AEMC
Australian Energy Market Commission

Australian Energy Market Commission

DETERMINATION

Draft rule determination

National Electricity Amendment (Calculating the cumulative price) Rule

Delta Electricity
Snowy Hydro

29 January 2026

Enquiries

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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 live and work. The AEMC office is located on the land of the Gadigal people of the Eora nation. We pay respect to all Elders past and present, and to the enduring connection of Aboriginal and Torres Strait Islander peoples to Country.

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Summary

1 The Commission has decided to make a more preferable draft rule (the 'draft rule') to amend the calculation of the cumulative price during periods of peak market stress in response to two rule change requests submitted by Delta Electricity (Delta) and Snowy Hydro (Snowy), respectively.

2 In response to Delta's rule change request, the draft rule would amend the methodology in the National Electricity Rules (NER) for calculating the cumulative price when one or more regions have reached the cumulative price threshold (CPT).[1] The draft rule, consistent with the initial rule change request from Delta,[2] would require Australian Energy Market Operator (AEMO) to use received prices, instead of dispatch prices, to calculate when the CPT is reached in a region.

3 The Commission considers this aspect of the draft rule would improve efficiency in market signals, which should improve certainty and investment signals for peaking generation.

4 In response to Snowy's rule change request, the draft rule would amend the NER to adjust the methodology for the calculation of the cumulative price when AEMO has suspended the market due to market stress. The draft rule retains the calculation methodology proposed by Snowy,[3] combined with the suggestion from Shell Energy, to differentiate between market suspensions caused by market stress and technological failures with AEMO's systems.[4] The key aspects are:

- Differentiate between a market suspension caused by technological failures with AEMO's system and a market suspension caused by other conditions, such as market stress.
- When the market suspension has been caused by a technological failure with AEMO's systems, retain the current arrangement (i.e. retain the use of the market suspension pricing schedule prices as an input into the cumulative price calculation).
- When the market suspension has been caused by other conditions, such as market stress, exclude the trading intervals from the cumulative price calculation (i.e. Snowy's methodology).

5 Our draft rule seeks to generate more efficient market outcomes. In saying this, the Commission is mindful that the magnitude of the benefit is difficult to determine, given the rarity of these events. Additionally, this will need to be assessed against the costs incurred to change AEMO's systems. We are seeking feedback on the magnitude of both costs and benefits in submissions to this draft determination.

6 The Commission has formally consolidated both rule change requests as it is desirable to treat them as one request for the purposes of Part 7 of the National Electricity Law (NEL). The new project name is 'Calculating the cumulative price' under project code ERC0356.

7 We consider that the rule should commence 12 months after publication of the final rule (if made), to allow AEMO sufficient time to update relevant processes.

8 We are seeking feedback on our draft determination and rule by **12 March 2026**.

The draft rule would address issues with the cumulative price calculation methodology to improve outcomes for participants and consumers

9 The issue raised by Delta in its request, is that when a region is not under administered prices but is exporting electricity to a region that is under administered prices, the settled price that is

1 Delta Electricity, Rule change request, p. 1.

2 Delta Electricity, Rule change request, p. 4

3 Snowy Hydro, Rule change request, p. 3

4 Submission to the consultation paper: Shell, p. 3.

received by the generator is lower than the dispatch price.[5] This creates an outcome where a region's CPT is reached based on higher dispatch prices, while lower prices are received in settlement.

10 Our draft rule addresses this issue, as it will align the CPT calculation with the price received by generators. This provides increased certainty for market participants during dual-region administered pricing period (APP) events.

11 The issue raised by Snowy in its rule change request, is that when there is underlying market stress prior to the market suspension (i.e. an APP preceded the market suspension) and the market suspension is in place for long enough, the input prices from the market suspension pricing schedule (MSPS) into the calculation of the cumulative price can result in the cumulative price being below the CPT. This means that when the market suspension pricing is removed, the cumulative price calculation (informed by market suspension prices) can give the impression that the market stress has subsided.[6] This may occur despite the underlying market stress persisting, because spot prices that reflect this underlying stress have not been a direct input into the calculation of the cumulative price during the market suspension.

12 Our draft rule would better address this issue than Snowy's proposal, because it is more targeted to the situation Snowy's proposal is intended to address, i.e. where an APP precedes a market suspension.[7] This will improve the protection provided by the CPT following a market suspension where there was underlying market stress, leading to better outcomes for consumers.

