AEMC

16 AEMC, *A consumer-focused net zero energy system*, September 2024, p 7.

17 AEMO, *2025 Gas statement of opportunities*, p 6-7.

18 AEMC, *A consumer-focused net zero energy system*, September 2024, p 25.

1.1 Outline of the proposed supplier of last resort mechanism

The ECGS Supplier of last resort mechanism rule change request is one of four rule change requests that together seek to establish specific tools for the existing RSA framework for the ECGS. These tools would allow AEMO and market participants to better respond to reliability and supply adequacy threats.

The RSA stage 1 reforms in early 2023 were made in the face of impending risks of gas shortfalls forecast for winter 2023.[19]

Following implementation of the stage 1 RSA reforms, energy ministers considered that additional changes to the NGR were needed to complement the framework and to make it fit for purpose for addressing reliability and supply adequacy risks in the short, medium and long term. In December 2023, ministers directed senior energy officials to progress a package of reforms to implement stage 2 of the RSA framework through changes to the NGR.[20]

This rule change request is a core component of the stage 2 RSA reform package and takes inspiration, in part, from the design of the reliability and emergency reserve trader (RERT) mechanism in the national electricity market (NEM) and the interim arrangements for the Dandenong LNG storage facility.[21]

The central problem this rule change request seeks to address is the limited guidance currently provided in the NGR on how AEMO could use the trading function provided to it under the NGL. This is framed in the context of the other rule change requests that seek to develop the RSA framework for the ECGS.[22]

Noting the proponents have considered a range of potential solutions to address this issue, the request proposes a solution which:

- enables AEMO, if certain preconditions are satisfied, to establish reserves through the use of storage facilities, pipelines, compressors, blend processing plants and demand response
- permits AEMO to use its reserves to respond to a threat to reliability and supply adequacy if market participants have been unable to address the threat and no longer have the ability to do so.

The request also proposes:

- mechanisms to guide how AEMO can recover costs from market participants and also distribute any proceeds that may arise
- a system of notifications from AEMO to provide transparency to market participants
- reporting and accountability requirements on AEMO.

Figure 1.1 below sets out, based on the rule change request, the proposed NGR framework to guide the use of the NGL ECGS trading function.

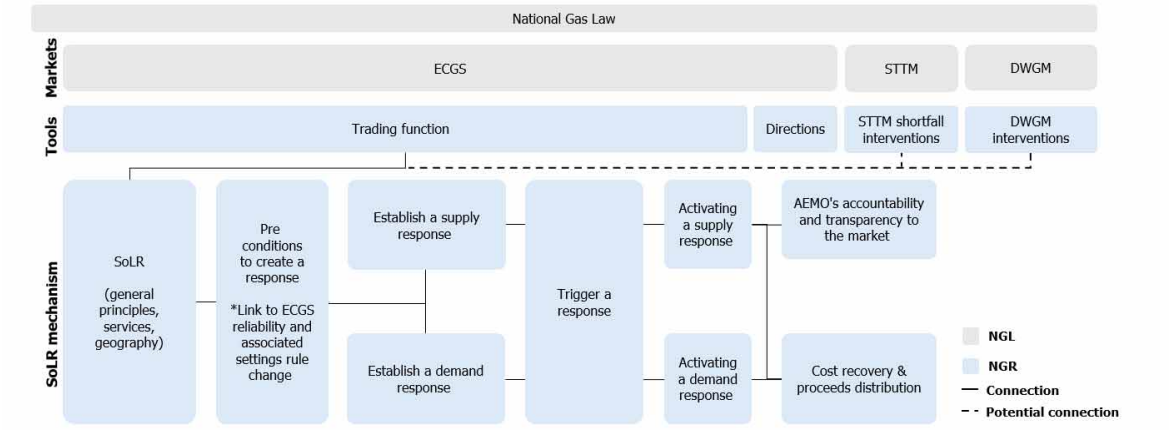
19 Stage 1 reforms gave AEMO some power to address and mitigate reliability risks and threats in the ECGS such to issue directions to relevant entities or trade gas where no industry responses to reliability threats are feasible. For more details on the stage 1 reforms, see Chapter 3 of the AEMC's background paper.

20 For more details on the other rule change requests that form part of the framework, see Chapter 1 of the background paper.

21 Rule change request, p 12.

22 See Chapter 2 of this paper.

Figure 1.1: Proposed NGR framework to guide the use of the NGL ECGS trading function



Source: AEMC - Illustrative only

There are five reasons why the proponents consider their preferred option to be the most appropriate:[23]

1. it addresses the problems identified with the current trading function arrangements in Part 27 of the NGR
2. AEMO will be better positioned to respond to any reliability and supply adequacy threats that market participants fail to address
3. it enables AEMO to use both supply and demand options
4. AEMO will not be limited in the exercise of its functions by the trading fund cap of $35 million
5. it does not mute the incentives or the ability of market participants to continue to operate and invest in the ECGS.

1.2 Other considerations when assessing this rule change request

In considering this rule change request and stakeholder responses to this consultation paper, the Commission will consider previous stakeholder engagement carried out by officials, related policy developments that are underway, and progress on the other stage 2 RSA rule change requests. Having regard to this related work will enable the Commission to develop a response to this request that is fit for purpose and aligns with the most up-to-date developments.

1.2.1 Prior stakeholder engagement by energy officials

In June 2023, jurisdictional energy officials asked stakeholders to provide feedback on the design of the stage 2 RSA framework to complement stage 1. This included consultation on a possible mechanism that included AEMO acting as a supplier of last resort and managing a demand response mechanism. The feedback helped inform this rule change request.[24]

On the potential of demand response, stakeholders supported last resort powers that would be implemented by a RERT-style tender panel limited to demand response providers.[25]

23 Rule change request, p 28.

24 DCCEEW, *Reliability and supply adequacy framework for the east coast gas market, stage 2 of framework development*, consultation paper, June 2023; ECMC, Consultation on stage 2, accessed 31 July 2025.

25 Submissions to stage 2 of the Gas reliability and supply adequacy framework consultation paper: EnergyAustralia, p 5; Engie, p 13; Alinta, p 16.

On the potential supplier of last resort function for AEMO, stakeholders made the following comments:

- A SoLR mechanism is not necessary while there is also a trading function.[26]
- A SoLR mechanism may not provide value if a demand response mechanism was implemented.[27]
- If the SoLR mechanism procures from in-market resources, it risks cannibalising and crowding out the market, therefore not contributing to reliability and supply adequacy, especially since market participants already have strong incentives to cover their peak gas demand.[28]
- If market participants are competing with AEMO for gas it could distort market signals, and cause contracting delays, and reduce incentives for market led procurement.[29]

Further information on the consultation by energy officials is at Appendix B of this consultation paper.

1.2.2 New developments for the reliability and supply adequacy framework

At the 6 December 2024 Energy and Climate Change Ministerial Council (ECMC) meeting Ministers tasked senior energy officials to work with AEMO on potential expanded powers for AEMO to address ECGS supply issues, and recommend policy options to address this over the medium term.[30]

Officials responded to this request, and at the 14 March ECMC meeting, the Ministers observed:[31]

> Senior officials presented Ministers with the findings of work tasked at the December 2024 meeting, outlining options to potentially expand the Australian Energy Market Operator's (AEMO) powers to address possible structural supply shortfalls in the east coast gas market from 2028. Ministers requested further policy analysis, including an assessment of costs and benefits, to support a decision in July 2025 on whether to expand AEMO's powers. Ministers noted that any expanded powers would direct AEMO to be technology and solution agnostic, providing the chosen solution or mix of solutions can be delivered within the required timeframes and the lowest cost to customers. Ministers emphasised that if agreed, the use of any additional powers for AEMO would be available to secure supply as a last resort measure only.

This third stage of the RSA framework to expand AEMO's powers to address supply shortfalls was again considered at the August 2025 ECMC meeting. The Ministers noted the officials' work and requested that a draft regulatory package (of a Bill, Rules and Regulations) be provided for ECMC consideration no later than December 2025. Ministers noted:[32]

> Ministers agreed the proposed powers would:
>
> - only be used as a last resort (i.e. a material threat to the reliability or adequacy of supply in the East Coast Gas System is identified that can only be resolved through use of the powers);

26 Submissions to stage 2 of the Gas reliability and supply adequacy consultation paper: APGA, p 22; APLNG, p 15.
27 Alinta submission to stage 2 of the Gas reliability and supply adequacy framework consultation paper, p 10.
28 Submissions to stage 2 of the Gas Reliability and supply adequacy framework consultation paper: Engie, p 13; AEC, p 16; Origin, p 6.
29 Submissions to stage 2 of the Gas reliability and supply adequacy framework consultation paper: APA, p 30; APLNG, p 15.
30 Communique, Energy and Climate Change Ministerial Council Meeting, 6 December 2024, pp 2-3. See section 1.2.2 of the background paper.
31 Communique, Energy and Climate Change Ministerial Council Meeting, 14 March 2025, p 2.
32 Communique, Energy and Climate Change Ministerial Council Meeting, 15 August 2025, p 4.

- enable ministers from directly affected jurisdictions to determine whether the powers are used, the scope of competitive tenders and the types of solutions that should be prioritised;
- require AEMO to provide robust analysis to ministers on the impacts of options including, to the extent possible, analysis on the longer term impact on gas prices in the East Coast Gas Market revealed through competitive tenders to support decision-making;
- include an equitable cost recovery mechanism; and
- preserve market incentives to invest.

The Commission will engage with officials as appropriate and consider any advice and actions that arise from this work program on the proposed rule change.

1.2.3 Related rule change requests underway

The proponents designed the various tools and functions included in the four stage 2 RSA rule change requests to include linkages between them.[33]

The proposed linkages that are relevant to this request are:

- Reliability standard: it is proposed that the SoLR mechanism would be triggered by a forecast breach of the proposed reliability standard (i.e. the reliability standard is or could be breached) where market-led solutions have failed to fully address the forecast breach.[34]
- Value of gas customer reliability (VGCR): it is proposed that the VGCR would inform AEMO on the amount to be paid for a SoLR reserve[35]
- Reliability forecast in the GSOO which identifies forecast breaches of the reliability standard that inform the use of a SoLR mechanism[36]
- MT PASA is in place and makes use of a reliability standard in the assessments that can inform AEMO on the need to use the SoLR mechanism.[37]

The proposed SoLR mechanism is not intended to limit or impact the use of the directions power provided to AEMO for the ECGS under the NGL.[38]

The Commission is currently considering a related rule change request to extend the interim period of the interim arrangements for the Dandenong LNG facility. The draft determination was to extend the arrangements by four years to "allow for the development of a fit-for-purpose and enduring solution to manage security and reliability risks in the DWGM and East Coast Gas System (ECGS) more broadly."[39] The final determination is expected to be published in October 2025.

1.2.4 Potential interactions with the gas facilitated markets

The rule change request proposes powers that have the potential to apply to and affect the Victorian declared wholesale gas market (DWGM) and the short term trading market (STTM),

33 AEMC, Background paper, 20 March 2005, p 3-6.
34 East coast gas system Reliability Standard and Associated Settings rule change request, July 2024.
35 East coast gas system Reliability Standard and Associated Settings rule change request, July 2024.
36 East coast gas system Reliability Standard and Associated Settings rule change request, July 2024.
37 East coast gas system Projected Assessment of System Adequacy (PASA) rule change request, January 2025.
38 Rule change request, p 15.
39 AEMC, *Extension of the DWGM Dandenong LNG interim arrangements*, draft rule determination, 7 August 2025, p 6.

although they are not intended to limit the ability of AEMO to use its existing market-specific tools to manage demand and supply issues.[40] There is also the potential for interactions with the gas supply hub (GSH) and the operation of the day ahead auction (DAA).

The role AEMO holds for the facilitated markets is different, and the relevant parts of the NGR reflect this. AEMO's role for the ECGS complements these prior roles. Importantly, the new ECGS role is not intended to limit AEMO's system security and public safety functions for the Victorian Declared Transmission System (DTS) and the DWGM.[41] The Commission is conscious that any rules that may be made in this process will need to be clear on how they interact and relate to other functions AEMO carries out.

1.3 This rule change process

This consultation paper is the first stage of the rule change process, which includes other opportunities for stakeholder engagement. More information on rule change processes is available from the AEMC website.[42]

The key milestones for this rule change process are set out below, with current indicative dates.

Table 1.1: Key rule change process milestones

Milestone	Date
Publication of consultation paper	25 September 2025
Close of first consultation period	30 October 2025
Publication of draft determination	February 2026
Close of second consultation period	April 2026
Publication of final determination	June 2026

40 Rule change request, p 15.
41 Reliability standard and associated settings rule change request, p 50.
42 See: https://www.aemc.gov.au/our-work/changing-energy-rules

2 Defining the problem

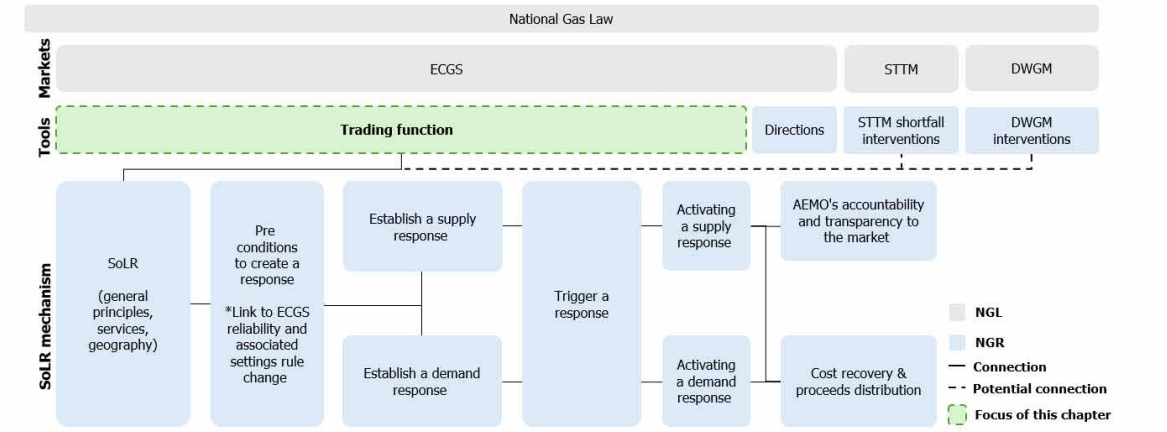
This chapter seeks stakeholder feedback on the problem identified in the rule change request. The Commission considers there are three parts to the problem this rule change process should address:

- Section 2.1 — risks of peak day and structural gas shortfalls in the ECGS
- Section 2.2 — guidance and guardrails are needed on AEMO's ECGS trading function
- Section 2.3 — an enduring solution is needed for the DWGM Dandenong LNG storage facility.

Each is discussed in turn below.

Figure 2.1 below indicates where the problem raised in the rule change request sits in the proposed NGR framework for the NGL ECGS trading function.

Figure 2.1: Context for the problem raised in the rule change request



Source: AEMC - Illustrative only

2.1 There remain projected risks of gas shortfalls in the ECGS

All the stage 2 RSA rule change requests address a shared problem: risks of gas shortfalls in the ECGS. This core issue is informed by the supply and demand outlooks released by AEMO and the ACCC in recent years that project gas shortfall risks from the late 2020s.[43]

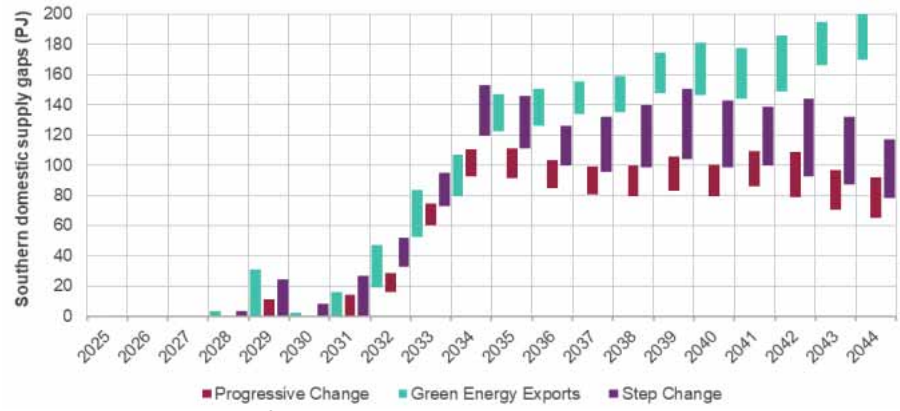
The proponents cite evidence of reliability and supply adequacy risks:[44]

- The ACCC's Gas Inquiry interim report published in 2023, stating there is potential for gas shortfalls from 2027 onwards.
- AEMO's 2024 Gas Statement of Opportunities (GSOO), where similar risks of gas shortfalls in the southern jurisdictions could emerge in 2026 and 2027.

In AEMO's 2025 GSOO, gas shortfalls risks continue where supply gaps emerge from 2029:[45]

43 AEMC, *ECGS reliability and supply adequacy rule change requests*, background paper, 20 March 2025, p 1.
44 Rule change request, p 6.
45 AEMO, *Gas statement of opportunities*, March 2025, p 11.

Figure 2.2: Gas supply gaps forecast in southern regions 2025-2044



Source: AEMO. *Gas statement of opportunities*, March 2025, p 11.

The proponents identify a key driver of these gas shortfalls as the increased demand for gas-powered generation (GPG) in the NEM.[46] AEMO's 2025 GSOO also projects an increase in annual consumption of gas by GPGs from the early 2030s with significant growth in peak day consumption.[47]

The proponents state that the risk of peak day shortfalls is acute over the winter period in southern jurisdictions:[48]

In addition to peak day shortfalls, there is a risk of underlying structural shortfalls in supply due to declining gas production:[49]

> Setting the winter deliverability threats aside, both the ACCC and AEMO are projecting that from 2028 the east coast gas system could experience more structural shortfalls in supply, with forecast domestic gas production projected to be insufficient to meet demand.

2.2 AEMO requires guidance to use the ECGS trading function

In light of the risks of reliability and supply adequacy in the ECGS and as part of the stage 1 RSA reforms, Energy Ministers agreed to amend the NGL and NGR to provide AEMO with two new tools that could be used to address threats of reliability or supply adequacy:[50]

- ECGS directions function, which AEMO can use to direct relevant entities to take specific actions that affect the reliability and supply adequacy of gas
- ECGS trading function, which AEMO can use to trade in gas or to purchase pipeline, compression or storage services.

AEMO can only exercise these functions where it considers them necessary to prevent, reduce or mitigate an actual or potential threat to the reliability or adequacy of supply in the ECGS and AEMO has communicated this to the market.

Part 27 of the NGR sets out how AEMO is expected to exercise these functions and includes:

46 Rule change request, p 6.
47 AEMO, *Gas statement of opportunities*, March 2025, p 6.
48 Rule change request, p 7. Also see AEMC, *ECGS reliability and supply adequacy rule change requests, background paper*, 20 March 2025, pp 14-19.
49 Rule change request, p 7.
50 Rule change request, p 18. These amendments were passed in 2023.

- principles to guide AEMO on whether and the extent to which it should exercise these functions in relation to a risk or threat
- the process that AEMO is expected to follow in exercising these functions.

Part 27 of the NGR also sets out trading function specific rules, such as:

- how AEMO is to establish and maintain a trading fund with a total funding capacity capped at $35 million (in real terms as of 30 June 2022) for each financial year (rules 708-710)
- what the trading function may be used for (rule 708)
- how the trading fund is to be funded (rule 709).

The NGL also requires AEMO to develop ECGS guidelines on the exercise of its trading and directions functions.

In light of the stage 1 RSA reforms put in place, the proponents have identified the following issues with the ECGS trading function:[51]

> The key issues that have been identified with the existing trading function provisions in Part 27 of the NGR are that they do not:
>
> (a) provide clear and objective guidance to AEMO or market participants on when and how this function should be exercised
>
> (b) impose appropriate guardrails around the use of this function, particularly given its potential to:
>
> – impose unnecessary costs on gas users
>
> – give rise to a perceived conflict of interest for AEMO in the facilitated markets if AEMO is competing with market participants to procure gas or other services
>
> – have a range of distortionary market impacts, including potentially crowding out market participants and reducing their incentive to address the threats.

The proponents also identified other limitations with the current ECGS trading function provisions:[52]

- they do not provide guidance to AEMO on allocating costs and distributing proceeds
- they do not recognise AEMO's ability to recover costs from NEM participants
- the $35 million trading fund cap unnecessarily restricts AEMO's actions
- they do not specify how AEMO would manage potential conflicts of interest if it participates in the facilitated markets
- they do not allow AEMO to procure demand response.

2.3 Finding an enduring solution for the Dandenong LNG storage facility

In 2022, the Commission made a rule to develop an interim framework for the DWGM Dandenong LNG storage facility to address risks of peak day gas shortfalls in the DWGM, particularly during winter.[53] These interim arrangements enable AEMO to act as both buyer and supplier of last resort for the Dandenong LNG storage facility. The interim arrangements ensure that storage capacity is fully utilised at the Dandenong LNG storage facility in the lead up to winter by requiring AEMO to

51 Rule change request, p 21.
52 Rule change request, pp 20-21.
53 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022.

purchase all uncontracted storage capacity as at 1 March each year. These arrangements were set to expire in 2025.

On 3 April 2025, the Victorian Minister for Energy and Resources, Climate Action, and the State Electricity Commission submitted a rule change request to extend these interim arrangements while recognising the need for an enduring solution for the DWGM Dandenong LNG storage facility. On 7 August 2025, the Commission published the draft determination that proposed to extend the interim arrangements for the DWGM DLNG storage facility by four years.[54] In that draft determination, the SoLR rule change request was identified as the process for considering an enduring solution for Dandenong LNG storage facility:[55]

> The four year extension would allow for the development of a fit-for-purpose and enduring solution to manage security and reliability risks in the DWGM and East Coast Gas System (ECGS) more broadly...The Commission notes that such a Supplier of Last Resort mechanism (either in combination with a third party access regime or without, noting that third party access and the Supplier of Last Resort mechanism would address different underlying issues) could deliver the enduring solution for the Dandenong storage facility. The four year extension of the interim arrangements would allow sufficient time for a long-term solution to be developed and implemented for the DWGM. The Commission will consider this issue further when we initiate the ECGS Supplier of Last Resort rule change process.

Question 1: Defining the problem

1. Do you agree that these are problems to be addressed by this rule change process?

54 AEMC, *Extension of the DWGM Dandenong LNG interim arrangements*, draft rule determination, 7 August 2025.

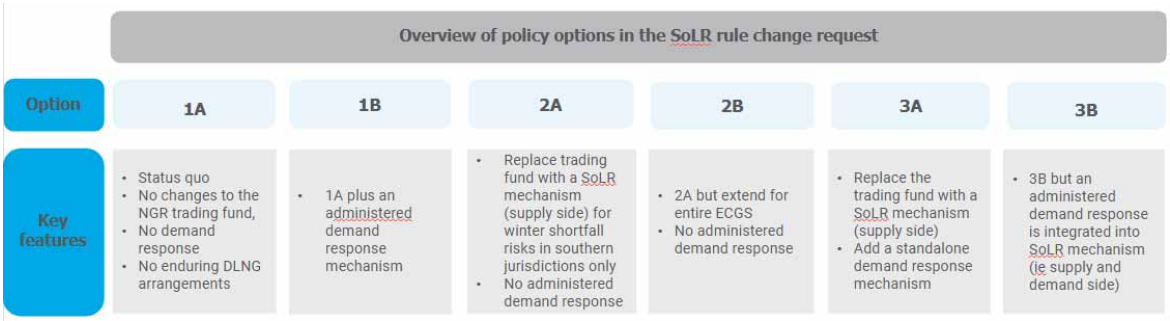
55 AEMC, *Extension of the DWGM Dandenong LNG interim arrangements*, draft rule determination, 7 August 2025, pp 6, 7.