The Commission has considered its analysis alongside stakeholder feedback in making its decision

13 Our draft rule has been informed by the seven stakeholder submissions we received in response to the consultation paper.

14 In response to Delta's rule change request, stakeholders generally supported the issue and proposed solution. This supported our internal analysis and exploration of Delta's proposed solution. We have provided additional scenario analysis based on historical multi-region APP events to help stakeholders understand the potential impact of this change (i.e. the potential for it to slightly adjust the length of an APP).

15 In response to Snowy's rule change request, stakeholders agreed with the issue identified by Snowy, although several had hesitations about the magnitude of the issue and Snowy's proposed solution. We note that there are inherent challenges in capturing the magnitude of the issue (and consequentially, any proposed benefit of a solution), because market suspensions due to underlying market stress are extremely rare. The situation only presented in June 2022 due to a very unique set of conditions in the NEM, that saw AEMO make the decision to suspend the market. This means we are unable to complete quantitative analysis based on historical data.

16 Both AEMO and Shell raised the point that market suspensions are traditionally used for technological failures with AEMO's IT system.[8] We adopted Shell's point of differentiating the calculation methodology based on the underlying factor that caused the suspension (technological system failures or other causes, such as market stress). Our draft rule limits the changed calculation methodology to situations where there has been no technological system

5 Delta Electricity, Rule change request, p. 4.

6 AEMO, in lifting a market suspension, has clear processes to follow and conditions to meet. More information available here.

7 Snowy Hydro, Rule change request, p. 1.

8 Submissions to the consultation paper: AEMO p. 2, Shell p.3.

failure, so that the CPT calculation methodology will be a function of the situation that caused AEMO to suspend the market suspension.

17 Market suspensions are extremely rare (and are typically used ad-hoc), so any efficiency benefits from the draft rule in relation to Snowy's request could be deemed marginal to costs and challenges associated with implementation. In relation to Delta's request, there have been three dual-region APP events of varying severity - 2009, 2019 and 2022. In relation to Snowy's request, there has only been one relevant event - the 2022 market suspension. The rarity of these situations means the magnitude of the benefit is difficult to determine.

18 We are seeking further information on the cost of implementation from AEMO, to make an assessment about the net benefits. Additionally, we are seeking views from participants on the relative magnitude of the benefits from the proposed change. This information will be an important input into our final determination.

We assessed our draft rule against assessment criteria

19 The Commission has considered the NEO[9] and the issues raised in the rule change requests, and assessed the draft rule against four assessment criteria outlined below. We gathered and analysed stakeholder feedback in relation to these criteria, noting that there were no changes to the criteria based on stakeholder feedback.

20 Our draft rule would contribute to achieving the National Electricity Objectives (NEO) by:

- Achieving better outcomes for consumers in the long term
  - In relation to Delta's request, the draft rule would require AEMO to use received prices, (instead of dispatch prices) to calculate when the CPT is reached in a region. This would ensure that the CPT functions efficiently in times of market stress and does not truncate scarcity pricing prematurely. This could strengthen investment and availability signals for peaking generation in specific periods of market stress.
  - In relation to Snowy's request, the draft rule would require AEMO to exclude market suspension prices from the calculation of the cumulative price, if the market was suspended due to market stress. This could reduce the risk of consumers facing prolonged, high spot prices following a market suspension.
- Promoting safety, security and reliability
  - We consider that under the draft rule, the cumulative price calculation methodology would operate as intended to maintain a reliable and secure power system during specific periods of market stress. We consider that this would ensure the cumulative price methodology arrangements align with the intent of the market price settings to promote efficient investment in the market, that would achieve the reliability standard.
- Promoting principles of market efficiency
  - We consider that under the draft rule, principles of market efficiency would be achieved because the methodology that informs the calculation of the cumulative price would be a function of market conditions. This should align market price settings with conditions, to promote efficient investment and operational outcomes during periods of stress in the National Electricity Market (NEM).
- Promoting principles of good regulatory practice

9 Section 7 of the NEL

- We consider that under the draft rule, principles of good regulatory practice would be achieved because the cumulative price calculation methodology would provide greater predictability and stability to participants during unique situations of market stress, while also providing greater transparency and simplicity in the outcomes it would achieve.

There would be a 12-month implementation period for the rule

21 We have included a commencement date of 23 April 2027 in the draft rule (i.e. 12 months after the publication date for the final rule, if made). We consider that this would allow AEMO sufficient time to make updates to its system to reflect the changes to the cumulative price calculation methodology.

22 We note that in response to Delta's rule change request, AEMO considers it will be a 'small to medium size' implementation project, with most effort expended on pre-production testing of various scenarios.[10] Although more information regarding implementation is needed for the Commission to make a balanced decision in the final determination, the Commission considers that 12 months would be adequate for AEMO to make system changes.

23 We also note that in response to Snowy's rule change request, the draft rule will likely require AEMO to make a significant change to its market suspension pricing systems and processes for calculating the cumulative price after a market suspension (i.e. with additional conditional statements and links to flagged prices that are generated during a market suspension).

24 Based on the information currently available, the Commission considers that a 12-month implementation period would allow for the necessary systems change.

25 In saying this, the Commission is seeking feedback from stakeholders on the implementation costs, predominantly from changes to AEMO systems, and the expected magnitude of benefits of the proposed change from participants.

10 Submission to the consultation paper: AEMO p.2. .

Full list of consultation questions

Question 1: Do stakeholders consider that our proposed change to clause 3.14.2 (to use received prices to calculate when the CPT is reached in a region) would address the issue with the cumulative price methodology raised by Delta? If so, would this change have net benefits or costs ?

Question 2: Do stakeholders consider that:

(a) our proposed clause 3.14.2(c1) to adjust the methodology for the calculation of the cumulative price when AEMO has suspended the market due to market stress, would address the issue raised by Snowy?

(b) the application of the methodology in the draft rule should be limited to situations where 'a technological failure with its (AEMO's) systems is not the sole reason for the market suspension', ie. so it would apply to a situation where there is market stress that precedes the suspension?

(c) If you support this change, do you think it would result in net benefits or costs?

Question 3: Do stakeholders consider that the NER should set out a timeframe for when AEMO must manually adjust the cumulative price calculation as a result of a market suspension and ensure any price capping is correct?

If so, should this be drafted more broadly (ie. 'as soon as practicable') or narrowly ('within X period of time')?

How to make a submission

We encourage you to make a submission

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

How to make a written submission

Due date: Written submissions responding to this draft determination and rule must be lodged with Commission by **12 March 2026**.

How to make a submission: Go to the Commission's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code ERC0356**.**[11]

Tips for making submissions on rule change requests are available on our website.[12]

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, defamatory, vexatious or irrelevant content, or content that is likely to infringe intellectual property rights).[13]

Next steps and opportunities for engagement

There are other opportunities for you to engage with us, such as one-on-one discussions or industry briefing sessions.

You can also request the Commission to hold a public hearing in relation to this draft rule determination.[14]

Due date: Requests for a hearing must be lodged with the Commission by 5 February 2026.

How to request a hearing: Go to the Commission's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code **ERC0356.** Specify in the comment field that you are requesting a hearing rather than making a submission.[15]

For more information, you can contact us

Please contact us with questions or feedback at any stage, noting the project code.

Email:	aemc@aemc.gov.au
Telephone:	(02) 8296 7800

11 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

12 See: https://www.aemc.gov.au/our-work/changing-energy-rules-unique-process/making-rule-change-request/our-work-3

13 Further information about publication of submissions and our privacy policy can be found here: https://www.aemc.gov.au/contact-us/lodge-submission

14 Section 101(1a) of the NEL.

15 If you are not able to lodge a request online, please contact us and we will provide instructions for alternative methods to lodge the request.

Contents

1 The Commission has made a draft determination

The Australian Energy Market Commission (AEMC or Commission) has made a draft determination for a more preferable draft rule (the 'draft rule') in response to a rule change requests submitted by Delta Electricity (Delta) and Snowy Hydro (Snowy).[16]

In response to Delta's request, the draft rule will amend the methodology in the National Electricity Rules (NER) for calculating the cumulative price when one or more regions have reached the cumulative price threshold (CPT).[17] Our draft rule seeks to ensure the CPT functions efficiently in times of market stress and does not truncate scarcity pricing prematurely. This could strengthen investment and availability signals for peaking generation in specific periods of market stress.