3 Policy options for a proposed SoLR mechanism

This chapter describes and outlines the Commission's preliminary observations on the policy options identified by the proponents. It outlines and seeks feedback on an initial consideration of costs and benefits derived from our high level preliminary impact analysis (see Appendix C).

There are six policy package options (including the status quo) identified in the rule change request. There may be variations or further policy options to consider as part of this rule change process. Figure 3.1 below provides an overview of the proponents' policy options.

Figure 3.1: Overview of policy options



Source: AEMC.

3.1 Policy option 1A - No change

Description

Under the status quo option and noting the ECGS trading function in the NGL, the current ECGS trading function provisions set out in Part 27 of the NGR would be maintained. The trading function contained in the NGL and NGR that enables AEMO to trade in gas and to procure pipeline, compression and/or storage services up to a cap of $35 million (real June 2022) per year would remain as currently drafted. There would be no demand response mechanism because this is not a service AEMO can currently procure through its trading fund. Further, no arrangements would be made to accommodate DWGM Dandenong LNG storage facility beyond its current extension.

Preliminary observations

Maintaining the status quo could perpetuate the gas reliability and supply adequacy risks because it would not address the proponents' issues with the limited guidance and guardrails on AEMO's trading function. The status quo would also not address market participants' concerns around:

- risks of AEMO distorting the market if it were to exercise this trading function, which could compromise principles of market efficiency
- the limited transparency of current arrangements, which does not appear to be in line with principles of good regulatory practice.

Preserving the status quo could impact the overall effectiveness of the stage 2 RSA gas market reforms and related reforms, like extending AEMO's ECGS powers to include supporting gas infrastructure investment.[56] Further, this option would not provide an enduring solution to the DWGM Dandenong LNG storage facility arrangements.

56 ECMC Communique, 15 August 2025.

However, maintaining the status quo benefits AEMO and market participants because the current trading fund cap provides certainty on the maximum cost should AEMO use the ECGS trading function.

Potential benefits and costs

The status quo is the 'base case,' which is compared against the other policy options to determine the likely incremental benefits and costs of those policy options, so the Commission can ultimately determine which option (including the option of retaining the status quo) would best promote the NGO. See appendix C for further information on our approach to impact analysis.

In the status quo situation, there would be no additional implementation or operational costs as no SoLR mechanism would be in place.

However, with no SoLR mechanism in place, when the DWGM Dandenong LNG storage facility interim arrangements cease there may be some uncertainty for DWGM market participants regarding how system security threats could be addressed. This may be inconsistent with the principles of good regulatory practice and information transparency. Further, the current trading fund may be under-utilised or ineffective in addressing gas shortfalls due to insufficient guidance or guardrails for AEMO on using its ECGS trading function. If maintaining the status quo resulted in lower reliability than may occur under other policy options, then this could be a worse outcome for gas consumers.

3.2 Policy option 1B - Including administered demand response

Description

Option 1B includes the trading fund (status quo) as in option 1A, plus a new demand response mechanism administered by AEMO. Under the ECGS trading function in the NGL, a demand response mechanism would be set up under Part 27 of the NGR. The proponents have suggested that a demand response panel could be established through a competitive tender process for demand response providers in the ECGS, such as large gas users or gas retailers. Demand response panellists would be paid for reducing consumption if the panel was activated by AEMO for the purpose of addressing a threat to reliability and supply adequacy. For further discussion on potential administered demand response arrangements see chapter 7.

Preliminary observations

Introducing an administered demand response mechanism would provide an additional tool for AEMO to manage threats to reliability and supply adequacy and could result in improved reliability outcomes, compared to option 1A. In line with principles of market efficiency, it could be a more efficient way of addressing gas shortfall risks if it is a lower cost option to enable more flexible gas market participants to reduce their demand relative to AEMO intervening by using the trading fund.

However, a range of potentially complex implementation issues must be addressed in setting up an administrative demand response mechanism. These include the physical transportation of the gas to address the shortfall, the interaction with existing mechanisms in the facilitated markets and clarifying the roles and responsibilities of parties including contractual issues. These are discussed in chapter 7.

In addition to the discussion above on policy option 1A, a combination of the administered demand response mechanism with the current trading function could create further uncertainty, given the reported issues around the lack of guidance and guardrails for AEMO in using the ECGS

trading function. This raises concerns about the limited transparency of this policy option and suggests it may not be in line with principles of good regulatory practice.

Potential benefits and costs

The incremental benefit of option 1B compared to 1A could be material if some gas market participants have flexibility to reduce their gas consumption in response to requests from AEMO. If an administered demand response mechanism was available to resolve a gas shortfall, this would benefit those gas market participants who are less flexible in reducing their demand by lowering the probability, extent and hence costs of any curtailment that could eventuate. On this basis, it would appear that policy option 1B may have greater economic benefits compared to policy option 1A.

Further, an administered demand response mechanism can elicit information on which users are most able and willing to reduce demand, which can be useful for AEMO to manage gas shortfall situations.

Setting up an administered demand response mechanism will result in implementation and operational costs for AEMO and market participants. In addition, costs could arise from market distortions due to the creation of a secondary market for administered demand response unless the mechanism is designed to minimise these market distortions and market participants continue to bear the primary risk of efficiently balancing supply and demand.

3.3 Policy option 2A - Supply-side SoLR for winter deliverability threats in southern jurisdictions

Description

Implementing policy option 2A would involve developing a NGR framework that replaces the trading fund with a supply-side SoLR mechanism. The supply-side SoLR mechanism would only be used in southern ECGS jurisdictions to address 'winter deliverability' threats.[57] Southern ECGS jurisdictions are the ACT, NSW, South Australia, Victoria and Tasmania. The proponents state:[58]

> Under this option, AEMO would be able to establish a storage reserve ahead of time for winter and to procure and use any other gas supply, pipeline and/or compression reserves that may be required to address a forecast winter deliverability reliability gap in the south.

The SoLR mechanism envisaged under this option would not include an administered demand response — addressing any gas shortfalls would entirely be a supply-side response.

Preliminary observations

AEMO's 2025 GSOO notes the increasing needs of GPG in the future and indicates that southern regions will be exposed to increased risk if either unscheduled production interruptions occur in southern states that reduce supply capacity, or low VRE conditions or coal generator outages increase the GPG demand.[59]

Including a supply-side SoLR mechanism involving a storage reserve for the winter period would target where and when risks of gas shortfalls are greatest based on AEMO and ACCC's gas supply-demand outlook - see Chapter X (problem definition). This could lead to improved reliability

57 Rule change request, p 24
58 Rule change request, p 24.
59 AEMO, *2025 Gas Statement of Opportunities*, March 2025, p 9.

outcomes for the jurisdictions that currently appear to be most vulnerable to threats to reliability and supply adequacy.

Replacing the trading fund with a supply-side SoLR mechanism with more guidance and guard rails would increase AEMO's confidence in managing gas shortfall risks and could result in greater transparency of these arrangements for gas market participants and consumers.

However, the limited geographic scope of the supply-side SoLR mechanism would mean that gas shortfall risks in the northern jurisdictions (that is, Northern Territory and Queensland) can only be addressed through existing tools, potentially exposing those gas consumers to reliability risks. The differing tools between southern and northern jurisdictions could induce greater stakeholder uncertainty on the circumstances in which AEMO intervenes in the market to address a reliability threat. It would also make the gas market arrangements more complex, particularly for those gas market participants operating across jurisdictions. This would not be consistent with principles of good regulatory practice.

Setting up a supply-side SoLR mechanism would require a range of implementation issues to be addressed. These could be the triggers and operational steps AEMO takes to activate and use the mechanism, particularly in a way that enables a market-led response. Further implementation issues to address include cost recovery and proceeds distribution as well as arrangements to promote accountability and transparency. Such issues may be more complex if the mechanism applies to only some jurisdictions. These topics are discussed in chapters 4-10.

Potential benefits and costs

The primary economic benefit would be to improve reliability, supply adequacy and system security outcomes for gas consumers in the southern jurisdictions. In line with the impact analysis conducted for the DWGM interim LNG storage measures rule determination, relevant economic benefits for a SoLR mechanism include the:[60]

- value of avoided curtailment
- reduced risk of system security threats
- consumer and broader market and economic benefits.

Policy option 2A would appear to have greater potential economic benefits compared to 1A. This may occur because the proposed SoLR mechanism in option 2A, with its additional guidance and guardrails for AEMO, could be more effective in addressing gas shortfalls and avoiding risks of curtailment, than the current trading fund arrangements in policy option 1A.

The potential costs relate to the implementation and operational costs for AEMO and gas market participants. These may include any costs associated with replacing the Dandenong LNG arrangements with a SoLR mechanism if that option is taken. Similar to policy option 1B, establishing a SoLR supply-side mechanism could transfer some of the risk of managing gas shortfalls from gas market participants to AEMO, resulting in potential inefficiency. This risk could be addressed in designing the SoLR mechanism to enable a market-led response and to use SoLR only when necessary.

60 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022, p 18.

3.4 Policy option 2B - Supply-side SoLR for the ECGS throughout the year

Description

Policy option 2B is the same as policy option 2A, in that AEMO establishes a supply-side SoLR mechanism, except under this policy option AEMO can use the supply-side SoLR mechanism across the entire ECGS throughout the year. AEMO can establish a storage reserve and procure any other gas supply, pipeline, compression and/or storage reserves required to address a threat to reliability that it identifies across the ECGS.[61] There is no administered demand response under this policy option.

Preliminary observations

Similar to the Commission's initial views on policy option 2A, this option could improve reliability outcomes. However, there would likely be greater improvements in reliability under this option because of the potential use of the supply-side SoLR mechanism across the ECGS throughout the year. Specifically, this policy option would enable a supply-side SoLR mechanism to be used in Queensland and the Northern Territory. Also, this policy option would have greater transparency for market participants as there would be guidance and guardrails on AEMO's use of the SoLR mechanism compared to the current trading fund in policy option 1A.

Implementation of the supply-side SoLR mechanism through the entire ECGS will need to take into account AEMO's varying roles in the ECGS, DWGM and STTM. For example, in the DWGM, AEMO has market operator, pipeline operator and system security roles but does not have these same roles in the ECGS.[62] The interaction between the proposed SoLR and the existing information and intervention tools in the facilitated markets is considered in chapters 4-6.

Similar to policy option 1B and 2A, establishing a SoLR supply-side mechanism could transfer some of the risk of managing gas shortfalls from gas market participants to AEMO, resulting in potential inefficiency. This risk could be addressed in designing the SoLR to enable a market-led response and to use SoLR only when necessary.

Potential benefits and costs

Potentially, policy option 2B could be preferred to option 2A because the supply side SoLR mechanism is capable of improving reliability outcomes in Queensland and the Northern Territory without affecting outcomes in the southern jurisdictions. Applying one regulatory arrangement across the jurisdictions could aid clarity for AEMO and market participants. However, given the expanded scope of the supply-side SoLR mechanism there may be greater implementation and operational costs for AEMO and market participants under policy option 2B compared to option 2A.

3.5 Policy option 3A - Supply-side SoLR and standalone demand response

Description

Implementing policy option 3A would involve developing a NGR framework that replaces the trading fund with a supply-side SoLR mechanism and also introducing a standalone administered demand response mechanism. This option is similar to policy option 2B, except there is an additional standalone demand response mechanism. The standalone demand response mechanism could be similar to the demand response mechanism in policy option 1B. A standalone demand response mechanism could involve different guidance and guardrails

61 Rule change request, p 25.
62 Section 91BA(1) of the NGL.

compared to those applied to the supply-side SoLR mechanism. This policy option would operate across the ECGS throughout the year.

Preliminary observations

Enabling AEMO to choose between supply-side and demand-side options to address gas shortfall risks in the ECGS may result in improved reliability outcomes for gas consumers. Enabling AEMO to use potentially lower-cost demand response to address a reliability threat rather than a potentially higher-cost supply-side option could also increase market efficiency.

Similar to policy options 2A and 2B, policy option 3A would include greater guidance and guardrails on AEMO's use of the ECGS trading function compared to the current trading fund in policy options 1A and 1B. That is, under policy option 3A, AEMO would have clarity on when and how to use the supply-side SoLR mechanism and the demand response mechanism.

Under this policy option, AEMO would have two distinct mechanisms — a supply-side SoLR and a demand-side mechanism — to manage gas supply threats. With a standalone demand response mechanism, AEMO could establish specific principles, triggers, incentives and procurement approaches tailored to demand response. This could lead to a more efficient use of this mechanism.

However, as there are two distinct tools, there could be greater implementation and operational complexity for AEMO, particularly given the existing tools available in the DWGM and STTM to address gas shortfalls. Consequently, this policy option may appear less transparent to stakeholders.

Potential benefits and costs

Policy option 3A could have greater economic benefits than policy options 1B or 2B because it provides both supply and demand side options to AEMO to address reliability threats across the ECGS. This economic benefit could occur as there are more opportunities — demand and supply side options — for gas market participants to avoid curtailment.

However, as noted above, this option could have greater implementation and operational costs for AEMO and market participants as AEMO would have to design and maintain two distinct mechanisms.

3.6 Policy option 3B - SoLR with integrated supply and demand response

Description

This policy option was identified by the proponents as their preferred option.[63] Policy option 3B is the same as policy option 3A, except that the SoLR mechanism integrates both supply-side and demand response capabilities. An integrated SoLR mechanism would imply that the triggers, operational steps in setting up and activating the SoLR, and the cost recovery and accountability measures applied by AEMO are internally consistent for both supply and demand side responses. This policy option would also enable AEMO to consider the relative costs and benefits of reducing demand or increasing supply to address a gas shortfall.[64]

Preliminary observations

This policy option is the same as policy option 3A, in that there would be benefits on improved reliability outcomes across the ECGS to address any gas shortfalls throughout the year. There

63 Rule change request, p 28.
64 Rule change request, p 28.

would also be greater guidance and guardrails on AEMO on the objective and transparent use of this SoLR mechanism.

In addition to the benefits of policy option 3A, this option would provide greater consistency and simplicity as demand response and supply side responses would be considered together in AEMO's decisions to use a SoLR mechanism. It would avoid differing arrangements for demand side compared to supply side response. This consistency would improve the transparency to stakeholders of the SoLR mechanism and would appear more in line with principles of good regulatory practice.

Potential benefits and costs

Policy option 3B may be preferable to option 3A because it allows for improved coordination between the demand and supply side responses to address a gas shortfall, which would likely result in efficiency benefits.

The implementation and operational costs of policy option 3B could be lower than 3A because of the synergies in developing and maintaining processes for both supply and demand side together rather than as separate mechanisms. Such an approach could provide a benefit of greater clarity and consistency for AEMO and market participants.

Question 2: Policy options

1. What do you consider to be the best policy option outlined? Why?
2. Are there other potential benefits and costs of the policy options identified?
3. Are there any variations to the policy options outlined that would better address the problem?

4 Key design features of a SoLR mechanism

This chapter outlines key design features of a SoLR mechanism. The following aspects are discussed in turn:

- Section 4.1— use of SoLR for reliability and supply adequacy in the ECGS
- Section 4.2— principles guiding AEMO's use of a SoLR mechanism
- Section 4.3 — services AEMO can procure using a SoLR mechanism
- Section 4.5— geographic spread and time of use of a SoLR mechanism.

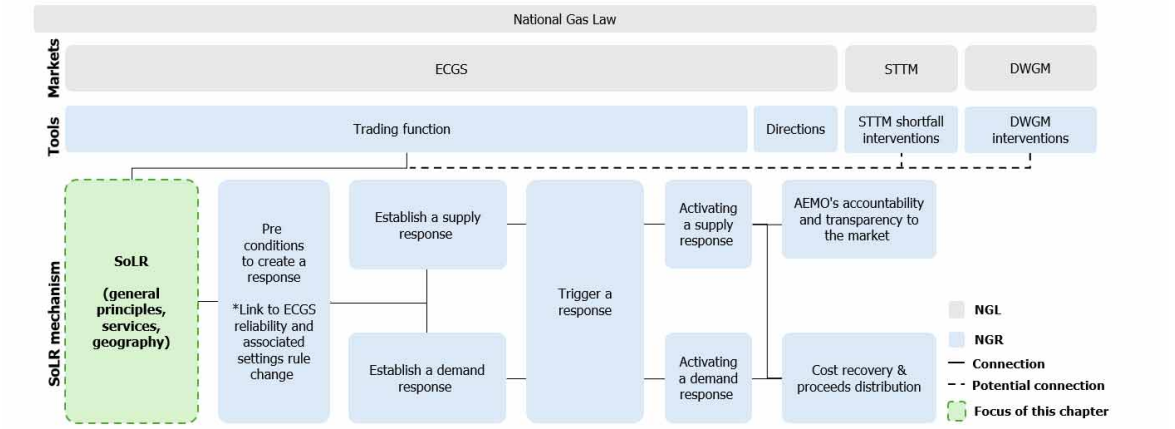
4.1 SoLR mechanism for ECGS threats to reliability and supply adequacy

Consistent with the other stage 2 RSA rule change requests, the purpose of a SoLR mechanism would be to address reliability and supply adequacy risk or threats in the ECGS.[65] The rule change request proposes to change the NGR by replacing the trading fund with a SoLR mechanism.[66]

As stated in chapter 2 on the problem definition, this rule change process is also exploring (as a consequential rule change) an enduring solution to the DWGM Dandenong LNG storage facility interim arrangements. In doing so, we are mindful that while AEMO's ECGS functions refer to reliability and supply adequacy, in the DWGM, AEMO's declared system functions extend to the provision of system security.[67]

Figure 4.1 below sets out where consideration of the high level design features of the SoLR mechanism discussed through the rest of this chapter fit in the context of this rule change request.

Figure 4.1: Context for the design of the proposed SoLR mechanism



Source: AEMC - Illustrative only

4.2 Principles to guide AEMO's use of a SoLR mechanism

The head of power for AEMO under which the proponents' proposed SoLR mechanism would operate is the ECGS trading function in the NGL:

65 Rule change request, p 8.
66 Rule change request, p 8.
67 Section 91BA of the NGL.

Box 1: Section 91AD of the NGL - AEMO's ECGS reliability and supply adequacy functions

(1) AEMO's east coast gas system reliability and supply adequacy functions are as follows:

...

(b) to identify and communicate actual or potential risks or threats to the reliability or adequacy of the supply of covered gas within the east coast gas system; ...

(f) to trade in covered gas or to purchase pipeline services or services provided by a compression service provider, blend processing service provider or a storage provider to the extent AEMO considers necessary to maintain and improve the reliability or adequacy of the supply of covered gas within the east coast gas system;

(g) other functions conferred on AEMO by the Rules for the purposes of this section;

...

(2) AEMO must not exercise the function specified in subsection (1)(f) unless AEMO is of the opinion that the trade or purchase is necessary to prevent, reduce or mitigate an actual or potential threat identified by AEMO in the exercise of the function specified in subsection (1)(b).

The proponents propose to change the NGR by replacing the trading fund with a SoLR mechanism. Chapter 3discussed various policy option packages for creating a SoLR mechanism for the ECGS. As articulated in section 2.2, the proposed SoLR mechanism is intended to provide guidance and guardrails on AEMO's use of its ECGS trading function to address reliability and supply adequacy threats.

The proponents propose a set of principles to guide AEMO's use of the SoLR mechanism:[68]

> AEMO is to have regard to the following principles (SoLR principles) when establishing a SoLR reserve:
>
> - actions taken should:
> - be those AEMO reasonably expects, acting reasonably, to have the least distortionary effect on the operation of the east coast gas system
> - aim to maximise the effectiveness of the SoLR reserve at least cost to gas consumers
> - the average amount payable by AEMO for each GJ should not exceed the estimated average VGCR for the location the SoLR reserve has been established for.

In assessing the proposed principles, the Commission is considering the following questions:

- Should there be principles for the SoLR mechanism?
- If so, what should those principles be?
- Should those principles be mandatory, or one aspect of broader discretion on AEMO?

The proposed principles are intended to provide guidance for AEMO, given the proponents' and stakeholders' concerns that there is insufficient guidance under current arrangements. Principles could provide greater certainty for AEMO and market participants, yet afford some discretion or flexibility for AEMO to choose a course of action in line with those principles. A principles-based approach could align with a SoLR mechanism designed to address risks, which by definition involves probabilities on when and how it would be used.

68 Rule change request, p 33.

Alternatives to a principles-based approach in the NGR could be:

- providing greater prescription in the NGR to AEMO, trading off flexibility for clarity and predictability, and possibly resulting in the SoLR mechanism being ineffective in addressing some situations
- providing no principles in the NGR and leaving AEMO to use its discretion in its ECGS Procedures, which would not address the proponents' and stakeholders' concerns about transparency of how a SoLR mechanism operates.

Currently, the NGR sets out principles that AEMO must consider when deciding to use its ECGS trading functions or directions.[69] Table 4.1 below compares the proponents' SoLR principles with those for the ECGS trading function and the NEM's RERT function. The proponents' proposed SoLR principles were informed by the RERT principles and have some similarity.[70]

Table 4.1: Comparison of principles used for related market functions

ECGS trading function (NGR rule 699)	NEM RERT (NER clause 3.20.2(b))	Proposed SoLR mechanism
Principles to guide AEMO's use of the ECGS trading function: • industry given a reasonable time to address a risk or threat • timely engagement with affected jurisdictions • distortionary impacts on the ECGS and costs to industry and consumers are minimised • do not compromise safety	Principles to guide AEMO's use of the RERT: • reasonable actions taken to have least distortionary effect on market operations • maximise effectiveness of reserve contracts at least cost to end use consumers • average amount payable by AEMO for reserve contracts should not exceed the average VCR for that region	Proposed principles for the use of SoLR: • actions taken should be least distortionary • actions maximise the effectiveness of the SoLR reserve at least cost to consumers • amount payable should not exceed the estimated value of gas customer reliability (VGCR)

Source: AEMC.

The appropriate set of principles would be determined by their purpose and scope. If the purpose of the principles is to guide AEMO's use of the SoLR mechanism, the set of principles needs to address key concerns affecting the use of the SoLR at the right level of generality. The scope of the principles should cover all aspects of the SoLR mechanism over which AEMO has a degree of discretion, such as from triggers and preconditions through to the use of the mechanism and cost recovery. A comprehensive scope covering all aspects of the SoLR mechanism is likely to be simpler and transparent, in line with principles of good regulatory practice.

Principles could be mandatory or part of a broader discretion provided to AEMO. The proponents' position is that the principles should be mandatory as this would provide certainty to AEMO and transparency to stakeholders on how AEMO would use the SoLR mechanism.[71] This view responds to concerns around the limited guidance for AEMO under current arrangements. As an alternative, the principles could be framed in a more discretionary way as part of broader

69 Rule 699 of the NGR.
70 Rule change request, p 33.
71 Rule change request, p 33.

considerations AEMO may take into account. This would provide greater flexibility for AEMO but may not provide the level of guidance needed and the transparency expected by market participants.

Finally, setting principles in the NGR for the SoLR mechanism can be complemented by more prescriptive arrangements on other matters in the NGR or more detailed aspects in AEMO's ECGS Procedures. Overall, the purpose is to provide sufficient guidance to AEMO, and clarity to market participants, on AEMO's use of the SoLR mechanism.

Question 3: Principles to guide AEMO's use of a SoLR mechanism

1. Should there be principles to guide AEMO's use of a SoLR mechanism?
2. What is the appropriate set of principles for the SoLR mechanism? Why?
3. Should these principles be mandatory or part of AEMO's broader discretion?
4. Do you have any views on how any principles should complement other more prescriptive obligations in the NGR or the ECGS Procedures?

4.3 Services AEMO could procure through a SoLR mechanism

The proponents propose that AEMO procure a range of services through the SoLR mechanism. These services are described as 'reserves' and grouped as follows:[72]

- Storage SoLR reserve where gas is placed in storage and used where required to address a threat to reliability and supply adequacy.
- Other SoLR reserve which involve gas services other than storage and encompasses pipeline, compression, blend processing and demand response services.

The proponents consider that the two types of reserves are not mutually exclusive and AEMO can choose to do both in varying degrees, for example, provide a mix of storage and demand response services.

Separating out types of SoLR reserves could enable different triggers, procurement approaches and pricing structures depending on the type of service procured by AEMO to address a threat to gas reliability. This would enable AEMO to create specific processes tailored to the service such as for storage compared to demand response. From a technical or practical perspective this may be appropriate as the lead time to establish gas storage would likely be longer than other services such as demand response. However, separating types of reserves may also create complexity and AEMO would need to clearly set out to gas market participants how it would use the different types of reserves so it is transparent.

The proponent has suggested there are two types of SoLR reserves. One alternative could be three types of reserves:

- storage
- gas infrastructure services (eg compression, blend processing)
- demand response.

72 Rule change request, p 34.

Distinguishing demand response could recognise some of the particular features in providing this service compared to storage and gas infrastructure services - see chapter 7. Other alternatives include:

- Establishing multiple (more than three) reserve types based on the range of gas services provided through a SoLR mechanism. This could provide greater granularity but may also result in further complexity.
- Having a single reserve type that merges all the range of services provided through a SoLR mechanism. This approach may result in not capturing the distinguishing features, such as differing procurement approaches, as between supply side and demand response services. However, such details could be managed by AEMO in the ECGS Procedures as needed.

Finally, if there is an identified need for distinct types of reserves, the remaining issue is whether these types of reserves are articulated in the NGR or whether these matters are for AEMO to develop in further detail in its ECGS Procedures. Setting the types of reserves in the NGR can provide certainty to AEMO and clarity for gas market participants. However, given the potential technical matters to address, for example stepping out in detail what is involved in a demand response or a compression service, it may be more appropriate for AEMO to retain the flexibility to resolve technical issues through its ECGS Procedures.

Question 4: Services AEMO could procure through a SoLR mechanism

1. Should the NGR identify particular types of SoLR reserves AEMO could access? If so, what types of reserves?
2. Which matters regarding the types of SoLR reserves are best left to the ECGS Procedures?

4.4 Constraining AEMO's SoLR costs

The proponents propose that the amount payable by AEMO for using a SoLR mechanism be constrained by a proposed Value of Gas Customer Reliability (VGCR).[73] Specifically, the average amount payable by AEMO for each GJ of gas should not exceed the estimated average VGCR for the location where the SoLR reserve has been established.[74]

By constraining the amount payable for use of the mechanism to the VGCR, the proponents assert that this would ensure that AEMO does not spend more than what customers are willing to pay for reliability and supply adequacy.[75] The proposed VGCR ($/GJ) would be conceptually equivalent to the Value of Customer Reliability (VCR) ($/KWh) in electricity, which is applied in the RERT provisions - both are 'willingness-to-pay' (WTP) measures that are intended to reflect the value consumers place on reliable electricity or gas supply.

The VGCR is not a construct currently used in the ECGS. In its assessment of the ECGS reliability standard and associated settings rule change request, the Commission's initial view is that a NEM-style VGCR might not be appropriate for gas market settings.[76] Instead, the Commission's preliminary direction is that a WTP measure may be appropriate for some gas market customers but not others. Specifically:

73 Rule change request, p 33.
74 Rule change request, p 33.
75 Rule change request, p 27.
76 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 25.

- It might not be appropriate to apply WTP measures to residential and small commercial gas customers because of the safety risks in shedding load and associated costs.[77]
- WTP measures could be considered for gas market participants who provide ex-ante bids into the gas markets and purchase gas through bilateral contracts.[78]

Related to the above, the Commission's preliminary direction is to establish an independent process and governance arrangement to review the gas market settings, including consideration of WTP and other factors for certain customers.[79]

If the current direction is implemented, a willingness to pay figure will likely be developed after the expected completion date of this rule change process in June 2026. As a result, there may need to be interim arrangements that set constraints on the amount payable by AEMO under a SoLR mechanism, if one is established.

Table 4.2 below outlines some interim metrics that could be used to constrain the amount payable by AEMO (per GJ of gas) for using SoLR. .[80]

Table 4.2: Examples of potential interim metrics to constrain the cost of using a SoLR

Metric	Description and key considerations
No metric – AEMO to use its discretion	While this option provides AEMO with flexibility, it would not provide transparency or certainty to stakeholders and could result in customers paying more for gas reliability than they may reasonably be prepared to pay.
Information in bilateral contracts	Using information in bilateral contracts, such as compensation terms for non-delivery of gas, to infer the value different customers place on reliability. However, it may be difficult for AEMO to obtain this information.
WTP of GPG	Using the WTP of GPG revealed through the NEM prices and settings as a proxy for the WTP of gas consumers who cannot reveal their value of reliability and can safely be load shed. GPG users can be the marginal bidder in gas markets when prices in electricity markets are high. They may have a high WTP for gas on occasions when the NEM price is high.
The per unit cost ($/GJ) of using the SoLR should not exceed the market price cap in the DWGM and STTM	This option would provide transparency to market participants and gas customers, but there would need to be a clear economic or pragmatic justification of why this metric should be used. This does not resolve the appropriate metric for outside the DWGM and STTM where there are no market price caps.

Source: AEMC.

77 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 24.
78 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 25.
79 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 28.
80 AEMC, ECGS reliability standard and associated settings, directions paper, 28 August 2025, p 225.

Question 5: Constraining AEMO's SoLR costs

1. What are the interim and ongoing metrics that should be applied to constrain the amount AEMO pays when using the SoLR mechanism? Why?

4.5 Geographic and seasonal scope for a SoLR mechanism

As set out in chapter 3, some policy options can vary on the geographic coverage and season (or time to use) a SoLR mechanism. For example:

- a SoLR mechanism could be restricted to the southern jurisdictions to address winter deliverability threats only, so that the mechanism would not be used in the northern jurisdictions and at other times of the year
- a SoLR mechanism could apply generally across the ECGS throughout the year.

In chapter 2 on the problem definition, the Commission identified that the greatest threat to gas reliability occurs in the winter months in southern jurisdictions.

However, some of the issues to resolve with limiting the SoLR to southern jurisdictions for winter deliverability threat include:

- Some threats to gas reliability may occur in northern jurisdictions or in the shoulder months. In this case, a SoLR mechanism would not be available to address these threats.
- Would threats to gas reliability in southern jurisdictions only be addressed from SoLR reserves sourced from southern jurisdictions, or could reserves in northern jurisdictions be called upon?
- Cold periods resulting in higher gas demand do not neatly coincide with winter calendar months, so AEMO may need some discretion to use a SoLR mechanism in the shoulder periods adjacent to winter months.

The Commission considers there may be merit in having a SoLR tool available across the ECGS throughout the year because of the wider potential of this mechanism to address gas reliability threats in a range of locations and times. This market-wide solution could provide regulatory consistency across the ECGS.

Alternatives for consideration include:

- A SoLR mechanism used in the ECGS but only in winter months. However, this would face similar issues to those identified above.
- Restricting the SoLR mechanism only to southern jurisdictions for use throughout the year. While this recognises that gas threats are heightened in southern jurisdictions, there would be a missed opportunity for a mechanism to address threats outside those jurisdictions.

Question 6: Geographic and seasonal scope for a SoLR mechanism

1. What is the relevant geographic scope for a SoLR mechanism?
2. Should a SoLR mechanism only be used for threats over winter or should it be available at any time of the year?

5 Preconditions and triggers

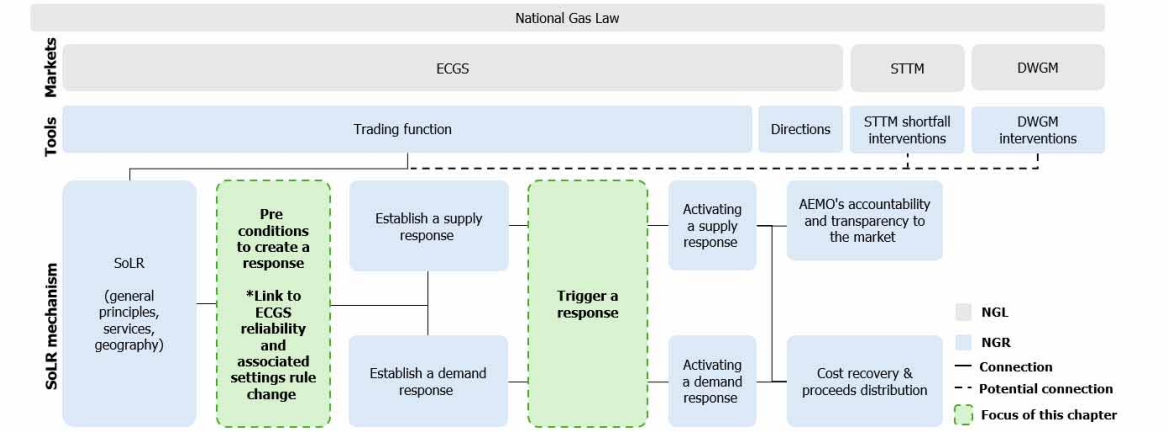
Subject to broader policy choices about the design of a SoLR mechanism (including whether it is a last resort demand and/or supply response) this chapter explores the design of the preconditions and triggers for establishing and using a SoLR reserve. It first sets out the existing tools that AEMO has in the ECGS and facilitated markets that aid in managing demand-supply gaps.

This chapter discusses and seeks feedback on:

- Section 5.1 — the issues with the preconditions and triggers as they relate to AEMO's existing tools.
- Section 5.2 — the preconditions that relate to AEMO setting up a reserve for a SoLR mechanism, which includes the option proposed in the rule change request and alternatives
- Section 5.3 — the trigger for AEMO making the decision to use its reserve under a SoLR mechanism, including for operational factors and whether discretion is needed
- Section 5.4 — the impact of SoLR preconditions and triggers on the facilitated markets.

Figure 5.1 below indicates where pre-conditions and triggers sit in relation to the framework for the NGL trading powers.

Figure 5.1: Context of preconditions and triggers in the proposed SoLR mechanism



Source: AEMC - Illustrative only

5.1 AEMO's existing market tools have preconditions and triggers

In the ECGS, AEMO's tools for managing reliability and supply adequacy issues are the directions and trading functions.[81] The preconditions and triggers for the proposed SoLR mechanism that leverages the NGL trading function power are discussed below in this chapter. The proponents do not propose changes to AEMO's ability to use its existing directions function in the ECGS.[82]

There are two gas markets that AEMO facilitates and operates — the Victorian declared wholesale gas market (the DWGM), and the short term trading market (STTM) that has hubs in Sydney, Brisbane and Adelaide. In these two facilitated markets, AEMO has market-specific tools to use:[83]

81 Part 27 of the NGR.
82 Rule change request, p 15.
83 For the DWGM, see Part 19 of the NGR and Part 20 for the STTM.

- the STTM includes the contingency gas mechanism
- AEMO can intervene in the DWGM to address risks or threats to the security of gas supply
- if certain conditions are met, AEMO is to fill the Dandenong liquefied natural gas (DLNG) tank and inject gas from it into the DWGM if there is a threat to system security that is not addressed by participants in the DWGM.

The contingency gas mechanism in the STTM and AEMO's intervention mechanism in the DWGM have different preconditions and triggers. The preconditions refer to the nature of the risk or threat to reliability, supply adequacy (and to system security in the facilitated markets), that arises in the market. The 'trigger' is the operational decision made by AEMO to start using the tool.

For context in considering the proposed SoLR mechanism, the preconditions and triggers for the facilitated markets are outlined belowsection 5.4below considers the potential impact of the SoLR preconditions and triggers on these existing arrangements in the facilitated markets.

5.1.1 Triggering contingency gas in the STTM

In the STTM facilitated market, AEMO has access to a contingency gas mechanism. Contingency gas refers to a quantity of gas supplied to or withdrawn from an STTM hub by trading participant to meet an operational requirement associated with actual or forecast adverse operating conditions at a hub, where that operational requirement is unlikely to be met through the normal operation of the STTM [84]

The NGR provides that each of the following is a contingency gas trigger event:[85]

- a forecast of pressure conditions under or over acceptable operating levels at a hub or custody transfer point
- a forecast inability of an STTM facility to meet the normal seasonal levels of daily delivery capacity to the hub
- an event upstream of an STTM distribution system that could reasonably be expected to adversely affect the supply of gas to that STTM distribution system, and
- AEMO issues an ex ante market schedule or a provisional schedule for a hub for a gas day which indicates that price taker bids will not be fully scheduled due to inadequate supply of gas to that hub on that gas day.

5.1.2 Triggers for intervention in the DWGM

In the DWGM, AEMO can intervene in the market to address risks or threats to the security of gas supply.[86] AEMO is the system operator of the DWGM, meaning it has visibility over pipelines and gas demand and supply in real time.[87] This differs from the ECGS and STTM, where it does not have a system security role.

If AEMO reasonably considers that 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', including making certain directions under section 91BC of the NGL.[88]

84 Rule 364 of the NGR.
85 Rule 440(1) of the NGR.
86 Part 19 of the NGR.
87 Section 91BA of the NGL.
88 Rule 343 of the NGR.

AEMO has more recently been given a specific intervention power regarding the Dandenong LNG storage facility. As provided by the rule change to Part 19 of the NGR made in 2022:[89]

- As buyer of last resort, AEMO must procure all the uncontracted capacity (excluding operational and non-market LNG storage) of the Dandenong LNG storage facility available for winter on 1 March and may procure additional uncontracted winter capacity if it becomes available after this date. AEMO must purchase gas from the DWGM to fill that tank capacity.
- AEMO's role as supplier of last resort requires it to inject gas from its LNG stock into the DWGM if it reasonably considers that there is a threat to system security that would be unlikely to subside without its intervention.

5.1.3 The existing ECGS trading function preconditions and trigger

Under the NGL, AEMO can only exercise the trading function if 'it is of the opinion that it is necessary to prevent, reduce or mitigate an actual or potential threat to the reliability or adequacy of supply in the east coast gas system that AEMO has identified and communicated to the market'.[90] This can be described as a precondition that needs to be satisfied before AEMO can decide to use the function. The trading function in the ECGS has never been used by AEMO.

Under the NGR, in determining if there is an actual or potential threat to the reliability or adequacy of the supply of natural gas within the ECGS, AEMO must consider the supply of and demand for natural gas (and may consider any impact that covered gases could have).[91] AEMO must establish a trading fund and can use it to the extent AEMO considers it necessary or desirable to:[92]

- trade in covered gas
- purchase pipeline services, blend processing services or services provided by a compression service provider or a storage provider.

In addition, rule 699 of the NGR sets out matters that AEMO must take into account when deciding whether to use the trading (or directions) function. These are:

> In determining whether to exercise a direction or trading function, AEMO must, to the extent AEMO considers appropriate given the nature, timing or circumstances of the identified risk or threat, have regard to the following principles:
>
> (a) the industry should be given a reasonable period of time to take action to mitigate the identified risk or threat;
>
> (b) engagement with affected jurisdictions should commence in a timely manner;
>
> (c) distortionary impacts on the east coast gas system and industry and consumer costs on which AEMO has available information should be, to the extent reasonably practicable, minimised;
>
> (d) safety should not be compromised.

The proponents consider that the existing preconditions for the trading function lack sufficient guidance to AEMO or market participants about the circumstances in which the function could be used. The rule change request identifies a need for 'clear and objective guidance to AEMO or market participants on when and how this function should be exercised'.[93] This is consistent with

89 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022, p ii.
90 Sections 91AD(2) and 91AF(2) of the NGL.
91 NGR rule 681A(2).
92 Rule 708 of the NGR.
93 Rule change request, p 21.

submissions received during the stage one consultation process, where stakeholders indicated the NGL and NGR should:[94]

- make it clear that the trading function should only be used as a last resort
- provide clear and objective guidance to AEMO and market participants on when and how this function should be exercised.

Consistent with the rule change request and stakeholder views to date, a more predictable framework that guides how AEMO uses the trading function could benefit AEMO and market participants and be consistent with good regulatory practice.

Question 7: Existing preconditions and triggers for AEMO intervention

1. Do the existing NGL and NGR preconditions and trigger for the trading function lack transparency and clarity? Is this a significant issue? Why?

5.2 Options for designing preconditions for a SoLR mechanism

The preconditions are the requirements that must be met before AEMO can consider whether to create a reserve for a SoLR mechanism. They represent the starting point of AEMO's preparation to potentially intervene in the market to address a threat to the ECGS reliability and supply adequacy that the market has failed to address. However, the preconditions should provide the opportunity and incentivise market participants to respond first to a threat before AEMO takes steps to intervene.

The existing preconditions in the NGL and NGR are noted above in section 5.1 This section focuses on what preconditions could be introduced to the NGR to supplement, but remain consistent with, s. 91AD(2) of the NGL and provide guidance on when AEMO can establish a SoLR reserve.

5.2.1 Overview of the preconditions proposed for the NGR

In addition to the requirements specified in the NGL, the rule change request proposed preconditions that would have to be satisfied before AEMO could consider whether to use a SoLR mechanism. The proposed design of the SoLR preconditions was informed by stakeholder feedback, and the design of RERT in the NEM and DLNG mechanism.[95]

The proponents considered that an actual or potential breach of the reliability standard would constitute an actual or potential threat to reliability and supply adequacy for the ECGS. Communicating such a breach to the market would be part of the preconditions for a SoLR mechanism.

Secondly, the proposed precondition arrangements require AEMO to be satisfied that using the SoLR mechanism would be necessary to address the threat to reliability and supply adequacy. It would also need to consider if other tools in the reliability and supply adequacy framework (having regard to costs and market impacts of those different tools) could address the threat. If AEMO does conclude that using the SoLR mechanism is necessary, then it must notify the relevant jurisdictions and publish a reserve establishment notice (see chapter 9 for more on transparency

94 Rule change request, p 21.
95 Rule change request, p 32.

and accountability). The proposed precondition arrangements are outlined in the table below and discussed in more detail in the following sections.

Table 5.1: Proposed design of the SoLR preconditions

Element	Rule change request proposal
What constitutes an actual or potential threat in the context of the SoLR?	An actual or potential breach of the proposed reliability standard would constitute an actual or potential threat.
How should a threat be identified & communicated?	AEMO, to consider triggering SoLR, would need to have: • identified the forecast breach of the reliability standard in the latest GSOO or PASA • communicated the forecast breach of the reliability standard to the market by publishing a risk or threat notice (rule 695 of the NGR). This is consistent with the proposal in the Reliability standard & associated settings rule change. AEMO would also be expected to convene a Gas Supply Adequacy and Reliability (GSAR) conference under rule 692 of the NGR to communicate the forecast breach to relevant entities and signal the need for an industry response.
What matters would AEMO be required to consider to determine if triggering the SoLR mechanism is necessary?	AEMO would only be able to trigger SoLR if it is of the opinion it is necessary to prevent, reduce or mitigate a forecast breach of the reliability standard, having regard to: • the nature and size of the forecast breach • the adequacy or feasibility of the response (or likely response) from market participants at the time the assessment is undertaken, noting that market participants should be given a reasonable period of time to take action to mitigate a forecast breach • the RSA tool assessment criteria (see below) • the NGO.

What are the RSA tool assessment criteria?	AEMO would be required to (under the RSA tool assessment criteria):
	• consider the costs (direct and indirect) and effectiveness of all the tools that it could use under the NGL/NGR and NEL/NER to address the forecast breach of the reliability standard, including:
	  • the SoLR mechanism,
	  • ECGS directions function,
	  • market specific tools (contingency gas mechanism in the short term trading market and the existing intervention powers in the declared wholesale gas market)
	  • tools available to it in the NEM (RERT, NEM directions and instruction powers)
	• use reasonable endeavours to choose the tool/s effective to address the forecast breach whilst minimising costs (direct and indirect).

Element	Rule change request proposal
	Where direct costs are the costs of using the alternative tools (e.g. payments that would need to be made under reserve contracts in the case of the RERT or SoLR mechanism, or compensation payments in the case of the directions tools). And indirect costs would include any distortionary effects on the operation of the ECGS (or if relevant the NEM) and the implied value of lost load if there is a risk of curtailment.
What happens if AEMO determines that it is necessary to trigger the SoLR mechanism?	AEMO must: • notify the affected jurisdiction(s) (i.e. the jurisdiction(s) for which the SoLR reserve will be established and any other affected jurisdictions) that it intends to establish a SoLR reserve and agree interjurisdictional cost sharing arrangements with those jurisdictions. • publish a reserve establishment notice to notify market participants and other interested parties of its intention to establish a SoLR reserve and the form the reserve will take.

Source: Rule change request, pp 32-33.

5.2.2 Proposed use of a reliability standard as a precondition

As noted, the proponents consider that the SoLR preconditions could provide more clarity and guidance, compared to the existing rules in Part 27 of the NGR. They have suggested that a reliability standard will assist in resolving this issue because:[96]

- By linking a SoLR mechanism to the reliability standard, the SoLR mechanism could operate in a more transparent, predictable and efficient manner.
- Participants can be more aware of the potential breach of the reliability standard and be able to respond before AEMO considers using the mechanism. This supports a market-led response to an identified threat, which would be likely to be more efficient than intervention by AEMO.
- It could allow AEMO to use other tools first, to address a potential breach of the reliability standard more efficiently, before using the SoLR mechanism.

Specifically, the rule change request proposes that the NGR would state that AEMO could only establish a SoLR reserve if it is of the opinion that using the SoLR mechanism is necessary to 'prevent, reduce or mitigate an actual or potential breach of the reliability standard'.[97]

5.2.3 Using a risk or threat signalling framework as a precondition

The proponents' proposed design of a SoLR mechanism relies on the reliability standard, which is part of the ECGS reliability standard and associated settings rule change request. However, developing a reliability standard is not the proposed direction of that rule change process.[98]

Relevantly, the Commission considers that the proposed reliability standard for the ECGS is not well-suited to guiding short-term operational decisions. However, the risk or threat signalling

96 Rule change request, p 33.
97 Rule change request, p 58.
98 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 11.

framework outlined in the directions paper could be used to notify market participants of the likelihood, nature and severity of an identified risk or threat.[99]

A risk or threat signalling framework that uses tiers and a probabilistic metric could be part of the preconditions for AEMO to procure a reserve under a SoLR mechanism. The probabilistic tiers could be appropriate for the ECGS due to two gas system-specific features:[100]

- A temporal separation between supply decisions and demand fulfilment. Pipeline transit times, combined with system linepack, mean that changes in supply are often realised at the demand points hours or even days later, depending on distance and network configuration.
- Location-specific shortfalls: reliability risks or threats are often localised (e.g., Victoria) rather than system-wide.