In response to Snowy's request,[18] the draft rule proposes an amendment to the NER to adjust the methodology for the calculation of the cumulative price when the Australian Energy Market Operator (AEMO) has suspended the market due to market stress. Our draft rule seeks to generate more efficient market outcomes, as it will align the CPT calculation with the price received by generators. This provides increased certainty for market participants during dual-region APP events.

We are seeking stakeholder feedback on the magnitude of the benefit, given the rarity of these events, and the extent of changes needed to AEMO's systems.

We are seeking feedback on the draft rule by 12 March 2026.

This chapter provides an overview of the draft rule, how it would deliver net benefits, and stakeholder views that shaped our draft determination.

1.1 Our draft rule would change cumulative price calculation during an administered pricing period and following a market suspension

1.1.1 Delta's rule change request

For Delta's rule change request, the Commission's draft rule seeks to improve efficiency in market signals, which should improve investment signals without incurring significant implementation costs. The key aspects of the draft rule, consistent with the initial proposal by Delta,[19] is to use received prices (instead of dispatch prices), to calculate when the CPT is reached in a region.

As administered pricing events may occur more frequently in the future due to increased variable renewable energy (VRE) penetration, there is a need to ensure the market settings operate efficiently, allocate risk appropriately and provide the correct incentives. The draft rule would improve incentives for new and existing peaking generation, as it allows these participants to receive prices up to the CPT. This is because revenue would be more aligned with the risk that peaking generation takes on with how best to manage scarce fuel resources when supply and demand are tight.

AEMO estimates the 'implementation project would be of small-medium size'.[20] It is important we strike a balance between the costs of implementation and the likely benefit. This is because

16 Snowy Hydro, Rule change request, p. 3.

17 Delta Electricity, Rule change request, p. 1.

18 Snowy Hydro, Rule change request, p. 3.

19 Delta Electricity, Rule change request, p. 4

20 Submission to the consultation paper: AEMO p.2.

administered pricing events, historically, have been rare (i.e. multi-region administered pricing periods (APPs) have only occurred twice – 2009 and 2022 - and briefly in 2019).[21]

The draft rule would require systems and process changes, primarily for AEMO, so that received prices are input into the calculation of the cumulative price. We will continue to work with AEMO to understand potential implementation timeframes ahead of the final determination and final rule (if made).

1.1.2 Snowy's rule change request

For Snowy's rule change request, the Commission has made a more preferable draft rule to generate more efficient market outcomes. While the Commission sees the benefit in implementing this change, it notes the rarity of the events will impact the overall magnitude of the benefit over time. As such, the Commission is seeking feedback from stakeholders on the implementation costs, predominantly from changes to AEMO systems, and the expected magnitude of benefits of the proposed change from participants.

The draft rule retains the calculation methodology proposed by Snowy,[22] combined with the suggestion from Shell, to differentiate between market suspensions caused by market stress and those caused by technological failures with AEMO's technological system.[23] The key aspects are:

- Differentiate between a market suspension caused by market stress or technological systems failure.
- When the market suspension has been caused by market stress, exclude any trading interval from the cumulative price calculation for which the price is set by AEMO in accordance with the market suspension pricing schedule (i.e. Snowy's methodology).
- When the market suspension has been caused by a technological systems failure, retain the current arrangement (i.e. retain the use of the market suspension pricing schedule prices as an input into the cumulative price calculation).

The draft rule would result in a tailored solution to the issue raised by Snowy.

In its rule change request, Snowy referred to the June 2022 market event as an example where a market suspension was used when there were underlying conditions of supply and demand stress. If the market suspension was in place long enough, Snowy says that it could have resulted in the cumulative spot prices being below the CPT.[24] Snowy considered that this increased the risk of the immediate resumption of extreme spot prices, undermining the protection that the CPT was designed to provide.[25] This would have been because the market suspension pricing schedule does not reflect real-world scarcity of supply during periods of volatility.[26]

However, market stress may not always be present when AEMO suspends the market. This is because AEMO may use market suspensions to manage situations where it has failures with its technological systems. This point was raised in Shell's submission.[27]

Because of this, we consider that differentiating between a market suspension caused by market stress or technological failures with AEMO's systems will result in a more efficient market

21 Submission to the consultation paper: AEMO p.2.
22 Snowy Hydro, Rule change request, p. 3
23 Submission to the consultation paper: Shell, p 2.
24 Snowy Hydro, Rule change request, p. 3.
25 Snowy Hydro, Rule change request, p. 3.
26 Snowy Hydro, Rule change request, p. 3.
27 Submission to the consultation paper: Shell, p 2.

outcome, as the cumulative price calculation methodology will be based on the situation that caused AEMO to suspend the market.