As a risk-based framework, responses from market participants and AEMO can also be better sized against the magnitude of the risk or threat. The framework could also allow for responses to be progressively deployed and adjusted as the level of the risk or threat is escalated or de-escalated by AEMO. It also recognises that some situations may warrant AEMO issuing an emergency notice immediately (e.g., a sudden rupture of a major pipeline, causing immediate supply disruptions to the surrounding regions).[101] This benefit could align with the needs of a SoLR mechanism.

An illustrative example in the table below has adopted the tier names consistent with the Reliability standard and associated settings directions paper.[102] The tier thresholds are based on increasing probabilities of supply not meeting demand (the 'probability of shortfall'). For example, a level 1 risk or threat notice could communicate a low-level reliability risk to market participants. This could signal that close monitoring is advised. In contrast, a level 3 risk or threat notice would signal a higher reliability threat that may require immediate action from market participants or AEMO.[103] Further information about notices is provided in chapter 9.

Table 5.2: Illustrative example of probabilistic risk and threat signalling framework

Level	Probability of shortfall
1 - Early warning	5-15% probability of supply not meeting demand (if no action is carried out)
2 - Alert	15-50% probability of supply not meeting demand (if no action is carried out)
3 - Emergency	50-100% probability of supply not meeting demand (if no action is carried out)

Source: AEMC, *ECGS reliability standard and associated settings rule change*, directions paper, 28 August 2025, p 13.

Using a tiered framework like this as a precondition could achieve a balance between transparency and flexibility about when and how AEMO could establish and use a SoLR reserve. It could also provide greater predictability to AEMO and the market, to communicate how risk and threats escalate to allow AEMO to procure and use a reserve. Under this tiered framework, market participants could be incentivised to address shortfalls before AEMO would need to intervene, as it would provide clarity about the urgency of the risk or threat to reliability and supply adequacy in

99 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 16.
100 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 12.
101 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 12.
102 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 13.
103 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 13.

the ECGS. This would align with the principle that a SoLR mechanism is to have a last resort nature.

Question 8: Using a risk or threat signalling framework as a precondition

1. Do you consider that a risk or threat signalling framework that uses tiers and a probabilistic metric would be a useful and relevant precondition for AEMO to decide whether to establish a SoLR reserve?
2. If a tiered risk or threat signalling framework was used, what tiers and probabilities would be appropriate signals for making decisions on using a SoLR mechanism?
3. Would a tiered system of shortfall risk provide a clear signal to the market about when AEMO would consider whether to intervene?

5.2.4 Using existing information tools as an input to the preconditions

As noted above, the rule change request proposes two preconditions — that AEMO has:[104]

- identified a forecast breach of the reliability standard in the latest GSOO or PASA
- communicated the forecast breach to the market by publishing a risk or threat notice under rule 695 of the NGR.

The proponents consider that the benefits of these preconditions are that they would enable a SoLR mechanism to operate in a transparent and predictable manner. This is because the NGR would include clear and objective preconditions for a SoLR mechanism, and the specification of matters to be considered by AEMO before deciding whether to use this mechanism would also be clear.[105]

Under the proposal, AEMO and market participants would use the existing information tools to help identify any reliability and supply adequacy risk or threats. The existing information tools are:

- Gas statement of opportunities [106]
- the Victorian gas planning report [107]
- the ACCC Gas Inquiry reports[108]
- the proposed ECGS Projected Assessment of System Adequacy.[109]

The stage 1 RSA reforms improved both AEMO's and the market's ability to assess shortfall outlooks.[110]

Leveraging existing information tools as inputs to these two proposed preconditions could also provide the benefit of allowing market participants to be both aware of the risk or threat and have the opportunity to address the risk or threat before AEMO considers whether to intervene.[111]

The ability of market participants to respond to threats before AEMO intervenes in the market is an important feature. It reflects the situation in the ECGS that infrastructure operators are best

104 Rule change request, p 31.
105 Rule change request, p 31.
106 See here.
107 See here.
108 See here.
109 See the project page here.
110 For more information, see here.
111 Rule change request, p 31.

placed to address any demand-supply imbalances that may arise. Providing relevant and timely information to the responsible pipeline and other facility service providers enables, and can incentivise, these parties to resolve reliability and supply adequacy threats. This is consistent with the design objective of the proposed mechanism being one of a 'last resort' before AEMO issues directions or Ministers use their emergency powers.

This means that the preconditions for a SoLR mechanism should ensure:

- the information used to identify the risk or threat is accessible to all market participants — so they can have visibility about the nature of the threat
- that the communication of the threat gives the market the opportunity to respond and any intervention by AEMO using a SoLR mechanism should be a 'last resort'.

5.3 Options for designing a trigger for a SoLR mechanism

The trigger refers to the decision point for AEMO on whether to use a reserve it has established as part of a SoLR mechanism. The design of the trigger is also subject to broader policy choices about the design of a SoLR mechanism (including whether it includes demand response) generally. It represents the starting point of AEMO's intervention in the market to address a threat that the market has failed to address. The 'trigger' is the operational decision made by AEMO to commence the process for using the tool.

As with the preconditions, the trigger for SoLR should incentivise and provide the opportunity for market participants to respond first before AEMO intervenes.

5.3.1 Operational factors could form part of a trigger

The rule change request proposed that AEMO should have regard to the nature and size of the forecast breach of the reliability standard and the adequacy or feasibility of the response (or likely response) from market participants at the time its assessment is undertaken. The proponents consider that these matters should answer the question of whether it is necessary for AEMO to trigger the SoLR mechanism.[112] The rule change request does not refer to specific operational factors that should be satisfied as part of the trigger for using its reserve under a SoLR mechanism.

In contrast, the STTM contingency gas mechanism includes operational factors that need to be satisfied before AEMO can consider using it. Contingency gas refers to a quantity of gas supplied to or withdrawn from an STTM hub by trading participant to meet an operational requirement associated with actual or forecast adverse operating conditions at a hub, where that operational requirement is unlikely to be met through the normal operation of the STTM [113] Rule 440 of the NGR could provide useful guidance on what could be an operational trigger for a SoLR mechanism:

- a forecast of pressure conditions under or over acceptable operating levels at a particular point
- a forecast inability of production or storage to meet the normal seasonal levels of daily delivery capacity to the particular point
- an event upstream of a particular point that could reasonably be expected to adversely affect the supply of gas to that particular point.

112 Rule change request, p 32.
113 Rule 364 of the NGR.

A SoLR trigger could also include an obligation on market participants such as pipeline service providers or facility operators to notify AEMO of these events.

Incorporating operational preconditions could promote predictability and stability for the benefit of AEMO and market participants. It could also provide more clarity to market participants about when and for what reason AEMO could use a reserve under a SoLR mechanism to intervene in the market. It could also signal to the market what operationally needs to happen before AEMO triggers a SoLR mechanism to address a threat that has not been resolved by the market.

Question 9: Operational factors could form part of a trigger

1. To what extent should the preconditions for a SoLR mechanism include operational factors? Why?
2. What operational conditions should be part of the trigger for a SoLR mechanism?
3. Are there any other factors or information that could provide greater transparency and predictability about how and when a SoLR mechanism could be triggered?

5.3.2 AEMO's discretion under a trigger mechanism

The rule change request emphasised a need for more guidance for AEMO and market participants about when using a reserve under a SoLR mechanism could be triggered, given the lack of guardrails around the existing trading function in Part 27 of the NGR.[114]

However, over-prescription could limit the effectiveness of a SoLR mechanism as a last resort intervention by closing options and potentially not allowing AEMO to choose not to intervene in the market. That is, more prescriptive rules could be beneficial (in providing clarity) but could give rise to a tension with flexibility that AEMO may need depending on the location, urgency and extent of the risk or threat to reliability or supply adequacy in the ECGS.

The different role that AEMO has in the ECGS compared to the facilitated markets may also be a factor in designing a trigger. AEMO does not have a system security role in the ECGS, and it is not the system operator. This means that AEMO's role in the ECGS (and ability to intervene where market participants fail to respond to a threat) should inform the nature of the trigger for a SoLR mechanism in the ECGS.

For example, AEMO may face information asymmetry issues and operational limits in the ECGS that it does not in the DWGM. As a result, it could trigger a SoLR mechanism earlier or later than needed to address a threat to reliability or supply adequacy. Both situations could result in AEMO distorting the market and being costly to gas consumers. This suggests that it may be useful for AEMO to retain some discretion as part of the trigger for a SoLR mechanism if this could help avoid costly, unnecessary intervention.

Providing AEMO with some discretion around the SoLR trigger could enable it to manage its options in a way that reinforces the 'last resort' intent of a SoLR mechanism. For example, depending on the nature of the threat, it could take time for AEMO to procure pipeline capacity to enable the needed gas to reach the market. Alternatively, some time may be required to enable a demand response to occur. However, such flexibility should be balanced against the potential benefits of rules that provide certainty and clarity.

114 Rule change request, p 31.

Question 10: AEMO's discretion under a trigger mechanism

1. To what extent should AEMO retain some discretion as part of the trigger for SoLR? Why?

5.4 Impact of the SoLR preconditions and trigger on the facilitated markets

5.4.1 The trigger for contingency gas in the STTM

As outlined above in section 5.1.1, rule 440 of the NGR sets out the trigger for the contingency gas mechanism.

Consistent with the general principle that market-specific actions should be used prior to an ECGS action, the role and potential interaction of the triggers of those market-specific mechanisms must be considered.

An additional implementation principle for any trigger for SoLR could be that it should not replace or interfere with the trigger for the contingency gas mechanism in the STTM. As the contingency gas mechanism is unique to the STTM and designed for that specific market, it should not be replaced or undermined by a trigger for SoLR that applies to the ECGS. The effect of applying this principle would be that the triggers will co-exist.

Question 11: The trigger for contingency gas in the STTM

1. Should the trigger to use contingency gas in the STTM be separate and mutually exclusive from a SoLR mechanism in the ECGS? Why?
2. Are there any issues the AEMC should consider if an STTM contingency gas mechanism and an ECGS SoLR mechanism are to co-exist?
3. Is guidance required (in the NGR or procedures) on the order of priority of market intervention tools? How much discretion should be provided to AEMO in its decisions on what tools to use?

5.4.2 The trigger for intervening in the DWGM

As outlined above in section 5.1.2, as system and market operator AEMO has greater powers to manage and respond to threats to the DWGM. Uniquely, AEMO can intervene in the DWGM to address system security threats and is provided with some flexibility to do so. Rule 343 of the NGR states:

> (1) If AEMO reasonably considers that a threat to system security is unlikely to subside without intervention, AEMO must intervene in the Market by taking any measures it believes are reasonable and necessary to overcome the threat to system security ...

AEMO also has a specific role regarding the Dandenong LNG facility as buyer and supplier of last resort.[115]

115 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022, p ii.

In contrast to the above, in regard to this role, the trigger for AEMO to prepare for any potential future intervention is a factual one: that there is 'any uncontracted LNG storage capacity' in the Dandenong facility at the end of 1 March of any year.[116] If this trigger is satisfied, then AEMO must act as buyer of last resort as set out in Part 19 of the NGR: there is no discretion provided to AEMO.

As discussed in chapter 2 on the problem definition, this rule change process could consider the long-term arrangements for AEMO using the Dandenong LNG storage facility in light of an ECGS SoLR mechanism. On this, the difference between the triggers for using the different intervention tools should be considered. For example, to change the trigger for the Dandenong LNG facility buyer of last resort intervention to align with the proposed ECGS SoLR trigger could result in the facility not being filled prior to each winter. This would limit AEMO's ability to use gas stored at Dandenong to respond to a threat to DWGM's system security. However, this may be mitigated by AEMO calling on its more general intervention power for the DWGM or the ECGS SoLR mechanism — both of which provide AEMO with the flexibility to use other facilities to address threats to system security or reliability and supply adequacy.

While this rule change could provide an enduring solution for AEMO's last resort role for the Dandenong LNG facility, AEMO's role in relation to that facility and the arrangements are unique. This uniqueness and the gas outlook for Victoria may suggest that the triggers for AEMO's intervention in relation to that facility could be appropriate and should be retained alongside an ECGS SoLR mechanism.

Question 12: The trigger for intervening in the DWGM

1. Should the trigger to intervene for system security reasons in the DWGM be amended if a SoLR mechanism for reliability and supply adequacy threats is introduced for the ECGS? Why?
2. Should the trigger for AEMO to use the Dandenong LNG storage facility be amended if a SoLR mechanism for the ECGS is introduced? Why?
3. Are there any issues the AEMC should consider if the DWGM intervention powers and an ECGS SoLR mechanism are to co-exist?

116 Rule 282(3) of the NGR.

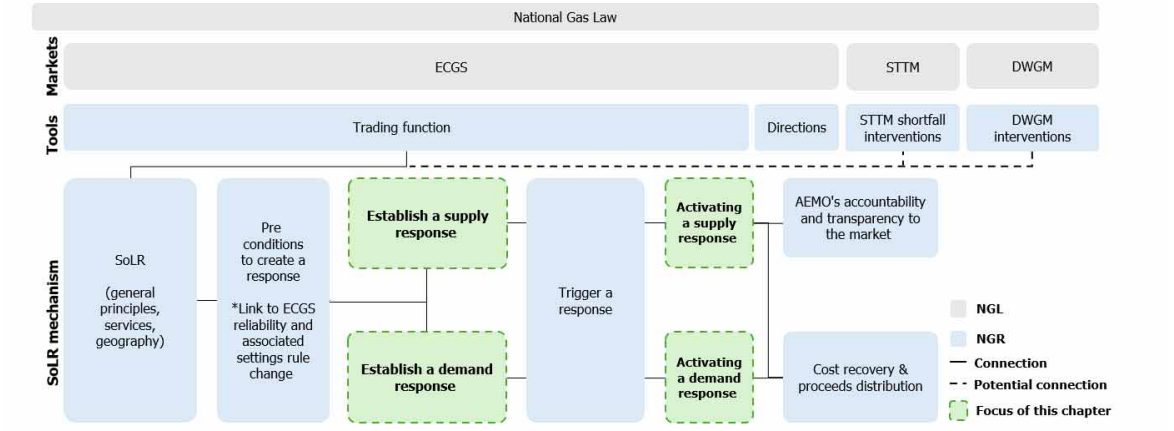
6 Operating a SoLR mechanism

This chapter discusses more detailed design elements relating to how AEMO would use or operate a SoLR mechanism after the necessary triggers and preconditions in chapter 5 are met. This discussion applies to both supply-side and demand response capabilities of a SoLR mechanism, if implemented. The Commission seeks feedback on:

- Section 6.1 — key steps in operating the SoLR mechanism
- Section 6.2— arrangements to transport gas to address a specific reliability threat
- Section 6.3 — the conditions enabling AEMO to enter and vary reserve contracts
- Section 6.3— how to relinquish capacity and transfer gas from a SoLR storage reserve
- Section 6.5— AEMO's interactions in the facilitated markets.

Figure 6.1 below indicates where the operation of the SoLR mechanism sits in the proposed NGR framework for the NGL ECGS trading function.

Figure 6.1: Context of the operation of the proposed SoLR mechanism



Source: AEMC - Illustrative only

6.1 Key steps in operating a SoLR mechanism

Once triggered, AEMO would follow a sequence of actions to use contracted SoLR resources (whether supply or demand side) in order to address a threat to reliability and supply adequacy. Understanding the range and scope of each action is an important input into the design of the SoLR mechanism.

To evaluate the proposed options in the rule change request, this chapter uses an expected operational sequence (depicted in Figure 6.2) to aide discussion and support stakeholder feedback. It should be noted that the operational sequence outlined below focuses on the use of a SoLR mechanism, not the use of any other tools (ie, directions or STTM contingency gas) which might be used in place of or in conjunction with the SoLR.

Figure 6.2: Expected operational sequence of the SoLR mechanism

Source: AEMC.

Step 1 — The pre-conditions (identified by a tiered or probabilistic risk or threat signalling framework) are met for the forecasted shortfall, and AEMO has determined that it should use the SoLR mechanism to address the shortfall because the market has not responded. See chapter 5 for more information on preconditions.

Step 2 — Prior to activating any resources, AEMO would assess which available supply and/or demand-side resource(s) (depending on the final form of the tool) are most appropriate, with regard to the SoLR principles, to address the threat. This would include discussing cost-sharing arrangements with relevant jurisdictions, including interactions with AEMO's cost recovery arrangements. See chapter 8 for more information.

Step 2A — Where AEMO determines that an appropriate SoLR resource is not available, it carries out a tender process or negotiations to enable a suitable resource to be contracted in time. Where a threat arises without sufficient time for AEMO to carry out a tender process, it may bypass this step and go straight to step 3.

Step 3 — Where a threat remains and moves from forecasted to an actual shortfall, AEMO should reassess to confirm the most efficient available resource to activate. It is appropriate that AEMO reassess which resource is the most efficient to use, as this may have changed between when the threat was first forecast and when it is expected to occur.

Step 4 — AEMO would activate the SoLR resource(s) (e.g., inject from storage, use demand response) as discussed below in this chapter.

Question 13: Key steps in operating a SoLR mechanism

1. Do stakeholders see any additional steps not identified in the consultation paper that should be included in AEMO's use of a SoLR mechanism (if introduced)?
2. Does the operational sequence outlined in the consultation paper align with stakeholder expectations of how AEMO would use a SoLR mechanism?

6.2 Arrangements to transport gas to address a specific reliability threat

In light of the proposed operational sequence for SoLR set out in section 6.1 above, from step 2 through to step 4, AEMO would need to consider how gas would physically arrive at the location it is needed to address a threat or risk to gas reliability. Complex issues need to be considered in light of the differences in both the gas market arrangements and AEMO's role across the ECGS as follows:

- *Physical:* How AEMO would (and if it should) facilitate the transport of gas from the location where it can be made available to the location where it is needed to address a threat to gas reliability. The tools available vary, given AEMO's different roles:
  - AEMO is the DWGM market, system and transmission pipeline operator and so has greater ability to facilitate the transportation of gas.
  - In other facilitated markets, AEMO is the market operator and does not control the pipeline infrastructure. This situation is more complex, and AEMO may need to liaise with relevant shippers and pipeline operators to transport gas.
  - In areas not part of a facilitated market, AEMO has no established role and may have limited information to consider the transport impacts of its actions.
- *Legal or contractual:* How AEMO would manage both the title over the gas itself (the commodity) and the rights to pipeline capacity needed to transport that gas to the location where there is a risk or threat to gas reliability? This is in the context of:
  - Gas Transport Agreements (GTAs) over contract carriage pipelines in areas of the ECGS (outside of the DWGM), where AEMO is the market operator but does not directly control pipeline infrastructure.
  - Within the DWGM where the DTS is operated as a market carriage pipeline by AEMO's operation of the DWGM, so it would appear that AEMO can more readily achieve its intended outcomes.
- *Financial:* How AEMO would manage the financial arrangements (eg settlements) in light of its varying roles:
  - as market operator in the DWGM and STTM
  - its roles in the GSH, CTP and DAA.

Similar issues as above are identified for the proposed administered demand response capability in the SoLR mechanism discussed in chapter 7 on administered demand response.

Using various market scenarios, section 6.1 below illustrates the high-level issues identified above where AEMO uses the SoLR mechanism and then seeks to transport gas to address a gas reliability threat.

Table 6.1: Gas market scenarios on how AEMO would transport gas to address a reliability threat

Scenario	Initial considerations
Scenario 1: The threat to gas reliability is located within a facilitated market (eg DWGM) and the source of gas to address that threat is also located within the same facilitated market. For example, injecting gas stored in DLNG to address gas reliability threats in the DWGM.	In this scenario, given AEMO's role in the DWGM as market, system and transmission pipeline operator for system security, AEMO should be able to readily transport the gas to address the reliability threat and the appropriate legal/contractual and financial arrangements would already be established.
Scenario 2: The threat to gas reliability is located within a facilitated market, and the source of gas to address that threat is located outside the facilitated market (i.e., in the ECGS more broadly). For example, there is a gas reliability threat in the DWGM, and AEMO has identified gas that could be sourced from the	In this scenario, for the areas outside the facilitated market, AEMO's role is more limited, and it would need to work with pipeline operators and shippers. AEMO would have to navigate the physical, legal/contractual and financial arrangements outside the facilitated markets to transport gas to address the

Scenario	Initial considerations
Gas Supply Hub at Moomba to address that gas shortfall.	reliability threat.
Scenario 3: The threat to gas reliability is located outside a facilitated market and the source of gas to address that threat is located from a facilitated market.	Similar complexities to scenario 2.
Scenario 4: The threat to gas reliability and the location of the gas source to meet the gas shortfall are outside the facilitated markets (i.e., in the ECGS more broadly).	Similar complexities to scenario 2.

Source: AEMC.

One potential solution to these challenges is AEMO tendering for the commodity and capacity and then using an intermediary to buy or sell into the markets. This would enable AEMO to bypass the need to arrange transport. The intermediary could manage the transport arrangements and manage the title of gas under their existing contractual arrangements.

An alternative solution would be AEMO directing gas to where it is required under its existing directions power. While this may be faster than sourcing and contracting with an intermediary, AEMO may struggle to manage the chain of title when directing gas outside the facilitated markets.

Question 14: Arrangements to transport gas to address a reliability threat

1. Drawing on the issues and scenarios above, how do you think AEMO would acquire, transport and pay for gas through a SoLR mechanism?
2. To what extent should intermediaries be involved in transporting gas procured under the SoLR mechanism? Why?
3. Would using AEMO's directions power be appropriate for transporting gas procured under the SoLR mechanism? Why?

6.3 Conditions required to enter or vary reserve contracts

The proponents propose that AEMO be given the power to enter or vary reserve contracts using the SoLR if it has issued an establishment notice (see chapter 9 for more on notices).[117] The NGR would make it clear that AEMO could negotiate the terms and conditions of a reserve contract at any time, but could only enter into new reserve contracts (or vary existing reserve contracts) if it had issued a reserve establishment notice.[118] This approach draws from the operation of RERT.[119]

There could be benefits to this approach as it provides AEMO flexibility and allows sufficient preparation time for AEMO to effectively deliver reliable, secure, and safe provision of energy for consumers at an efficient cost. By allowing AEMO to set up contracts in advance, this approach would enable AEMO to have resources ready to activate using the SoLR mechanism, if and when

117 Rule change request, p 42.
118 Rule change request, p 42.
119 Clause 3.20.3(f) of the NER.

the occasion arises. This is particularly important for storage, which can take several months to fill, and demand response, which may require providers to invest in alternative fuels, metering equipment, etc., so they are equipped to respond. Further, by giving AEMO sufficient time to set up contracts in advance, it would likely have sufficient time to run a competitive tender and negotiate a contract that ensures the provision of gas at an efficient cost to consumers. Nevertheless, the proposed approach does raise some risk that AEMO and market participants will incur the expense of establishing contracts and ongoing storage costs that are not used.

However, by first issuing a reserve establishment notice, AEMO would provide transparency to the market and an opportunity for market participants to respond to the identified threat first. The reserve establishment notice could improve market outcomes without the SoLR mechanism ever being activated because it may lead to market participants responding to meet the threat instead of AEMO, bypassing the need for the SoLR mechanism to be used.

The proponents propose that while the NGR sets out the requirements on AEMO entering or varying reserve contracts, further details should be contained in AEMO's ECGS Guidelines.[120]

Question 15: Conditions required to enter or vary reserve contracts

1. What requirements should be in place to enable AEMO to enter into and vary contract conditions for a SoLR mechanism?
2. Is publishing a reserve establishment notice a sufficient precondition for AEMO to enter into or vary a contract using a SoLR mechanism?

6.4 How to relinquish capacity and transfer gas from a SoLR storage reserve

One of the identified risks from AEMO using a SoLR mechanism is that AEMO could 'crowd out' other market participants. The proponents propose that when AEMO establishes a SoLR reserve, the following should also apply:[121]

- Storage SoLR reserve - where a market participant seeks storage capacity and there is no other available capacity then AEMO could be required to:
  - relinquish the storage capacity to the storage provider
  - either transfer the gas that was in storage to the market participant that acquires the storage capacity, or otherwise dispose of that gas, in accordance with AEMO's ECGS Procedures.

In contrast, the interim arrangements relating to the Dandenong LNG storage facility contain a mandatory relinquishment function where AEMO must relinquish its capacity of the storage facility if a market participant seeks storage services.[122] This was designed as a measure to prevent AEMO from crowding out other market participants who may wish to procure capacity from the LNG storage facility. There may be a benefit of adopting a mandatory relinquishment approach to reduce the risk of AEMO crowding out the market by holding onto stock or capacity that other participants would pay for. In this way, a relinquishment function could be argued to support the principles of market efficiency and competition.

120 Rule change request, p 42.
121 Rule change request, p 39.
122 NGR Rule 286

However, adopting a mandatory approach would reduce AEMO's flexibility to manage its holding of capacity or gas in light of its broader view on the threats to reliability and supply adequacy in the ECGS. While it is important to reduce the risk of crowding out the market, it is also key that storage capacity or a stock of covered gas procured by AEMO for reliability or supply adequacy reasons is not relinquished when it is still needed to address a threat. If AEMO has limited discretion to deny a request to relinquish its capacity or stock, there is a risk that the gas or storage held for reliability reasons is relinquished leaving AEMO with limited means to address a reliability threat. Attempting to procure new gas or services again, and potentially at short notice, may result in greater costs for AEMO. This outcome would likely have adverse implications for safety, security, and reliability.

Further, there is a risk that adopting a mandatory approach to relinquishment would not adequately reflect the costs of procuring the supply in the first instance. Similarly, arrangements should address risks of gaming where market participants offer lower than market value prices while knowing that AEMO has limited recourse but to accept the offer. As a result, arrangements are needed to reduce this risk and ensure that services are provided at an efficient cost to consumers over the long term.

An alternative could be to provide more conditions on the relinquishment requirement. For example, the regulatory arrangements could require AEMO to relinquish the capacity or transfer the stock to market participants, but only if this is not contrary to the interests of gas consumers.

Different approaches have potential benefits and costs as illustrated by the examples in Figure 6.3 below. This figure outlines the rule change request's proposed option, an alternative approach, and the Dandenong LNG storage interim arrangements.

Figure 6.3: Options for relinquishing capacity and transferring stock from a SoLR storage reserve

SoLR Rule change request proposal:
AEMO could also be required to do the following if a market participant wanted to procure storage capacity and the only available capacity was that held by AEMO:
- *relinquish storage capacity to the storage provider*
- *transfer the gas that was in storage to the entity acquiring the capacity, or otherwise dispose of the gas, in accordance with AEMO's ECGS Procedures.*

The ECGS Procedures should specify how the transfer or disposal is to be conducted, including the price and other terms and conditions on which any transfer or disposal is to occur.

Alternative relinquishment mechanism

Unless it would result in an unreasonable cost to consumers or a threat to system security, reliability, or supply adequacy, AEMO must do the following if a market participant wants to procure storage capacity held by AEMO:

- *relinquish storage capacity to the storage provider*
- *transfer the gas that was in storage to the entity acquiring the capacity, or otherwise dispose of the gas, in accordance with AEMO's ECGS Procedures. The ECGS Procedures should specify how the transfer or disposal is to be conducted, including the price and other terms and conditions on which any transfer or disposal is to occur.*

Dandenong interim arrangements 2022
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.

Less strict relinquishment requirements

More strict relinquishment requirements

Source: AEMC.

The alternative approach shown in the figure above could help reduce the impact of AEMO's intervention on the efficient operation of the market by minimising the risk of market participants being crowded out. Giving AEMO the flexibility to specify the transfer and disposal procedure

(including the price and other terms and conditions) in its ECGS Procedures would allow the relinquishment process to adapt to market needs over time.

Further, by providing conditions around circumstances when AEMO does not need to relinquish, this option gives AEMO more discretion on whether relinquishing capacity to the market participant would still allow it to meet its responsibilities and reduces the risk of market participants gaming the system. The Commission welcomes feedback on whether this alternative approach strikes the right balance of minimising risks of AEMO 'crowding out' or distorting the market in using the SoLR while also safeguarding the long term interests of consumers in terms of reliability and cost.

Question 16: How to relinquish capacity and transfer gas from a SoLR storage reserve

1. To reduce risks of crowding out, should the NGR specify a mandatory, discretionary or hybrid approach to the relinquishment of capacity and transfer of gas for SoLR storage reserves?
2. Which type of approach balances the need to minimise market distortion while supporting reliability and cost-effective outcomes for consumers?

6.5 AEMO's interactions in the facilitated markets

The rule change request proposes that if AEMO is to buy or sell gas through a facilitated market, there must be guidance on how that is to be achieved to provide transparency to market participants.[123]

6.5.1 Buying gas

The rule change request proposes that if AEMO decides to procure gas from the DWGM, STTM, gas supply hub (GSH) or the day-ahead auction (DAA), then, to avoid any actual or perceived conflict of interest (or unfair advantage), the NGR would require it to do the following, depending on the market it is seeking to use:[124]

- **STTM and DWGM**: In these two markets, which have market price caps, AEMO would be required to submit any bids to withdraw gas at the applicable market price cap.[125]
- **GSH and DAA**: There is no price cap in these two markets. To use these markets, AEMO would be required to engage an intermediary (e.g., a broker) to act on its behalf. It would also be prohibited from disclosing any market or commercially sensitive information to the intermediary and from favouring the intermediary when carrying out its market functions.

AEMO bidding transparently into the facilitated markets at the market cap ensures that AEMO's bids do not interfere with the bidding behaviour of market participants, but also allows AEMO's bids to be part of market settlement. Bidding at the market price cap signals a high willingness to pay, which improves the certainty of obtaining gas. However, bidding at the market price cap does not mean that AEMO actually pays that price. The clearing price paid in each facilitated market is determined by the point where supply meets demand.

In the facilitated markets, using the market price caps where AEMO is purchasing the gas can reduce the likelihood of crowding out the market, as all other bids would (under normal market

123 Rule change request, p 44.
124 Rule change request, p 42.
125 STTM: see rule 405(4) and the definition of MPC in rule 364 ($400/GJ). DWGM: see rule 209(5) and the definition of VoLL in rule 200 ($800/GJ).

conditions) be cleared first. This provides a benefit of reducing market distortion and providing simplicity and transparency about AEMO's expected bidding behaviour when trading in the facilitated markets.

The proposal aligns with the arrangements applied for using the Dandenong LNG storage facility where AEMO bids at the market price cap in the DWGM. Under this arrangement, AEMO is required to place gas from its storage reserve in the pricing or operating schedule at the market price cap (which is named value of lost load or VoLL). The VoLL is currently at $800/GJ and reflects the scarcity value of the LNG held in the Dandenong storage facility. The use of VoLL in this context provides DWGM market participants an opportunity to bid their gas in before the LNG reserve is used, consistent with the last resort nature of this function. It provides market participants with a financial incentive to hold their own LNG stock (i.e. to avoid having to pay VoLL). The proponents suggest that a 'similar approach under the proposed SoLR mechanism is likely to yield similar benefits to those identified by the AEMC in the DLNG last resort mechanism rule change'. This is in terms of transparency and reducing the risk of AEMO competing with market participants for supplying gas from a SoLR reserve.[126]

For the GSH and DAA, using a broker would help to ensure that AEMO's position, including its access to information, does not compromise negotiations. This helps balance any potential or perceived conflicts of interest.

6.5.2 Selling gas

The rule change request also discusses how AEMO should manage the inclusion of gas from its storage reserve into market schedules. This is important for situations where AEMO wishes to sell its gas through the facilitated markets (ie, without another market participant requesting that AEMO relinquish its stock or capacity). AEMO may need to sell gas in situations where a shortfall in the facilitated markets has been identified, and it seeks to meet the shortfall by injecting from the stock of gas it holds.

The proponents suggest that the SoLR mechanism can address this scenario in a similar way to what is used in the Dandenong interim LNG arrangements. In their view, the approach 'is likely to yield similar benefits to those identified by the AEMC in the DLNG last resort mechanism rule change'[127]

Under the Dandenong interim LNG arrangements, AEMO is required to use LNG injection bids and accreditation as a means by which gas from the LNG reserve is incorporated into a market schedule and requiring any gas that is placed in a pricing or operating schedule to be included at the market price cap.[128]

The proponents see the benefits of this approach for a SoLR mechanism as being greater transparency of AEMO's actions, reducing the risk of AEMO competing with market participants when supplying gas from a SoLR reserve, and avoiding unintended impacts on the operation of the markets or on participants' incentives to mitigate threats.[129] The proposed approach could also assist in AEMO not underbidding offers made by market participants.

126 Rule change request, p 45.
127 Rule change request, p 45.
128 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022, p 44-45.
129 Rule change request, p 45-46.

Question 17: Buying and selling gas through facilitated markets

1. Should a SoLR mechanism include requirements that AEMO bid to buy and offer to sell gas in the facilitated markets at the relevant market price cap?
2. Should a SoLR mechanism include requirements regarding how AEMO buys and sells gas through the GSH and DAA? If so, is it appropriate to require AEMO to use a broker, or should additional or different requirements be imposed?
3. What, if any, requirements should be in place for AEMO buying and selling gas outside the DWGM, STTM, GSH or DAA?

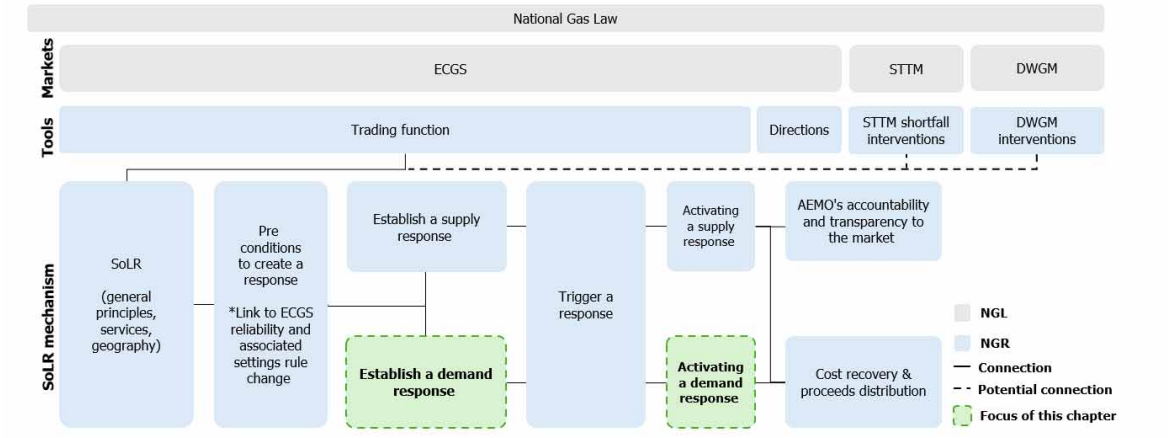
7 Administered demand response

This chapter discusses and seeks feedback on an administered demand response capability as part of the potential SoLR mechanism:

- Section 7.1— the proposal for an administered demand response mechanism in the rule change request
- Section 7.2 — the role of demand response given current gas market arrangements
- Section 7.3 — utilising flexible gas demand to address supply shortfalls
- Section 7.4 — factors that impact the ability of market participants to provide demand response
- Section 7.5— potential designs for an administered demand response mechanism.

Figure 7.1 below indicates where administered demand response sits in the proposed NGR framework for the NGL ECGS trading function.

Figure 7.1: Context of administered demand response in the proposed SoLR mechanism



Source: AEMC - Illustrative only

7.1 Proposed administered demand response mechanism

The proponents state that:[130]

> the trading function provisions do not currently allow AEMO to procure demand response even where it may be a lower cost option to address a reliability or supply adequacy threat.

The proponents also note that gas users who may be capable of offering demand response can face operational and commercial barriers when using existing market and commercial mechanisms. As a result of these barriers, these users might not currently respond to risks or threats to reliability or supply adequacy by reducing demand.[131]

In response to these factors, the proponents propose a SoLR mechanism where:[132]

> AEMO would be responsible for establishing and administering a panel of demand response

130 Rule change request, p 26.
131 Rule change request, p 27.
132 Rule change request, p 27.

providers. The panel could be established through a competitive tender process that would be open to large gas users and other demand response providers (e.g. retailers) in the east coast, with panel members paid for reducing consumption if the tool is triggered. In a similar manner to the RERT, any such payment could be subject to the principle that it should not exceed the average VGCR for that location, so that AEMO does not spend more than what customers are willing to pay for reliability and supply adequacy.

Under the proposed arrangement AEMO, would be able to set up demand response contracts in advance of a shortfall. This could occur through the procurement process outlined in AEMO's procedures and rely on AEMO's register of demand response providers as discussed in chapter 6.

The proponents suggest that an administered demand response mechanism could function similarly to RERT in the NEM.[133] However, the request does not include the extensive operational, structural, or contractual details for how an administered demand response mechanism could work in the ECGS. As a result, this chapter expands further on the concept of an administered demand response mechanism to give stakeholders insights into how such a mechansim could operate and the factors that are likely to affect its ability to succeed.

7.2 Role of demand response in gas market arrangements

While the NEM's RERT mechanism may have guided the rule change request's proposed administered demand response mechanism, the context of gas market arrangements and settings for supply to meet demand are an important consideration.

Most gas is supplied through long-term bilateral contracts or GSAs. In the STTM and DWGM, the market prices reflect the balancing of supply and demand. While market-exposed participants may respond to those prices, the degree of price responsiveness is not instantaneous like in electricity. This has implications for how gas demand response could occur.

Further, within these facilitated markets, AEMO has various mechanisms to help balance supply with demand:

- in the STTM, there are market operator services (MOS), trading of market schedule variations (MSVs) and contingency gas[134]
- in the DWGM, there are changes to intraday schedules and deviation payments.[135]

Question 18: Role of demand response in gas market arrangements

1. How responsive are gas users to price given underlying bilateral contracts or GSAs? What are the barriers to gas users reducing consumption based on higher prices?
2. How do current market arrangements across the ECGS (both the facilitated markets and outside of those markets) enable gas users to reduce demand to meet supply? For example, in the STTM, how effective are MOS, MSV, and contingency gas arrangements in this respect?
3. What are the barriers to reducing consumption using existing gas market arrangements?

133 Rule change request, p 27.
134 Part 20 of the NGR.
135 Part 19 of the NGR.

7.3 Using flexible demand to address supply shortfalls

The success of a demand response mechanism in the ECGS relies on both the tool's design and on the availability of sufficient flexible gas load within the ECGS. In 2023, the proponents commissioned ACIL Allen to study the potential for demand response in the ECGS and any possible barriers to this occurring. The results of the ACIL Allen study, summarised in the rule change request, suggest that the ability to provide demand response would likely be limited to large load commercial and industrial customers.[136] This is not only from a financial feasibility perspective (given the likely need to invest in the capability to ensure flexible load) but also from a scale perspective, as smaller loads would be unlikely to provide sufficient demand response to meet AEMO's needs.

The ACIL Allen study found that of those commercial and industrial users surveyed:[137]

- 28 per cent of their total demand could be turned down or shutdown in less than six hours and face relatively low operational risk in re-starting their operational processes
- 15 per cent of the demand could be turned down or shutdown within 6-12 hours and could return to normal operations within 24 hours with moderate process complexity.

Further, ACIL Allen found that while GPG users have the technical capacity to reduce demand, their incentive to do so relies heavily on conditions in the NEM and their ability and willingness to fuel-switch.[138]

On this basis, while there may be benefits to having an administered demand response mechanism in the ECGS, further information on the scale of the opportunity is sought from market participants to quantify the potential benefits and compare these to the costs of implementing and operating such a mechanism.

Question 19: Using flexible demand to address supply shortfalls

1. How much capacity could be made available through an administered demand response mechanism implemented across the ECGS?
2. Does the potential amount of responsive demand vary between jurisdictions or is it evenly distributed across the ECGS?
3. Does the potential amount of responsive demand vary between seasons?

7.4 Factors that may impact demand response participation

The Commission understands that a range of factors influence the willingness and ability of market participants to provide demand response within an administered mechanism. As part of its study of demand response potential, ACIL Allen conducted a survey with a number of retailers, GPGs and commercial and industrial users. The survey indicated that there are many barriers to customers providing and/or having sufficient incentive to provide demand response in the ECGS, including:[139]

- the opportunity cost of lost production and the impact on their supply chain, particularly where downstream customers have time-sensitive and critical uses

136 Rule change request, p 82.
137 Rule change request, p 82.
138 Rule change request, p 82.
139 Rule change request, p 82.

- environmental factors where a turn down or shutdown would result in additional emissions due to changing of feedstock and operational processes
- safety and operational issues involved in cutting back or shutting down production
- operational factors that determine when maintenance must be scheduled
- additional investment to enable greater flexibility in energy supply to the plant.

The proponents state that market participants should be incentivised to participate in a demand response panel through a pre-activation fee and an activation fee. However, the proponents consider that 'relevant entities are not to be paid to be on the SoLR Panel.'[140] While no further reasoning was provided, this suggests the proponents' view is that participants are to be compensated only for the delivery of services (ie. reducing demand), not the availability to provide services.

If there are financial barriers to providing demand response at the customer level, gas users may not be incentivised to make the necessary investments and changes to ensure they are ready and able to provide demand response without an upfront payment. In contrast to the rule change request, NEM participants providing demand response through RERT can be paid an availability fee, a pre-activation fee, and an activation fee.[141]

While an availability fee could improve incentives for market participants to be willing to participate in demand response, it would increase the cost of implementing a demand response tool. This is compounded by the possibility that after paying participants to be ready and available, a shortfall in their area never arises.

An alternative to providing sufficient incentives to participate in the demand response mechanism is requiring market participants to participate. For example, relevant market participants could be required to provide AEMO with information on their load characteristics and level of flexibility. This would enable AEMO to make an informed assessment of available demand-side resources and tendering processes suitable to address any risk to reliability and supply adequacy. This could be a lower-cost solution for AEMO and ultimately consumers compared to paying participants an availability fee.

Question 20: Factors that may impact demand response participation

1. What are the factors that could impact gas users' ability to participate in an administered demand response mechanism?
2. What impact would the terms of gas supply and transport agreements have on gas users' ability to participate in an administered demand response mechanism? Would these contracts require amending to enable participation in demand response mechanism?
3. Would an availability fee help overcome some barriers and enable greater participation in an administered demand response mechanism?
4. Would an alternative approach of making demand response-relevant information available to AEMO enable it to make informed decisions that support a demand response in the ECGS?

140 Rule change request, P.25.

141 Reliability Panel, *Reliability and emergency reserve trader guidelines*, final guidelines, 21 August 2020, p 8.

7.5 Potential designs for an administered demand response mechanism

The rule change request did not provide details on the extensive operational, structural, or contractual details of how an administered demand response mechanism would work in the ECGS.

High-level design options for an AEMO administered demand response mechanism are outlined inTable 7.1 to aide stakeholder consideration of the proposal. These options could work as a standalone mechanism or as an integrated element of a SoLR supply side mechanism as outlined in chapter 3.

Table 7.1: Design options for an administered demand response mechanism

Description	Potential impact
Option 1: Ad hoc contracting as shortfalls arise	
Under this option, the approach to contracting would be left for AEMO to determine in the ECGS procedures. Contracting demand response could be ad hoc, where a shortfall arises. This would give AEMO flexibility to tailor its contracting approach to shortfalls as they arise. However, it may not provide enough guidance to AEMO and industry on how and when demand response will be used.	This would likely have a low implementation cost compared to options 2 and 3. However, the lack of a standing demand response panel may be less likely to incentivise users to invest in overcoming barriers to providing demand response.
Option 2: A register of potential demand response providers	
Under this option, AEMO would run an expression of interest process to gauge the availability of demand response in the ECGS. Potential providers would be able to apply at any time to join the register. The register would form the basis of AEMO's assessment of which providers to contract for demand response.	Compared with option 3, this is likely to have a lower implementation cost due to the lack of availability payments. However, the lack of availability payments may result in gas users who could provide demand response being less inclined to participate if they face costs to overcome barriers to provide demand response.
Option 3: Pre-established demand response panels	
This option is on the largest scale and would see AEMO set up a demand response panel for each state in the event that a shortfall requiring demand response arose. AEMO could use a competitive tender process and set up contracts in advance (but not activate them unless triggered).	This is likely to have the greatest implementation costs and operating costs, depending on the inclusion of availability fees, need for additional IT infrastructure and staffing. The setup costs for establishing contracts with demand response providers across the ECGS could be a substantial aspect of the implementation costs. If availability payments are used to incentivise gas users to participate, this is also likely to add more cost compared to options 1 and 2. The extent to which the benefit outweighs the cost may be

Description	Potential impact
	hard to establish without a clear assessment of the flexibility of gas loads in the ECGS and the costs associated with providing flexible demand.

Source: AEMC.

Question 21: Potential designs for an administered demand response mechanism

1. In reference to the outlined design options in Table 7.1, what potential design options could be successful for an ECGS administered demand response mechanism? Why?
2. Are there other design options the AEMC could consider?

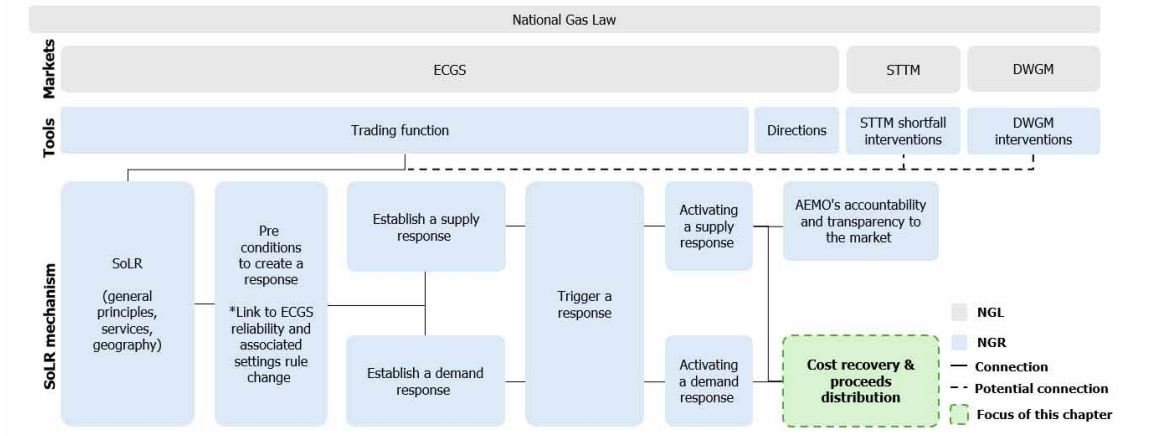
8 Cost recovery and proceeds distribution

This chapter outlines the options for cost recovery and proceeds distribution arrangements that would be needed if AEMO uses the proposed ECGS supplier of last resort mechanism.[142] This chapter discusses and seeks feedback on:

- Section 8.1 — how to recover costs and distribute proceeds, specifically:
  - removal of the trading fund and replacement with a standard cost recovery and proceeds distribution process
  - the trigger for cost recovery and proceeds distribution
  - how costs could be allocated
  - how proceeds could be distributed
- Section 8.2 — transparency of the SoLR mechanism's cost recovery and proceeds distribution process
- Section 8.3— AEMO establishing a separate financial account for the SoLR mechanism.