The draft rule will likely require a significant change to AEMO's market suspension pricing systems and processes for calculating the cumulative price after a market suspension. It will likely require AEMO to rework its current system (i.e. with additional conditional statements and links to flagged prices that are generated during a market suspension).

Market suspensions are extremely rare, so any efficiency benefits from the draft rule could be deemed marginal to costs and challenges associated with implementation. As the magnitude of the benefit is difficult to determine, we will continue to work with AEMO to understand potential implementation timeframes ahead of the final determination and final rule (if made).

1.2 Our draft determination was informed by stakeholder feedback

The draft determination has been informed by stakeholder feedback. In response to our consultation paper, we received seven submissions from a range of stakeholders. All stakeholders provided views on both Delta and Snowy's rule changes.

For Delta's rule change request, general views provided by stakeholders in submissions were as follows:

- Most stakeholders agreed with Delta, that there is an issue with the calculation of cumulative price in the current arrangement, that occurs when one region is exporting to a region in administered pricing.[28]
- Most stakeholders agreed that the issue raised by Delta was of sufficient magnitude to warrant a change to the NER.[29]
  - One stakeholder had some reservations about the magnitude of the issue, noting the inherent complexity of the National Electricity Market's (NEM's) pricing and settlement processes.[30]
- Most stakeholders agreed that the solution proposed by the Delta (i.e. to use received prices, instead of dispatch prices, to calculate when the CPT is reached in a region) was reasonable to address the issue. [31]
  - One stakeholder offered support on the condition that we provide more analysis on the potential impact of the solution.[32]

We acknowledge the general support from stakeholders in response to Delta's rule change request. Therefore, our draft rule is consistent with Delta's proposed solution to require AEMO to use received prices to calculate when the CPT is reached in a region, with dispatch prices to be used to monitor the cumulative price once the CPT is reached. We have provided additional scenario analysis based on historical dual-region APP events to help stakeholders understand the potential impact of this change.

Please see section 2 for more information.

28 Submissions to the consultation paper: AEC, AEMO, CS Energy, Origin, Shell, Snowy Hydro.
29 Submissions to the consultation paper: AEC, AEMO, CS Energy, Origin, Shell, Snowy Hydro.
30 Submission to the consultation paper: Origin p.1.
31 Submissions to the consultation paper: AEC, AEMO, CS Energy, Origin, Shell, Snowy Hydro.
32 Submission to the consultation paper: Origin p.1.

For Snowy's rule change request, general views provided by stakeholders in submissions were as follows:

- Most stakeholders agreed with Snowy, that there is an issue with the calculation of the cumulative price when prices are set by the market suspension pricing schedule.[33]
- Of the limited stakeholders who responded to the question, most were hesitant about the magnitude of the issue.[34]
- Only some stakeholders supported the solution from Snowy (i.e. to suspend the cumulative price calculation when the market suspension pricing schedule is used).
  - Half of stakeholder responses expressed hesitations about any unintended consequences.[35]
  - One stakeholder did not support Snowy's solution and provided an alternative solution.[36]
- One stakeholder raised some additional points - the need for greater clarity in the NER around when AEMO can declare a market suspension and the need for a definition of regional original price.[37]

We acknowledge that while all stakeholders agreed with the issue raised by Snowy, many had hesitations about the magnitude of the issue and the proposed solution. We note that there are inherent challenges in capturing the magnitude of the issue (and consequentially, any proposed benefit of a solution), because market suspensions due to underlying market stress are extremely rare. The situation only occurred in June 2022 due to a very unique set of conditions in the NEM. This means we are unable to complete quantitative analysis based on historical data.

Two stakeholders raised the point that market suspensions are used for technological failures with AEMO's system.[38] Considering this feedback, we adopted Shell's point of differentiating the calculation methodology based on the underlying factor that caused the suspension (market stress or technological systems failure). Our draft rule would not change the current cumulative price calculation methodology in situations where a technological failure with AEMO's system was the sole reason for the market suspension.