Figure 8.1 below indicates where the cost recovery and proceeds distribution process sits in the proposed NGR framework for the NGL ECGS trading function.

Figure 8.1: Context for cost recovery and proceeds distribution in the proposed SoLR mechanism



Source: AEMC - Illustrative only

8.1 How to recover costs and distribute proceeds

8.1.1 Removing the trading fund and its $35 million cap

The proponents propose removing the trading fund and replacing it with a standard cost recovery and proceeds distribution mechanism. Removing the trading fund would remove the relevant rules including rule 709 of the NGR, which caps the trading fund to $35 million annually (in real terms as of 2022 but adjusted for CPI). The proponents state:[143]

> The proposed design of the SoLR mechanism provides for the replacement of the trading fund with a more standard cost recovery-proceeds distribution mechanism employed in

142 The proposal that AEMO seek agreement on cost-sharing arrangements with the relevant jurisdictions upon deciding to use a SoLR mechanism (see rule change request, p 33) is noted in Chapter 9.

143 Rule change request, p 47.

both the RERT and the DLNG last resort mechanism, and the recently revised compensation arrangements in Part 27 of the NGR.

The proponents observe that the current trading fund arrangements are less transparent than equivalent mechanisms in the RERT and DLNG last resort mechanism.[144] Further, they consider the $35 million trading fund cap may impede actions AEMO can take in using the SoLR mechanism.[145]

The current NGR sets out:[146]

- the $35 million trading fund cap and how this is adjusted each financial year by CPI
- AEMO must notify relevant entities prior to each financial year of CPI adjustments and the contribution rate
- relevant entities must pay amounts relating to the trading fund as notified by AEMO
- the items that AEMO may pay into the trading fund
- the items that AEMO may pay from the trading fund.

In addition, AEMO's ECGS Procedures set out further detail on payments made into the trading fund and any refunds. For example, the matters that AEMO may have regard to in setting the contribution rate for relevant entities into the trading fund.

Table 8.1 compares the trading fund with the cost recovery mechanisms for the DWGM DLNG storage facility and the RERT.

Table 8.1: Comparison of cost recovery mechanisms

	ECGS trading fund	DLNG storage facility	RERT
Description	Trading fund is set up ex ante in readiness for when AEMO may need to use the trading function (NGR rules 709-710)	Costs are recovered ex-post based on gas withdrawals (consumption) or gas injections (NGR rule 286B)	Costs are recovered based on electricity consumption by market customer in a region over a billing period (NER clause 3.15.9)
Financial cap	Cap of $35 million adjusted each financial year by CPI (NGR rules 709-710)	No cap	No overall cap, but average per-MWh prices are limited (NER clause 3.20.2)
When costs are recovered	Not applicable as trading fund amounts set ex ante	Costs are recovered on a monthly basis	Costs recovered in line with an intervention settlement timetable (within 20 weeks of the billing period) (NER clause 3.12.1)

Source: AEMC.

144 Rule change request, p 47.
145 Rule change request, p 47.
146 Rules 709-710 of the NGR.

Noting the proposal outlined above, there are alternatives:

- Option 1: keep the current trading fund, including the $35 million cap (adjusted by CPI), and use this for the SoLR mechanism (status quo)
- Option 2: keep the current trading fund and remove or increase the cap, and use this for the SoLR mechanism
- Option 3: remove the current trading fund and replace it with a standard costs and proceeds distribution mechanism (proponents' preferred approach).

Under option 1, as the trading fund is effectively a pool of funds established ex ante, there is little connection between that fund and the users affected by the SoLR mechanism. As the proponent identified, the cap could impede the actions AEMO can take in addressing a gas shortfall risk.[147] However, a potential benefit of retaining the current trading fund is that it is already established, and no additional actions or transitional activities arise from a final determination. In addition, there is clarity over what gas consumers will ultimately pay.

Under option 2, the same issues may arise as in option 1 where there is not a close connection between the fund and the users affected by the SoLR mechanism. AEMO would likely need additional guardrails on the financial size of the fund, as there would be no cap or a higher cap. Guardrails on the SoLR mechanism such as the principles for its use, relinquishment and linking the size of the SoLR reserve to market price settings can set boundaries on the costs recoverable by AEMO for using the SoLR mechanism.

Under option 3, given that costs are incurred or proceeds accrued through the use of the SoLR mechanism, a standard cost recovery and proceeds distribution process could be more fit for purpose for SoLR rather than an ex ante trading fund which is set up irrespective of whether it is actually used. This proposed arrangement is in line with the approach for the DWGM DLNG storage facility arrangements and RERT.

Question 22: Removing the trading fund and its $35 million cap

1. Should the trading fund:
   a. be retained as is
   b. be retained in an amended form, and if so, what amendments should be made, or
   c. be removed and replaced with a cost recovery and proceeds distribution mechanism as proposed?

8.1.2 Triggering the cost recovery and proceeds distribution process

The proponents suggest that the cost recovery and proceeds distribution process should be triggered as soon as AEMO establishes a SoLR reserve:[148]

> The cost recovery-proceeds distribution mechanism could be triggered as soon as AEMO establishes a SoLR reserve and operate on a monthly basis until the reserve ceases to be used and the associated costs have been recovered and proceeds distributed. Note that this approach would enable AEMO to recover costs in a more timely manner than if it was only able to recover net costs once the reserve has been used.

147 Rule change request, p 47.
148 Rule change request, p 47.

If the Commission creates a SoLR mechanism and a cost recovery and proceeds distribution process is a feature of that mechanism, the issue is whether to provide guidance on when a cost recovery and proceeds distribution process can be activated. If guidance is to be provided, it could be through the NGR, AEMO procedures or a combination of the two. The proponents anticipate that once AEMO establishes a reserve, it will incur costs that should be recovered from market participants.

This approach would be consistent with AEMO's financial arrangements and not leave AEMO bearing costs for a potentially unknown period of time. However, stakeholders may consider that there are advantages to delaying the time from which AEMO could recover costs from market participants. For example, delaying cost recovery until AEMO has carried out certain actions, or delaying for a certain period.

Question 23: Triggering the cost recovery and proceeds distribution process

1. Do you consider that the appropriate trigger for using the cost recovery and proceeds distribution process is when AEMO establishes a SoLR reserve? Is there a more preferable alternative?
2. Should guidance on using the cost recovery and proceeds distribution process be provided? Should this be through the NGR and/or AEMO procedures?

8.1.3 How costs could be allocated

Proposal for cost allocation in the rule change request

The proponents state that:[149]

> The costs that AEMO incurs in establishing and using the SoLR reserve could be recovered from:
>
> - relevant entities located in the location(s) that the SoLR reserve was established for, based on their share of gas demand in the location(s) in each month that the reserve is in place
> - NEM participants in the location that benefits from the use of the SoLR reserve, based on their share of adjusted gross energy amounts in the relevant NEM regions in each month the reserve is in place.

The proponents' suggestion to allocate costs to relevant entities based on their share of gas demand is consistent with the cost recovery arrangements in the:

- DWGM interim LNG storage measures final rule determination where all gas users in the DWGM would contribute to costs based on their share of gas withdrawals.[150]
- Compensation and dispute resolution frameworks final rule determination where compensation would be recovered on a relevant entity's aggregate gas demand in the location of an identified risk or threat.[151]

149 Rule change request, p 47. The proponent notes that 'relevant entities' is defined broadly in s. 91AF(8) of the NGL.

150 AEMC, *DWGM interim LNG storage measures*, rule determination, 15 December 2022, p 59.

151 AEMC, *Compensation and dispute resolution frameworks*, rule determination, 7 March 2024, p 25.

It is unclear whether the proponents' alternative suggestion, to allocate costs to NEM participants, would be feasible or appropriate given the current restrictions in the NGL and the National Electricity Law (NEL). The Commission's preliminary assessment is that changes to the NEL may be necessary before such a cost allocation approach could be employed.[152] Therefore, we do not propose to pursue this option further at this time.

Assessing cost allocation methodologies

There are different cost allocation methodologies, which can be broadly grouped as follows and are discussed in turn below:

- beneficiary or causer pays
- allocating by the proportion of demand from gas market participants in a region and time period (proponents' view)
- sharing across all gas market participants (other than by gas demand) in a region or across the ECGS pay for a SoLR mechanism.

Beneficiary or causer pays

Using the beneficiary or causer pays approach requires a clear link or attribution between the activity and the beneficiary or causer of that activity, which would, in principle, link market activities and cost incentives. This may have economic appeal. However, the proponents suggest that it is challenging to identify who benefits from or who 'causes' the use of the SoLR reserve, and so it would be practically difficult to implement well.[153]

In submissions to the 2023 consultation on stage 2 of the RSA reforms, there were mixed views on using a 'causer' pays approach. Alinta acknowledged the difficulty of implementing causer pays and was wary of applying this approach for emergency mechanisms or markets undergoing rapid change.[154] In contrast, Brickworks suggested that there should be a causer pays approach for an administered demand response mechanism to 'avoid creating a perverse incentive for gas buyers to remain intentionally short to the market if they believe it will lower their overall cost due to the scheme's cost being smeared across all gas buyers'.[155]

Gas users pay based on demand

Under the second option noted above — to allocate by proportion of demand or consumption — there would be a link between the use of the SoLR mechanism and the type of relevant entities in a region impacted by that mechanism. This approach has the advantage of avoiding the practical implementation challenges of identifying specific causers or beneficiaries, while recognising that all gas users benefit from a secure and reliable system. It is also consistent with the DWGM interim LNG storage facility and the Part 27 NGR compensation framework, suggesting that market participants may be familiar with this approach.

This demand-based allocation method is preferred by the proponents who suggest allocating costs to gas market participants based on their respective share of gas withdrawals (or demand) in each month that the reserve is in place at that location. For example, if a relevant entity is responsible for five per cent of the total withdrawals (or demand) at a location during a particular month a SoLR reserve is in place, then it would be liable for five per cent of the SoLR mechanism

152 The same considerations are likely to apply to distributing proceeds to NEM participants.

153 Rule change request, p 48.

154 Alinta Energy, Submission to consultation on stage 2 of the reliability and supply adequacy framework for the east coast gas market, July 2023, p 20.

155 Brickworks, Submission to consultation on stage 2 of the reliability and supply adequacy framework for the east coast gas market, July 2023, p 13.

costs.[156] This option also provides a link in time between the SoLR reserve and gas users active during that same period. The proponents claim this would allow AEMO to recover costs in a timely manner and avoid reliance on other funding arrangements.[157]

Sharing across all gas market participants

The third option listed above is to recover costs from all gas market participants in a region or across the whole ECGS. Rather than sharing costs according to demand, the distribution could be as a flat amount to each market participant. This approach draws no specific link between the use of the SoLR mechanism and any particular entity or set of relevant entities affected by the mechanism. Instead, it spreads or shares the costs across all participants in a region or the ECGS.

This cost allocation method could be valid where the use of the SoLR mechanism generates wider system or market benefits that accrue to all participants regardless of the type or volume of their gas market activities. However, it could misalign the incentives between cost and market activity when gas market participants contribute at differing levels to the need for and the costs of the SoLR mechanism.

Question 24: How costs could be allocated

1. Do you agree with the proposed cost allocation methodology — that costs be recovered from relevant entities based on their share of gas demand at the locations where a SoLR reserve is established and in each month that the SoLR reserve is in place? Or are other alternative approaches preferred? Why?
2. Are there other benefits and costs of the proposed cost allocation method that the AEMC should consider?

8.1.4 How proceeds could be distributed

Proceeds may accrue to AEMO if, to address a threat to reliability and supply adequacy, it must sell its reserve into the ECGS. This is similar to proceeds distribution under the current Dandenong LNG interim arrangements. For example, by selling some of its stock of gas into a facilitated market. The monies collected will need to be rebated to market participants. The proponents state:[158]

> To the extent that there are any proceeds arising from the use of the reserve, they should be distributed back to relevant entities using the same percentage allocation used for cost recovery (ie. based on the relevant entity's weighted average share of gas demand over the period costs are recovered).
>
> For example, if a relevant entity's share of withdrawals or gas demand over the period that a reserve was in place resulted in it being required to pay 5% of the costs on a weighted average basis (i.e. weighted by its share of withdrawals in each month the reserve is in place), then it should be rebated 5% of the proceeds.

The range of approaches for proceeds distribution is similar to that for cost recovery, ranging from:

156 Rule change request, p 47.
157 Rule change request, p 49.
158 Rule change request, p 47.

- beneficiaries or causers receive proceeds
- gas users receive proceeds based on the proportion of gas demand at a region and time period
- all gas market participants receive proceeds (divided equally).

Further, the approach to proceeds distribution can be the same (as requested by the proponents) or different from the approach for cost recovery.

Question 25: How proceeds could be distributed

1. Do you agree with the proposed proceeds distribution methodology — that proceeds be distributed to relevant entities in a timely manner based on their share of gas demand at the locations where a SoLR reserve is established? Or are other alternative approaches preferred? Why?
2. Are there other benefits and costs of the proposed proceeds distribution method that the AEMC should consider?

8.2 Providing transparency about cost recovery and proceeds distribution

8.2.1 Key transparency arrangements in the NGR

The rule change request proposes to include key arrangements relating to the SoLR cost recovery and proceeds distribution process in the NGR to promote greater transparency. The proponents state that:[159]

> the current trading fund arrangements in Part 27 of the NGR are less transparent than the equivalent mechanisms employed in the RERT and DLNG last resort mechanism and provide no guidance on who AEMO should seek funding from.

This refers to the current arrangements from implementing stage 1 of the RSA reforms. At present, the detailed arrangements for cost recovery and proceeds distribution are not contained in the NGR but in the ECGS procedures.[160] This has provided AEMO with considerable discretion. In contrast:

- The NER sets out detailed methodology for the RERT on calculating reserves and the steps AEMO must take to recover costs from or pay amounts to market participants.[161]
- The NGR sets out detailed methodology on cost recovery and proceeds distribution for the Dandenong LNG storage facility interim arrangements.[162]
- Revised compensation arrangements are included in Part 27 of the NGR for when AEMO exercises its ECGS directions function.[163]

As indicated by the rule change request, the different approach taken for the trading function is notable. This high-level approach could be maintained if a SoLR mechanism was introduced into the NGR. However, the contrast with the RERT and Dandenong mechanisms suggests that there may be benefits for AEMO and market participants if the NGR does include key requirements

159 Rule change request, p 47.
160 AEMO, ECGS Procedures, section 5.
161 Clause 3.15.9 of the NER.
162 Rule 286B of the NGR.
163 AEMC, *Compensation and dispute resolution frameworks*, rule determination, 7 March 2024.

about the cost recovery and proceeds distribution process, for transparency. These benefits could include greater certainty and clarity on how the process operates.

Key aspects in the NGR could include:

- what triggers cost recovery and proceeds distribution
- who would be subject to cost recovery and proceeds distribution
- how costs would be recovered and allocated
- how proceeds would be distributed.

8.2.2 Supporting transparency arrangements in procedures

The proponents state that while most of the proposed cost recovery and proceeds distribution mechanism would be expected to be in the NGR, some matters are more appropriate in the ECGS Procedures, including:[164]

- how AEMO would identify liable entities
- how AEMO would calculate aggregate gas demand in a location and a liable entity's share of gas demand in that location (including how it will deal with the share of gas demand of a retailer or other person that sells gas).

In the compensation and dispute resolution framework final rule determination, the Commission made a rule that certain details relating to the compensation of claimants subject to an ECGS direction are included in AEMO's procedures, such as:[165]

- how liable relevant entities are determined
- how AEMO will calculate aggregate gas demand at a location
- how AEMO will calculate the liable relevant entity's share of gas demand at a location.

This general approach could also be taken in determining the role of procedures in providing additional guidance and supporting details relating to transparency in the cost recovery and proceeds distribution process.

In deciding what requirements are best placed in the NGR and what would be appropriate for procedures, it may be relevant to consider:

- the degree of discretion that should be allocated to AEMO
- the change processes relevant for the NGR and for procedures
- that the NGR can provide clear guidance and principles.

Question 26: Providing transparency about cost recovery and proceeds distribution

1. Which aspects of the cost recovery and proceeds distribution process should be in the NGR, and which aspects should be in the ECGS Procedures to support transparency to market participants? Why?

164 Rule change request, p 48.
165 Rule 707(10) of the NGR.

8.3 Establishing financial separation for the SoLR mechanism

The proponents state that:[166]

> The proposed design is intended to provide for an appropriate level of accountability and transparency of AEMO's SoLR related activities by requiring AEMO to maintain separate financial accounts relating to the SoLR mechanism...
>
> This accountability measure, which mirrors what applies under the RERT in the NEM, is intended to impose additional discipline on AEMO in terms of costs it incurs and provide market participants and other interested parties greater confidence in those costs.

There are requirements for AEMO to hold separate accounts for the RERT in the NER and the DWGM DLNG interim storage facility arrangements in the NGR:

- The arrangements relating to the RERT in the NEM state that 'AEMO must ensure that it maintains in its books separate accounts relating to the RERT functions and powers granted to AEMO...'[167]
- For the DLNG interim storage facility, AEMO 'must maintain an interim LNG storage measure account'.[168]

While accounting separation creates some costs for AEMO, it does provide a level of transparency and accountability in managing the SoLR mechanism. This is likely to be consistent with the principles of good regulatory practice.

The alternative approach is that AEMO does not establish a separate financial account; rather, the costs and proceeds are integrated into AEMO's overall existing accounts. This would likely result in less transparency in AEMO's management of SoLR activities. As a result, market participants seeking greater clarity may need to request specific information from AEMO.

Question 27: Establishing financial separation for the SoLR mechanism

1. Do you agree with the proposal that AEMO establish a separate financial account for its use of the SoLR mechanism? Why?

166 Rule change request, pp 14 & 51.
167 Clause 3.20.5(b) of the NER.
168 Rule 286B(2) of the NGR.

9 Providing transparency and accountability

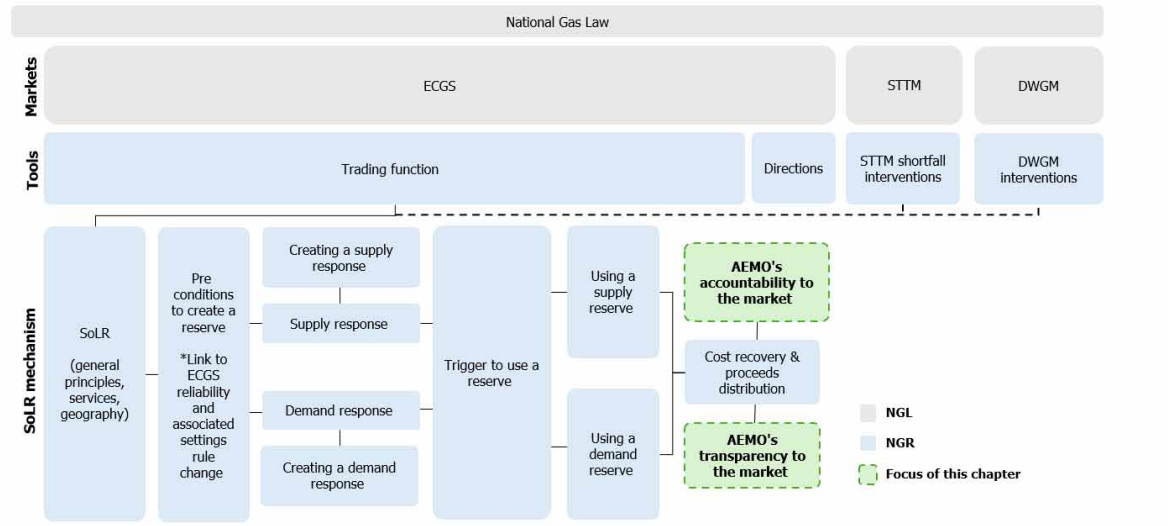
This chapter provides an overview of the accountability and transparency measures AEMO could be required to undertake to appropriately inform participants on the use of the SoLR mechanism, if the Commission determines to introduce the mechanism.

It considers what AEMO should do to maintain transparency and accountability in both procuring a SoLR reserve, and also going through the steps of using the reserve to intervene in the ECGS where the market has failed to address a shortfall threat. Broadly the issue of accountability and transparency applies to a SoLR mechanism (including whether it is a demand or supply response) to support AEMO's existing trading function under the NGL. However, some details will depend on the specific design of the mechanism created through this rule change process.

This chapter includes:

- section 9.1 which considers the market notification process that AEMO could utilise to inform participants
- section 9.2 which describes the information AEMO could publish to uphold transparency and accountability.

Figure 9.1: Accountability and transparency in the proposed SoLR mechanism



Source: AEMC - Illustrative only

9.1 Providing transparency to market participants

The proponents have proposed an action-based notice system, where AEMO publishes a number of sequential notices that indicate an escalation in AEMO's response to a threat to reliability and supply adequacy. The intent of this design is to provide market participants with visibility and timely information about AEMO's SoLR response, so that they have sufficient opportunity to respond to prevent an intervention. The proponents note that market-led responses will generally result in a more efficient outcome than intervention by AEMO.[169]

169 Rule change request, p 49.

There is also an interdependence with the Reliability standard and associated settings rule change request. The reliability standard rule change request suggests that there is a need for a more sophisticated, tiered risk or threat signalling framework for AEMO to issue risk or threat notices to ECGS participants compared to the current system. That is, the current 'flat' (that is, non-tiered) system could be improved to enable AEMO and market participants to respond with measures proportionate to the nature of the risk or threat.[170]

If a tiered design of the reliability and supply adequacy threat and risk notice is introduced, one of the tiers could be used as the link to the proposed SoLR mechanism.[171] For example, only under a more 'serious' tier level, where risks are heightened, would AEMO be able to utilise its SoLR function. This connection is discussed more in chapter 5 of this consultation paper.

Considering this context, the discussion below outlines the issues arising from the existing notice arrangements and potential solutions.

9.1.1 The current market notifications may create uncertainty

The current notice requirements in the NGR (established through the stage 1 RSA reforms) apply to both AEMO's ECGS direction and trading functions. The current arrangements provide a degree of flexibility in publishing a risk or threat notice. However, this may also create some uncertainty for market participants.

Under the existing market notification process, AEMO may publish the market notices described in the table below.