We also acknowledge that some stakeholders had concerns about implementation challenges, given the inherent complexity of AEMO's processes. We note that our draft rule will likely require significant changes to AEMO's systems and processes that apply leading into, during, and following a market suspension. This may mean that any efficiency benefits could be deemed marginal to costs and challenges associated with implementation.

Please see section 2 for more information.

33 Submissions to the consultation paper: AEC, AEMO, CS Energy, Delta, Origin, Shell.

34 Submissions to the consultation paper: AEC, AEMO, CS Energy, Delta, Origin, Shell.

35 Submissions to the consultation paper: AEMO, Origin, Shell.

36 Submission to the consultation paper: Shell, p 2.

37 Submission to the consultation paper: Shell, p 2.

38 Submissions to the consultation paper: AEMO, Shell.

1.3 Further information regarding cost will be important in informing our final determination

> **Box 1: In order to make a clearer assessment about the magnitude of net benefits of the draft rule, we need further information about the cost of implementing the draft rule. Historically, the situations where the issues raised by both Delta and Snowy rule changes have occurred, have been rare. We also require further information on the cost of implementing any changes, so we can assess a the potential benefits.**

Both rule change requests were submitted following the market event that occurred in winter 2022, which saw multiple regions exceed their cumulative price thresholds, enter into administered pricing, and AEMO ultimately suspend the market. It was a unique situation that occurred from a combination of high commodity prices, domestic market price caps, planned and unplanned outages of scheduled generating plant, low output from semi-scheduled generation, and high winter demand conditions.[39]

This means that both requests relate to the calculation of the cumulative price in relatively niche situations. Administered pricing events may occur more frequently in the future due to increased VRE penetration. There is a need to ensure the market settings operate efficiently to protect consumers, allocate risk appropriately and provide the correct incentives.

- Delta's rule change request relates to an issue that could occur with the calculation of cumulative prices in one region (not in administered pricing), exporting to a region that is in administered pricing. In addition to the market event in winter 2022, there was one other administered pricing event in the spot market where the issue raised by Delta may have occurred.[40]
- Snowy's rule change request relates to an issue that occurred with the calculation of the cumulative price when a region is in an APP and spot prices are being set by AEMO in accordance with its market suspension pricing schedule. Aside from the market event in winter 2022, there have been no other instances where this situation has occurred. However, there have been three instances where administered pricing has occurred in the NEM.[41]

In order to make a clearer assessment about the magnitude of net benefits, we need further information regarding the cost of implementing the draft rule.

- For Delta's rule change request, it is reasonable to assume that dual-region APP's, although rare, may occur in the future. AEMO submitted that the 'implementation project would be of small-medium size'.[42]
  - We are working with AEMO to obtain further information about the size of this implementation project, to strike a balance between the costs of implementation against the likely benefits.[43]
- For Snowy's rule change request, it is hard to predict whether an APP and market suspension event will reoccur at the same time. AEMO submitted that implementation (of Snowy's proposal) is "potentially challenging... the nature of a market suspension, especially a market

39 AEMO, NEM market suspension and operational challenges in June 2022, report, p. 4.

40 See Appendix B.1 for more information.

41 For more information about the historical prevalence of administered pricing, see section 1.2 of our consultation paper.

42 Submission to the consultation paper: AEMO, p 2.

43 Submission to the consultation paper: AEMO, p 2.

systems failure, cannot be predicted. During a major technological failure, systems may publish meaningless prices, or no prices at all. Upon recovery of systems, these prices will be backfilled with market suspension prices. The CPT detection will automatically respond to the backfilled prices".[44]

- We are seeking further information on the cost of implementation from AEMO, to make an assessment about the net benefits under the draft rule in Snowy's rule change. Additionally, we are seeking views from participants on the relative magnitude of the benefits from the proposed change.

44 Submission to the consultation paper: AEMO, p 2.

2 The draft rule would contribute to the energy objectives

The draft rule would contribute to the National Electricity Objective (NEO) by promoting efficiency in the cumulative price calculation methodology during specific periods of market stress.

In response to Delta's rule change request, the draft rule will adjust the cumulative price calculation methodology to deliver a more efficient market outcome as it will align the CPT calculation with the price received by generators. This provides increased predictability and certainty that participants will be able to receive adequate price signals during dual-region APP events.