Table 9.1: Existing ECGS market notifications

Notice	Explanation
Risk or threat notice (rule 695)	AEMO must publish this notice if an actual or potential risk or threat to the reliability or adequacy of supply of gas is identified (except if it considers that there is insufficient time to publish the notice before exercising its direction or trading function. A notice must include: • the identified risk or threat • the nature and magnitude of the identified risk or threat • the likely duration of the identified risk or threat • the location of the identified risk or threat • the industry response, if any, that AEMO considers necessary to prevent or mitigate the identified risk or threat, including the duration of the response.
Variation or revocation of risk or threat notices (rule 696)	As soon as reasonably practicable, AEMO must publish notice of a variation or revocation of a risk or threat notice (in accordance with the procedures) if it considers that: • there is a material change in the nature or circumstances of the identified risk or threat specified in the notice • it is necessary to publish further information relating to the nature or circumstances of the identified risk or threat or the industry response

170 AEMC, *ECGS reliability standard and associated settings*, directions paper, 28 August 2025, p 2.

171 The Commission expects to make a final determination on the ECGS reliability standard and associated settings rule change in June 2026.

Notice	Explanation
	specified in the notice • the identified risk or threat specified in the notice is unlikely to be resolved or mitigated if AEMO does not exercise a direction or trading function within a further period specified in the variation, or • the identified risk or threat specified in the notice no longer meets or exceeds the criteria specified in the procedures.
Publication of direction or trading notices (rule 697)	AEMO must publish a notice as soon as reasonably practicable after the exercise of a direction or trading function, in accordance with the procedures. The notice must contain: • details of the risk or threat notice, including where the notice is available • a statement that the function has been exercised in relation to the identified risk or threat specified in the risk or threat notice. If a risk or threat notice was not published, this notice should also contain details of the risk or threat (including nature and magnitude, likely duration and industry response).

Source: AEMC.

This flat structure — that there is either a notice of a risk or threat to the reliability and supply adequacy in the ECGS or there is not — provides AEMO with discretion on when to activate its trading function. While this approach could be advantageous in a rapidly changing environment, it may also create uncertainty for market participants and other interested stakeholders. In addition, the current flat notice structure does not support the 'last resort' concept of the SoLR mechanism, which is important to enable market participants to respond to threats before AEMO intervenes.

9.1.2 Improving the market notices to better inform the market

The proposed market notifications requirements

The proponents have built on the current notice requirements to propose a system of five 'action-based' notices to communicate the escalation of actions AEMO is taking to market. The proposal has been informed by the notice requirements for RERT and DLNG and is outlined in the table below.[172] While the proponents acknowledge that all five notices could be achieved in a single notice, they consider there is a risk that using one notice to advise the market of all of AEMO's actions may cause confusion or result in market participants failing to be aware of the escalation of actions.[173]

Together, the proposed market notice requirements are designed to provide market participants with greater visibility and timely information about any reliability and supply adequacy threats facing the ECGS. The proposed arrangement could also provide more timely information about when AEMO could consider both procuring a reserve and using it. The notices could provide the market with sufficient opportunity to respond.[174]

172 Rule change request, p 49.
173 Rule change request, p 50.
174 Rule change request, p 49.

Table 9.2: Proposed market notifications

Notice	When would it be published?
1. Risk or threat notice (existing notice)	As soon as reasonably practicable, if AEMO identifies an actual or potential risk or threat to the reliability or adequacy of the supply of gas within the ECGS that meets or exceeds the criteria specified in the procedures.
2. Reserve establishment notice (new notice)	As soon as practicable, if AEMO decides to establish a SoLR reserve, or it considers it necessary to procure additional SoLR reserves.
3. Potential intervention notice (new notice)	As soon as reasonably practicable, if there are any foreseeable circumstances that may require AEMO to intervene in the ECGS, by using SoLR.
4. Actual intervention notice (new notice)	Immediately, if the latest practicable time for AEMO to intervene has been reached and the risk or threat to the reliability or adequacy of supply has not been alleviated.
5. Cessation of intervention notice (amendment to an existing notice)	As soon as reasonably practicable, after AEMO has ceased to intervene in the ECGS.

Source: Rule change request, p 50.

A threat signalling framework that uses tiers informed by a probabilistic metric

An actions-based notification process could have advantages over the current arrangement, which lacks clarity and predictability in how AEMO assesses, communicates, and responds to reliability risks.[175] While AEMO does address some of these issues through its procedures, there may still be some gaps in guidance about how it assesses and monitors risks or threats.[176]

Therefore, the threat signalling framework described in the Reliability rule change directions paper provides at least three tiers or levels of risk or threat notices informed by a probabilistic metric to effectively communicate evolving reliability risk levels to the market. This could also support operational decision-making, enabling AEMO to:[177]

- clearly communicate emerging reliability risks to the market
- coordinate and seek responses from market participants to manage such risks
- escalate or de-escalate the risks as a result of those responses
- inform the proportionate response that might be required by AEMO to manage the reliability risk.

The three-tier threat signalling framework is noted in the table below.

The remaining market notifications that support the use of a SoLR mechanism could leverage this framework (assuming it is implemented). Specifically (and assuming there is sufficient time for AEMO to issue a notice):

- a reserve implementation notice could be used if the level 2 alert threat signalling notice has been published

175 AEMC, *Reliability standard and associated settings rule change*, directions paper, p 11.
176 AEMO, East coast gas system procedures, available here.
177 AEMC, *Reliability standard and associated settings rule change*, directions paper, p 11.

- a potential intervention notice could be used if the level 3 emergency threat signalling notice has been published
- an actual intervention notice could be used if the level 3 emergency threat signalling notice has been published.

The table below provides how the market notification requirements could work together.

Table 9.3: Potential alternative market notification requirements

Notice	Details
1. Threat signalling framework[a]	Level 1 Early warning: 5-15% probability of supply not meeting demand (if no action is carried out) Level 2 Alert: 15-50% probability of supply not meeting demand (if no action is carried out) Level 3 Emergency: 50-100% probability of supply not meeting demand (if no action is carried out)
2. Reserve establishment notice	Why AEMO intends to establish a SoLR reserve if level 2 alert is notified. The form the reserve will take (i.e. storage reserve or other). The location(s) that the SoLR reserve is being established for. The likely size and duration of the SoLR reserve.
3. Potential intervention notice	The nature, magnitude, location, and likely duration of the level 3 emergency. The market response that AEMO considers necessary to prevent or mitigate a level 3 emergency The circumstances that may require AEMO to use the SoLR reserve The latest time by which AEMO would need to use the SoLR reserve. Note: AEMO would be required to regularly review the latest time estimate and publish any revisions to the estimate in a variation to the notice.
4. Actual intervention notice	The circumstances that have required AEMO to use the reserve under level 3 emergency. The location(s) the reserve is being used for. The likely duration of the use of the reserve.
5. Cessation of intervention notice	The circumstances that required AEMO to use the reserve. The location(s) for which the reserve was used. How long the reserve was used for.

Source: AEMC.
Note: a. From the AEMC, *Reliability standard and associated settings*, directions paper, 28 August 2025, p 13.
The proposed notices, except the cessation of intervention notice, should all be capable of being varied or revoked (e.g, if there is a material change in circumstances).

Question 28: Improving the market notices to better inform the market

1. Are the number of market notices and the information they contain provide appropriate transparency to market participants about AEMO's actions in using a SoLR mechanism?
2. Are the potential links between the risk and threat signalling levels and the SoLR-related market notices appropriate?

9.2 Accountability measures for AEMO

The rule change request proposes various accountability measures that:[178]

- have been designed with regard to the measures employed in both the RERT and DLNG arrangements
- build on the existing accountability measures set out in both the NGL and NGR, which require AEMO to publish post-intervention reports if it exercises its trading function and report on its activities to energy ministers.

In addition to maintaining separate financial accounts, discussed in chapter 8 on cost recovery, the rule change request proposes publications and reporting requirements for AEMO that go to its accountability to market participants and governments. These are:

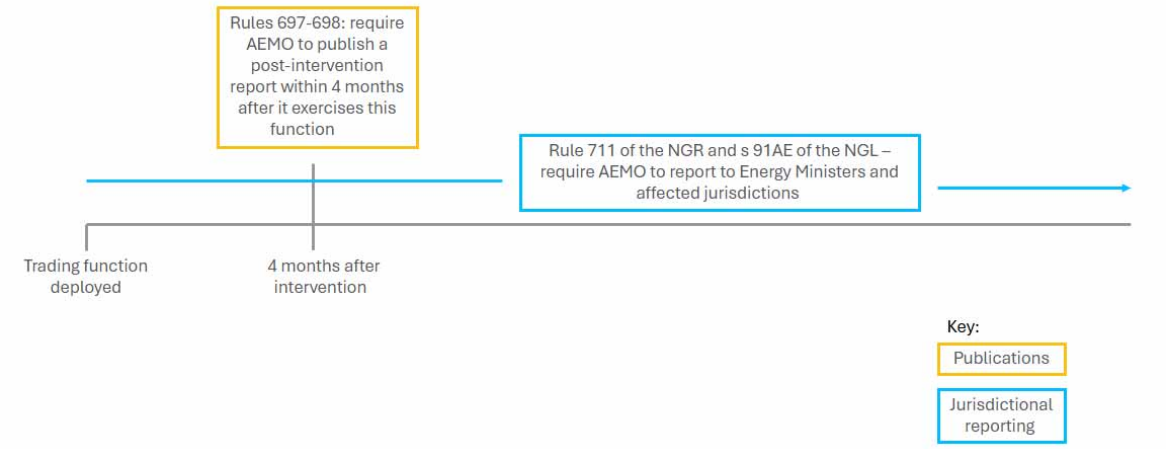
- post intervention reports in section 9.2.2
- biannual SoLR activity reports in section 9.2.3
- reporting to energy ministers and affected jurisdictions in section 9.2.4.

Each is discussed in turn below following an overview of the current and proposed arrangements.

9.2.1 Overview of the current and proposed accountability measures

Currently, under the trading function AEMO has limited transparency requirements. These are illustrated in Figure 9.2 below.

Figure 9.2: Current accountability measures under AEMO's trading function

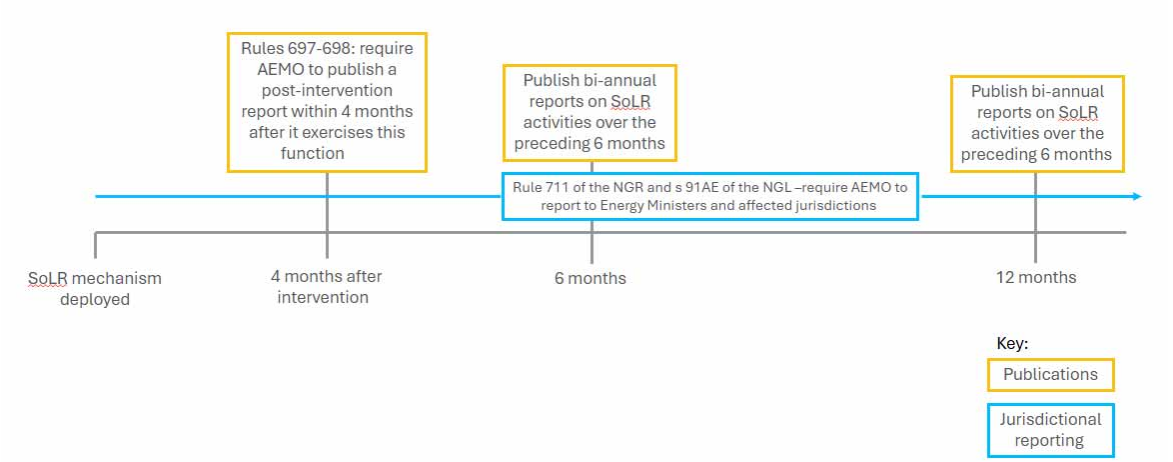


Source: AEMC. Illustrative only.

178 Rule change request, p 51.

The existing timeline indicated in Figure 9.3 differs from the timeline for a number of new transparency measures proposed in the rule change request.[179]

Figure 9.3: Proposed accountability measures for a SoLR mechanism



Source: AEMC and Rule change request, pp 51-52. Illustrative only.

The proponents state that the proposed accountability measures are intended to provide market participants and other interested parties with greater transparency of AEMO's SoLR activities. The measures are also intended to impose additional discipline on AEMO in terms of the costs it incurs and the efficiency with which it uses any reserves it has established.[180]

9.2.2 Publishing a post-intervention report

The rule change request outlines that, in keeping with the existing requirements in rule 698 of the NGR, AEMO should be required to publish a post-intervention report if it exercises the SoLR mechanism. In the proponents' view, such a report would:[181]

- describe the events leading up to the exercise of the SoLR mechanism, including the reasons the SoLR mechanism was exercised and the matters AEMO considered before deciding to do so
- explain how the SoLR mechanism was used
- set out AEMO's estimated expenditure on the exercise of the SoLR mechanism
- contain AEMO's assessment of the extent to which the exercise of the SoLR mechanism mitigated the identified risk or threat
- contain any other material AEMO considers appropriate.

Currently, rule 698 of the NGR requires a post-intervention report to be published within four months of the directions or trading function being exercised. However, AEMO has published post-intervention reports more promptly than required by the NGR.[182]

AEMO's recent practice suggests that more prompt post-intervention reporting is possible, potentially useful, and could be reflected in the NGR. A more prompt reporting regime could

179 Rule change request, p 51.
180 Rule change request, p 51.
181 Rule change request, p 51.
182 AEMO, *East coast gas system – Queensland Gas Pipeline preliminary post-intervention report*, May 2024.

enhance accountability. The NGR could specify that if the SoLR mechanism is used, AEMO should provide a post-intervention report to the market at least one month after the intervention has ended. If AEMO considers doing so useful, this could be supplemented by a follow-up report at the four-month mark. However, reporting twice on the one event could add some costs to AEMO.

The Commission recognises the importance of simplicity and transparency in reporting that reflects principles of good regulatory practice. Post-intervention reports should be informative and useful for market participants. This can, in turn, promote better market outcomes and benefit consumers.

Question 29: Publishing a post-intervention report

1. Should AEMO be required to publish a post-intervention report within one month of an intervention in the market?
2. Should AEMO also have the discretion to provide a supplementary report at the four-month mark, if it considers it would be appropriate?

9.2.3 Publishing biannual reports

The rule change request proposes that, similar to the DLNG arrangements and RERT, AEMO should be required to report on its SoLR activities over the preceding six months (if there are any such activities).[183]

A six-monthly reporting regime could be timed so that a report is published prior to winter and summer (on 1 May and 1 November respectively). It could contain information on:[184]

- any products or services procured under reserve contracts or through the facilitated markets in the preceding six months
- the reserves held by AEMO and any changes in its holdings over the preceding six months
- the total costs and proceeds associated with AEMO's SoLR activities over the preceding six months and how they have been recovered or distributed
- any exercises of the SoLR reserve over the preceding six months
- any instances in the preceding six months where:
  - the size of the reserve procured by AEMO exceeded the forecast breach of the reliability standard and, if so, why
  - the average amount payable by AEMO per GJ of reserve exceeded the estimated average VGCR for the relevant location and, if so, why.

If the NGR requires a post-intervention reporting regime as described above, then the value of an additional biannual reporting regime should be considered (noting the existing requirement for annual reporting to Ministers, discussed below). There is a balance between enabling market participants to be well-informed about important matters, such as market interventions, and the administrative costs to AEMO.

An alternative to the NGR requiring biannual reporting from AEMO on its SoLR activities over the preceding six months as proposed in the rule change request, is that AEMO report annually on activities over the preceding 12 months (if there are any such activities).

183 Rule change request, p 52.
184 Rule change request, p 52.

Question 30: Publishing biannual reports

1. Would regular reporting from AEMO on its market intervention activities (in addition to post-intervention reports) be valuable to market participants?
2. If so, should AEMO be required to report on its SoLR activities on an annual or biannual basis?

9.2.4 Reporting to energy ministers and affected jurisdictions

The rule change request considers that AEMO's existing reporting to energy ministers and affected jurisdictions about its use of a SoLR mechanism should be retained. Under the existing requirements in the NGR and NGL:[185]

- Rule 711 of the NGR requires AEMO to report to energy ministers annually on the exercise of its east coast gas system reliability and supply adequacy functions.
- Section 91AE of the NGL requires AEMO to (at the written request of energy ministers or a minister of a participating jurisdiction) provide information about the performance of its east coast gas system reliability and supply adequacy functions.

The rule change request notes that the reporting above is in addition to:[186]

- AEMO informing affected participating jurisdictions of its decision to establish a SoLR reserve[187]
- AEMO (using reasonable endeavours) informing an affected participating jurisdiction that it intends to use a SoLR reserve if the market does not address the identified threat to reliability and supply adequacy in the ECGS. [188]

The proposal to continue to require AEMO to provide annual reports to ministers should be considered in the context that the NGL already provides the ministers with the ability to request information from AEMO at any time. Relatedly, the rule change request proposes other reporting obligations on AEMO as discussed above. While accountability on AEMO regarding its market intervention powers is important, reporting obligations should ultimately be consistent with the long term interests of gas consumers.

Question 31: Reporting to energy ministers and affected jurisdictions

1. Should AEMO continue to be required to provide an annual report to energy ministers about any SoLR activities, if the proposed additional reporting requirements are introduced?

185 Rule change request, p 52.
186 Rule change request, p 52.
187 Rule change request, p 33.
188 Rule change request, p 44.

10 Implementing a SoLR mechanism

This chapter discusses two aspects of implementing a SoLR mechanism: implementation costs and transitional arrangements. The rule change request identified several issues to address in the NGR which are discussed below:[189]

- Section 10.1 discusses the potential implementation costs for AEMO and industry participants
- Section 10.2describes transitional arrangements that may be required.

10.1 Implementation costs

If a SoLR mechanism is created through this rule change process then AEMO is likely to need to prepare procedures and/or guidelines to set out some operational details relating to the mechanism. It will need to update the current ECGS Procedures to reflect rules made in this project and the other stage 2 RSA rule changes.

AEMO procedures and/or guidelines could be used to set out:

- how AEMO would develop standard reserve contracts and procurement
- how the cost recovery and proceeds distribution process would work, including how to establish a settlement process.

AEMO procedures and guidelines would be created and updated following the consultative process that is used for other AEMO procedures and guidelines. As a result, there will be one-off costs incurred by AEMO and market participants to develop the documents and provide submissions.

In addition, market participants may need to change their business practices to accommodate the introduction of a SoLR mechanism in the NGR. These changes would also be considered implementation costs.[190]

Question 32: Implementation costs

1. Do you have any concerns about the implementation costs of AEMO procedures and/or guidelines?
2. Are there other implementation costs the AEMC should consider and is there a way to minimise them?

10.2 Transitional arrangements

The rule change request notes that transitional arrangements would be required if a SoLR mechanism were introduced into the NGR. The proponents have identified the following implementation transitional considerations, which are discussed in turn below:

- closing the trading fund in section 10.2.1
- AEMO's ECGS guidelines and procedures in section 10.2.2
- AEMO's DLNG interim arrangements in section 10.2.3.

189 Rule change request, p 52.
190 Rule change request, p 71.

10.2.1 Closing the trading fund

The proponents have suggested that AEMO close the trading fund as part of creating a SoLR mechanism. If this is to occur, then we must consider how to transition from the trading fund to other arrangements. The steps required may differ if the trading fund is in use at the time.

Closing the trading fund if it is not being used

Under the scenario that the trading fund is not being utilised when it is closed, then the rule change request proposes that any amounts of money that have been contributed by relevant entities (rather than being funded by a debt facility) would be refunded by AEMO to relevant entities.[191] This refund process would require some specification in the NGR.

The fund is currently set up as a debt facility, meaning AEMO has not asked for a contribution from participants; therefore, no participants would require a refund. If this remains the case at the time of the final determination, and that final determination is to close the trading fund, then it appears that no refund mechanism will be required. In this instance, the transition away from a trading fund may only require AEMO to end its debt facility arrangements, noting that depending on the specific arrangements, this could take some time.

Closing the trading fund if it is being used

In the event the trading fund is being exercised at the time new rules that create a SoLR mechanism and close the trading fund come into effect, the proponents recommend that AEMO continues to act under the trading function rules, utilising the trading fund, until AEMO ceases that specific exercise of the trading function.[192] This would mean that the new rules would not apply until after AEMO has finished using the trading function.

This proposed approach benefits AEMO and market participants by providing continuity and clarity of processes. This ensures that AEMO's existing function is not unnecessarily interrupted by any new rules. AEMO would need to comply with any existing transparency and accountability requirements associated with using the trading fund.

Question 33: Closing the trading fund

1. Do you agree with the proposed approach to closing the trading fund?
2. Are there any other issues that may arise in a transition away from the trading fund that the AEMC should consider?

10.2.2 Updating ECGS guidelines and procedures

The rule change request proposes that, within six months of the commencement of the rule, AEMO would update and publish the ECGS Guidelines, Procedures and standard form agreements for reserve contracts.[193] At present, the target date for making a final rule arising from this rule change process is June 2026. The rule change request proposes that AEMO would use the standard consultative procedure (which AEMO uses for other procedures and guidelines) to develop and update these documents. This process involves two rounds of consultation.[194]

191 Rule change request, p 53.
192 Rule change request, p 53.
193 Rule change request, p 53.
194 Rule 8 of the NGR.

The proposed approach could create a burden on market participants, as well as AEMO, to finalise multiple documents within six months following June 2026. However, if the procedures and guidelines are not finalised before winter 2027 then this could impact the use of the SoLR mechanism for that season.

Alternatives to the proposed approach would be to allow AEMO more than six months or to give it greater discretion to use a different consultative process.

The rule change request proposes that the amended ECGS guidelines would:

- specify the relevant entities that can supply products and services
- provide more detail on the procurement process including entering into or varying reserve contracts with relevant entities and the types of payments that could be made.[195]

The proposed amended ECGS Procedures would:

- set out how transfers of gas into, and disposals of gas from, a storage SoLR reserve are to occur
- clarify the details of the cost recovery proceeds distribution process considered in chapter 8.

Question 34: Updating ECGS procedures and guidelines

1. Is the proposed six months for updating ECGS procedures and guidelines achievable? What impact could this timeframe have on AEMO and market participants?
2. If a six-month timeframe is not appropriate, what should be the alternative timeframe and/or approach?
3. Are there other processes or information (in addition to those identified by the proponents) that AEMO should include in its procedures or guidelines? Why?

10.2.3 Changing the Dandenong LNG interim arrangements

AEMO's existing intervention power in the DWGM regarding the Dandenong LNG storage facility has been designed as an interim measure. It was created in 2022 to enable AEMO, as the Victorian gas market operator, to better manage the risk of curtailment for gas users during the tight demand-supply conditions expected from 2023 to 2025. The arrangements empowered AEMO to act as buyer and supplier of last resort in relation to the Dandenong LNG storage facility - see appendix D.

The AEMC has recently published a draft determination that would extend the operation of these arrangements to 2029, with a view to this rule change process considering a permanent solution.[196] A permanent solution to enable AEMO to better manage the risk of curtailment in the DWGM was not discussed in the rule change request. However, there is more than one option to explore if the AEMC considers that rules amending the Dandenong LNG interim arrangements are necessary or consequential as part of this rule change process:

- **Remove the Dandenong LNG interim arrangements**. This would not impact AEMO's responsibilities for safe system shutdown (which the interim arrangements do not alter). Any ECGS SoLR mechanism that is implemented through this rule change process would be available to AEMO to address any threats to reliability and system security in the DWGM. A key

195 Rule change request, pp 59-60.

196 AEMC, *Extension of the DWGM Dandenong LNG interim arrangements*, draft determination, 7 August 2025, p 15.

difference between using the specific Dandenong arrangements and a SoLR mechanism is that the SoLR mechanism will be unlikely to have the effect of ensuring the Dandenong LNG storage facility is full prior to winter. This is because, in contrast to the specific DWGM mechanism, a SoLR mechanism would provide AEMO with discretion on what reserves it should establish to address the anticipated threats.

- **Make the Dandenong LNG arrangements permanent**. This would provide certainty that the Dandenong facility would always be full prior to winter, even if there is no threat to reliability and system security in the DWGM. However, this certainty comes at a cost; AEMO currently spends approximately $8.8 million per year on storage, which is passed through to Victorian gas users.[197] In addition, retaining the interim arrangements would not address stakeholder concerns about the underlying market power of APA as owner and operator of the facility.[198] Where AEMO is concerned that there is a threat to reliability and supply adequacy it could use a SoLR mechanism developed through this process.

Resolving this issue also requires considering how to transition from the current arrangements to the permanent arrangements. Transitional considerations may include: how to end AEMO's contract with APA, AEMO relinquishing and disposing of LNG stock held, ensuring AEMO's safety obligations are not breached, finalising any outstanding accountability and transparency requirements, and what period of time is required to complete the transition.

Question 35: Changing the Dandenong LNG interim arrangements

1. What are your views on how a SoLR mechanism should apply to the DWGM Dandenong LNG storage facility arrangements?
2. Should the current Dandenong LNG interim arrangements cease as anticipated in 2029, leaving AEMO to use the ECGS SoLR mechanism to address reliability and supply adequacy threats for the DWGM? What issues should the AEMC consider to achieve this?
3. Should an ECGS SoLR mechanism and the DLNG arrangements co-exist? What changes to the current DLNG arrangements, and the proposed design of the SoLR mechanism, would be required in this case?

197 Extension of the DWGM Dandenong LNG interim arrangements, rule change request, p 36.

198 AEMC, *Extension of the DWGM Dandenong LNG interim arrangements*, draft determination, 7 August 2025, p 4-5.

A Making our decision

When considering a rule change proposal, the Commission considers a range of factors within its decision-making framework as outlined below.

A.1 The AEMC's decision-making framework

The Commission is bound by the NGL to only make a gas rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national gas objective.[199] The NGO is:[200]

> to promote efficient investment in, and efficient operation and use of, covered gas services for the long term interests of consumers of covered gas with respect to—
>
> (a) price, quality, safety, reliability and security of supply of covered gas; and
>
> (b) the achievement of targets set by a participating jurisdiction—
>
> (i) for reducing Australia's greenhouse gas emissions; or
>
> (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

The targets statement, available on the AEMC website, lists the emissions reduction targets to be considered, as a minimum, in having regard to the NGO.[201]

A.1.1 Making gas rules in Victoria

Under s. 295(4) of the NGL, the Commission may only make a rule that has effect with respect to an adoptive jurisdiction, such as Victoria, if satisfied that the proposed rule is compatible with the proper performance of AEMO's declared system functions.

In addition, under s. 295(5) of the NGL, the Commission may only make a rule that affects the allocation of powers, functions and duties between AEMO and a service provider for a declared transmission system if the rule is requested by the Minister of a relevant adoptive jurisdiction (or AEMO consents to the making of the rule).

As previously noted, the rule change request states that the proposed supplier of last resort mechanism is not intended to affect, in any way, AEMO's system security and public safety-related declared system functions (i.e. the functions AEMO exercises in the DWGM and Declared Transmission System (DTS)). However, there is the potential for consequential amendments to be required to Part 19 of the NGR (which relates to the DWGM). This will be considered when assessing the rule change request. If required, the Commission will have the scope to change rules within Part 19 of the NGR because the Victorian Minister is a proponent of the rule change request.

A.1.2 Making gas rules in WA

The versions of the NGL and NGR that apply in Western Australia differ from the NGL and NGR as they apply in other participating jurisdictions, and the Commission's rule-making powers are also different.[202]

199 Section 291 of the NGL.

200 Section 23 of the NGL.

201 Section 72A(5) of the NGL.

202 Under the *National Gas Access (WA) Act 2009*, a modified version of the NGL was adopted (WA Gas Law). The subject matters for the AEMC's rule-making power in Western Australia are in section 74 of the WA Gas Law.

In this case, as the rule change request relates to the ECGS, it would not apply in Western Australia and the Commission does not need to consider its rule-making powers in that jurisdiction.

A.1.3 Making a decision

After using the assessment framework set out above to consider the rule change request, the Commission may decide:

- not to make a rule
- to make the rule as proposed by the proponents,[203] or
- to make a rule that is different from the proposed rule (a more preferable rule). The Commission may make a more preferable rule (which may be materially different from the proposed rule) if it is satisfied that, having regard to the issues raised in the rule change request, the more preferable rule is likely to better contribute to the achievement of the NGO.[204]

A.2 The key assessment criteria for this rule change request

A.2.1 Our regulatory impact analysis methodology

Considering the NGO and the issues raised in the rule change request, the Commission proposes to assess this rule change request with particular reference to the set of criteria outlined below.

The Commission's regulatory impact analysis may use qualitative and/or quantitative methodologies. The depth of the analysis will be commensurate with the potential impacts of the proposed rule change. We may refine these methodologies as this rule change progresses, including in response to stakeholder submissions. For the purposes of the consultation paper, high level preliminary information is included in Chapter 3 to assist stakeholders consider the issues and the relative merits of the options.

Consistent with good regulatory practice, our assessment also includes considering other viable policy options — including not making the proposed rule (a business-as-usual scenario) and making a more preferable rule (see below) — using the same set of assessment criteria and impact analysis methodology where feasible.

A.2.2 Proposed key assessment criteria and rationale

The proposed key assessment criteria, rationale for each, and questions that the Commission will consider when assessing are set out below.

- **Safety, security and reliability** are central to the rule change request, as the intent is to "maintain or improve the reliability and security of supply of gas".[205] Similarly, noting the need to consider an enduring solution to replace the Dandenong LNG interim arrangements, the extent to which the proposed solution can support system security is another relevant area of assessment. Considerations under this criterion include:
  - Will implementing the proposed solution reduce the risk of supply interruptions?
  - Would the proposed solution promote efficient investment in, and operation and use of covered gas services?
- **Principles of market efficiency** will be considered, as providing guidance on an appropriate balance between market operations and intervention from a SoLR mechanism. As the

203 The key features of the proposal are described in Chapter 4 of the rule change request.
204 Section 296 of the NGL.
205 Rule change request cover letter.

proposed mechanism is intended to be used as a last resort, the AEMC will consider its impacts on market operations and investment.

- Would the proposed solution promote efficient investment in, and operation and use of covered gas services?
- How would the proposed SoLR mechanism impact costs for gas consumers?
- Would a SoLR mechanism allow for efficient trade-off between reliability and cost of supply disruption?
- Would the introduction of a SoLR mechanism increase information transparency and reduce information asymmetry?
- Would the proposed solution enable an appropriate allocation of risk?

- **Implementation considerations**, including the administrative costs to market bodies and participants required by the solutions proposed in the rule change request, will be key to our assessment of the costs and benefits.
  - Do the proposed solutions balance the cost and complexity of implementation and ongoing regulatory and administrative costs to all market participants, consumers and market bodies?
  - Would implementation of the proposed solution be likely to achieve the desired outcomes across the ECGS, taking into account specific jurisdictional conditions and outside facilitated markets' transactions?
- As the rule change request proposes to expand a new regulatory framework, the Commission will also have regard to **principles of good regulatory practice**, including considering whether the proposal would:
  - promote predictability and stability in the regulatory framework for stakeholders
  - promote simplicity and transparency for all stakeholders
  - interact constructively with other reforms underway
  - promote a principles-based approach over prescription, except where prescription is necessary.

The Commission's guide on *How the national energy objectives shape our decisions* sets out further information on how rule change requests are assessed against the national energy objectives, including the full list of potential assessment criteria.[206] The other potential assessment criteria, being emissions reduction, innovation and flexibility, and outcomes for consumers, were not proposed as they are less directly relevant than the assessment criteria above. However, not identifying these as key criteria does not limit the Commission's ability to consider these if they are relevant to specific aspects of the proposal.

Question 36: Assessment framework

1. Do you agree with the proposed assessment criteria?
2. Are there additional criteria that the Commission should consider or criteria included here that are not relevant?

206 AEMC, How the national energy objectives shape our decisions, March 2025, p 2.

B Summary of previous consultation

In conjunction with considering the rule change request, we have also reviewed and considered the comments made by stakeholders in response to the initial consultation carried out by Commonwealth and jurisdictional officials. This has been valuable input into this consultation paper.

On 12 August 2022, Energy Ministers directed Officials to progress a package of reforms to support a more secure, resilient and flexible east coast gas market.[207] This included introducing a fit-for-purpose reliability and supply adequacy framework.[208]

- Stage 1 of the framework, which came into effect on 4 May 2023, expanded the Australian Energy Market Operator's (AEMO) powers under the National Gas Law to better manage gas supply adequacy and reliability risks ahead of winter 2023 and beyond.
- Stage 2 of the reforms builds on stage 1 and comprises four rule change requests. The stage 2 reforms focus on the stage 1 elements of the framework to help guide how AEMO uses its new powers. It also seeks to facilitate timely market-led responses to future threats by providing market participants with greater predictability and transparency.

Officials undertook six weeks of public consultation (ending 13 July 2023), which included publicly releasing a consultation paper to seek stakeholder feedback on the need for, and high-level design options of, potential measures for inclusion as part of stage 2 of the framework.

Eighteen of the 22 stakeholders who made submissions to the officials' consultation on stage 2 of the RSA framework responded to questions about SoLR. Responses were mixed and some raised concerns. In summary, the feedback was:[209]

- A few stakeholders found the case for the additional value a SoLR mechanism could provide unclear. They considered that it would reduce the gas otherwise available to the market to contract.[210] They considered that a formal mechanism for SoLR is not necessary, as participants have strong incentives to ensure they can cover their peak demand.[211]
- A couple of stakeholders questioned where AEMO would source the gas from (to use for a SoLR mechanism) without crowding out the market.[212] They considered that AEMO would effectively be competing with market participants and this would create inefficient market outcomes.[213]
- Some stakeholders noted that a SoLR mechanism would reduce incentives for market-led procurement of infrastructure and transportation capacity. They were also concerned that a SoLR mechanism could create a risk that market participants would change their behaviour to compete with a non-commercial actor in the market (ie. AEMO).[214]
- Some stakeholders, although not supportive of the SoLR mechanism, made alternative suggestions:
  - RERT-style tender panel limited to demand response providers[215]

207 See the summary of measures here.
208 More information available here.
209 See submissions here
210 Brickworks submission, p 14.
211 Origin submission, p 6.
212 AEC submission, p 17; Origin submission, p 6.
213 Origin submission, p 6; Shell submission, p 6.
214 APA submission, p 30; Australia Pacific LNG submission, pp 14-15.
215 EnergyAustralia submission, p 5.

  - well-designed administered demand response mechanism[216]
  - formalised system of curtailment (that occurred in the 2022 energy crisis).[217]
- Some stakeholders supported more guardrails on the existing trading function and more transparency about how AEMO's existing powers can be used.[218]
- A stakeholder considered that there is an opportunity to streamline detailed rule provisions and guidelines for AEMO's various functions (in the ECGS and facilitated markets) to provide participants more clarity about how they interact.[219] Another stakeholder considered that the ideal solution to a lack of alignment would be changes to the NGR to align governance arrangements for market price settings reviews for the STTMs and the DWGM.[220]

216 Alinta submission, p 16.
217 Snowy Hydro submission, p 14.
218 ACCC submission, pp 14-15; AER submission, p 2; AFMA submission, p 6.
219 EnergyAustralia submission, p 5.
220 Alinta submission, p 1.

C Approach to the preliminary impact analysis

We have prepared this consultation paper with regard to preliminary impact analysis, which is noted as relevant throughout the body of the paper. The impact analysis involved:

1. Identifying potential benefits and costs for each policy option, informed by related prior rule changes and discussion (see Table C.1).
2. Developing a high level understanding of how the base case (option 1A) will change over time.
3. Assessing the likely qualitative magnitude of each type of benefit and cost on an incremental basis—that is, considering the difference between a particular benefit or cost in a policy option compared to the base case.
4. Making a preliminary comparison of the benefits and costs of each policy option.

This high-level, preliminary analysis does not attempt to provide a detailed analysis of flow-on impacts or distributional impacts. Further work on the potential impacts of the policy options will be included in the Commission's draft and final determinations, and will take into account relevant stakeholder comments.

Table C.1: Information used for the preliminary impact analysis

Information sources		How this information source was used in the preliminary impact analysis
Historical analyses and reports	DWGM interim LNG storage measures rule change 2022	The impact analysis carried out in this rule change serves as an example of a potential SoLR supply-side mechanism whose key features could be applied to the ECGS.
	Past RERT rule changes (focusing on the benefit and cost components), and historical RERT cost reports	Information about the RERT and its potential impact has been used to inform an initial analysis of a potential SoLR administered demand response mechanism, while noting the differences between electricity and gas markets.
Consultations and information sharing	AEMO discussions	AEMO's perspectives have helped us understand: • how and to what extent the potential SoLR mechanism can derive benefits • societal costs of historical incidents • operational costs.
	DCCEEW discussions	This enabled a deeper understanding of the policy intent of the rule change request.
	Related AEMC gas rule changes	This ensured that all stage 2 RSA rule change reforms applied a consistent approach to the impact analysis and that the relationship between SoLR and these other reforms was considered.

The table below outlines the overarching assumptions applied to this preliminary impact analysis.

Table C.2: Assumptions for preliminary impact analysis

Assumption	Assessment
The already-established $35 million trading fund will continue in the absence of a SoLR mechanism.	This assumption will form part of the base case. It will impact the incremental benefit and cost for the supply side mechanism, i.e. Options 2 and 3.
The current Dandenong LNG storage arrangement is assumed to be extended beyond 2025	Our preliminary analysis takes this position indicated in the *Extension of the DWGM Dandenong LNG interim arrangements* draft determination. When the DLNG arrangement expires, it is assumed that any supply-side mechanism that may be established through this rule change process will be relevant.
The regulatory package, as developed by Ministers under the Extension of AEMO's powers project, may be considered at a later stage but lies outside the scope of this preliminary impact analysis.	As in the ECMC Communique 15 August 2025, a regulatory package is being developed under the Extension of AEMO's powers project. The draft package will be developed for Ministers' consideration no later than December 2025, followed by consultation and final consideration no later than mid-February 2026. This package, currently being developed, is outside the scope of this preliminary impact analysis.
We will consider the impact of other stage 2 RSA rule changes on SoLR at a later stage, but not in this preliminary assessment.	Other stage 2 RSA gas rule changes (Reliability standard, PASA and Notice of closure) also aim to mitigate the risk of a gas shortfall in the ECGS. For this high-level assessment, we have not considered the impact of these rules on a SoLR mechanism. Their impacts can be included later in this rule change process.
AEMO and ACCC supply-demand outlooks suggest that there is a probability of gas shortfalls in the late 2020s.	Consistent with AEMO's 2025 GSOO scenario analysis, there is an assumption of a future gas shortfall. The proposed SoLR mechanism would provide both an insurance value, reflecting its role as a safeguard against potential supply-demand gaps, and an economic value, represented by the net benefit if it is activated during an actual shortfall.

D Potential implications for the DWGM Dandenong LNG storage facility interim arrangements

This appendix draws on the discussions in various chapters of this consultation paper to bring together and outline the potential implications for the DWGM Dandenong LNG storage facility interim arrangements (current DLNG arrangements) if a SoLR mechanism is implemented. Its purpose is to support stakeholders considering this particular issue. Questions on issues relating to the current DLNG arrangements, and the DWGM more generally, are included in the relevant chapters.

In chapter 2on the problem definition, the Commission identified that providing an enduring solution for the DWGM Dandenong LNG storage facility could be addressed as a consequential change under this rule change request. It also notes that key features of the proposed SoLR mechanism were based on the current DLNG arrangements.

Under the scenario where the DLNG arrangements expire and a SoLR mechanism is in place for the ECGS, one important potential implication for the DLNG arrangements is that AEMO would not be required to fill the storage facility with gas, but rather use its discretion depending on the nature and extent of the threat identified to DWGM system security or ECGS reliability and supply adequacy.

Table D.1below compares the current DLNG arrangements with a potential future for DLNG where its specific interim arrangements have expired and (as a simplifying assumption) the proposed SoLR mechanism for the ECGS is in place. As discussed in this consultation paper, there are other possible outcomes where some of the current DLNG arrangements could be maintained on an ongoing basis and co-exist with a SoLR mechanism. Further discussions and questions are included in the chapters as referenced in the table.

Table D.1: Comparison of current and potential future DLNG arrangements

Consultation paper chapter	Current DLNG arrangements	Potential future DLNG arrangements with a SoLR mechanism
2: Defining the problem	• Interim arrangements to 2025 have been made for DLNG. • In the Extension of the DWGM Dandenong LNG interim arrangements draft determination, the Commission's draft rule would extend these arrangements by four years. (NGR Part 19, Division 3, Subdivision 2).	• The SoLR mechanism is proposed to be an enduring solution for the ECGS, It would apply to all storage facilities in the ECGS, including DLNG
3: Policy options for a proposed SoLR mechanism	• Under the interim arrangements AEMO must keep the LNG storage facility filled by buying any uncontracted storage	• Under policy options 2A, 2 B, 3A and 3B, the DLNG arrangements would likely be changed compared to the status quo option (policy option 1A). These policy options introduce

Consultation paper chapter	Current DLNG arrangements	Potential future DLNG arrangements with a SoLR mechanism
	capacity as at 1 March each year, purchase gas for storage as LNG, and inject the stored gas where there is a threat to system security (rules 282, 343 of the NGR). • The ECGS trading function in the NGL and the associated trading fund in the NGR have not been applied to DLNG.	a supply-side SoLR mechanism that could replace the DLNG arrangements. • However, no changes to the DLNG arrangements would be necessary under policy option 1B as adding an administered demand response capability for the ECGS would not impact current interim DLNG arrangements.
4: Key design features of a SoLR mechanism	• The DLNG arrangements are intended as interim arrangements to address short term threats to system security in the DWGM identified by AEMO for the winter periods over 2023-25. • A prescriptive approach in the NGR rather than a principles-based approach is used for the DLNG arrangements. • AEMO would pay the market price and storage costs (to be recovered from DWGM market participants). • The geographic scope of the DLNG arrangements is limited to the DWGM.	• The proposed SoLR mechanism is intended to address threats to reliability and supply adequacy across the ECGS, including in the DWGM. • A principles-based approach is proposed under the SoLR mechanism. • Under the proposed SoLR mechanism, the amount AEMO pays would not exceed the average value of gas customer reliability for the relevant location. (An alternative solution may be required if this value is not developed.) • The geographic scope of the SoLR mechanism could include the whole of the ECGS, including the DWGM and DLNG.
5: Preconditions and triggers	• A prescriptive approach is taken where AEMO must have an LNG storage agreement in place under which AEMO must contract for the use of any uncontracted LNG storage capacity as at the end of 1 March each year (rule 282 of the NGR).	• Under the proposed SoLR mechanism, AEMO could use a risk and threat signalling function and any other operational preconditions to guide its discretion on whether to, and the extent to which, it triggers the SoLR mechanism. This could mean that AEMO does not fill the Dandenong LNG storage facility. • If a decision is made to trigger the SoLR mechanism, AEMO would

Consultation paper chapter	Current DLNG arrangements	Potential future DLNG arrangements with a SoLR mechanism
		consult with affected jurisdictions and agree any inter-jurisdictional cost sharing arrangements (as proposed by the rule change request).
6: Operating a SoLR mechanism	• AEMO applies the operational sequence set out in Part 19 of the NGR in performing its buyer and supplier of last resort functions for the DLNG arrangements. • AEMO must have LNG storage agreements in place at all times during the relevant years (rule 282 of the NGR) • AEMO must relinquish any capacity if requested by the LNG storage provider to satisfy a request for services to be provided to a market participant (rule 286 of the NGR). • AEMO must bid its injections of gas into the DWGM at the market price cap (rule 285 of the NGR).	• The operational sequence under the proposed SoLR mechanism would apply across the ECGS. • AEMO would have discretion to enter into or vary reserve contracts in response to a threat. • Relinquishment of uncontracted capacity could potentially be discretionary rather than mandatory. • Any AEMO bids to inject gas could continue current arrangements relating to the market price cap.
7: Administered demand response	• The DLNG arrangements are supplier of last resort arrangements.	• Introducing an administered demand response mechanism would not impact the use of DLNG as a supply of last resort.
8: Cost recovery and proceeds distribution	• The DLNG cost recovery and proceeds distribution process is set out in rule 286B of the NGR. • Costs (proceeds) are recovered (distributed) monthly.	• The cost recovery and distribution proceeds process proposed for the SoLR mechanism may be similar to the cost recovery and proceeds distribution process in the current DLNG arrangements
9: Providing transparency and accountability	• There are no specific market notifications given the prescriptive and mandatory role played by AEMO under current DLNG	• A market notification process aligned with the tiered risk and threat signalling framework could apply[a] •

Consultation paper chapter	Current DLNG arrangements	Potential future DLNG arrangements with a SoLR mechanism
	arrangements. • AEMO is required to report every 6 months on the DLNG arrangements (rule 286C of the NGR).	• The SoLR mechanism reporting requirements could include post-intervention reports and biannual reports, and would capture use of DLNG. There may be more reporting compared to the current DLNG arrangements.
10: Implementing a SoLR mechanism	n/a	• If a SoLR mechanism is established in the NGR, its implementation may require changes to current DLNG arrangements including AEMO's procedures. • Transitional arrangements would be needed to maintain interim use of DLNG until a SoLR mechanism is in place.

Source: AEMC
Note: a. ECGS Reliability standard & associated settings rule change, directions paper, 28 August 2025, pp 11-14.

Abbreviations and defined terms

AEMC	Australian Energy Market Commission
ACCC	Australian Competition & Consumer Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
APC	Administered price cap
Commission	See AEMC
CPT	Cumulative price threshold
DAA	Day-ahead auction
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DWGM	Declared wholesale gas market
ECGS	East coast gas system
ESOO	Electricity statement of opportunities
GFBP	Gas forecasting best practice guidelines
GRC	Gas reliability committee
GSAR	Gas supply adequacy and reliability
GSH	Gas Supply Hub
GSOO	Gas statement of opportunities
LOR	Lack of reserve framework
LoLP	Loss of load probability
MPC	Market price cap
NEL	National Electricity Law
NEM	National electricity market
NEO	National Electricity Objective
NER	National Electricity Rules
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
NOC	Notice of closure
PASA	Projected assessment of system adequacy
PoE	Probability of exceedance
Proponents	The proponents of this rule change request
QGP	Queensland Gas Pipeline
RSA Framework	Reliability and supply adequacy framework
SoLR	Supplier of last resort
STTM	Short term trading market
USG	Unserved gas
VGCR	Value of gas customer reliability
VGPR	Victorian gas planning report
WTP	Willingness to pay