We consider that this would contribute to the NEO by promoting the efficient operation and investment in electricity, as the calculation of the cumulative price will more accurately reflect the underlying price volatility in a region.

In response to Snowy's rule change request, the draft rule will adjust the methodology for the calculation of the cumulative price to allow the cumulative price to function more efficiently in times of market stress. It would result in better protection for consumers, because it would extend the APP after a market suspension allowing the CPT and APP to provide a safety valve during periods of extended volatility. We consider that this will contribute to the NEO as it will promote the efficient operation of electricity because consumers will have better protection from price volatility if there is underlying market stress before the market is suspended.

There could be a risk that the cost of implementing the draft rule could be more significant than the potential benefit to consumers. We are working closely with AEMO to understand the magnitude of implementation costs, to make our assessment of the outcome that is in the long-term interests of the consumers.

2.1 The Commission must act in the long-term interests of energy consumers

The Commission can only make a rule if it is satisfied that the rule will or is likely to contribute to the achievement of the relevant energy objectives.[45]

For this draft rule, the relevant energy objective is the NEO:

The NEO is:[46]

> to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system; and
>
> (c) 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.

45 Section 88(1) of the NEL.

46 Section 7 of the NEL.

The targets statement, available on the AEMC website, lists the emissions reduction targets to be considered, as a minimum, in having regard to the NEO.[47]

2.2 We must also take these factors into account

2.2.1 We have considered whether to make a draft rule for the Northern Territory

The NER, as amended from time to time, applies in the Northern Territory, subject to modifications set out in regulations made under the Northern Territory legislation adopting the NEL.[48] Under those regulations, only certain parts of the NER have been adopted in the Northern Territory.

The draft rule does not relate to parts of the NER that apply in the Northern Territory. As such, the Commission has not considered Northern Territory application issues.

See Appendix C for more detail on the legal requirements for our decision.

2.2.2 We have considered whether to make a more preferable rule

The Commission may make a rule that is different, including materially different, to a proposed rule (a more preferable rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule is likely to better contribute to the achievement of the NEO.[49]

The rule change request from Snowy proposed that administered prices set in accordance with AEMO's market suspension pricing schedule be excluded from the calculation of cumulative price in the spot market and frequency control ancillary service (FCAS) market for electricity.[50] The rationale for this proposal is that, if the market suspension is in place long enough and the market suspension pricing schedule is used, it results in the cumulative spot prices being below the CPT when the market suspension pricing is removed. This is despite the market conditions that initially caused the breach of the CPT persisting. Snowy considers that its proposal would ensure increased financial protection against periods of extended volatility, as the APP will not be artificially shortened by the use of scheduled pricing, improving certainty of the protection offered by the CPT and APC.[51]

For the Snowy rule change request, the Commission has made a more preferable draft rule that we consider would be a more targeted solution to the issue raised by Snowy. This is because market suspensions are more typically used for ad-hoc, technological failures with AEMO's IT system.

A situation where AEMO must suspend the market because of a failure with its technological system, is different from a market suspension due to underlying price volatility because of market stress. A market suspension because of a technological failure will not necessarily coincide with market stress, so there would be no need to adjust the methodology for the calculation of the cumulative price because there is no underlying, real-world scarcity of supply.

The more preferable draft rule retains the current arrangement for the calculation of the cumulative price, when the market suspension is solely caused by technological failures with AEMO's systems. The more preferable draft rule differentiates this from other situations, which would include a situation of market stress.

47 Section 32A(5) of the NEL.

48 These regulations under the NT Act are the National Electricity (Northern Territory) (National Uniform Legislation) (Modifications) Regulations 2016.

49 Section 91A of the NEL.

50 Snowy Hydro, Rule change request, p.3.

51 Snowy Hydro, Rule change request, p.3.

Where a market suspension is caused by underlying market stress, the more preferable draft rule applies the methodology for the calculation of the cumulative price that was proposed by Snowy. This means that AEMO would be required to exclude any trading intervals, for which prices are set in accordance with the market suspension pricing schedule, from the calculation of the cumulative price.

We have proposed this more preferable draft rule because it results in a more specific application of the adjusted cumulative price calculation methodology. The Commission considers that this more specific application will send more appropriate price signals, which will better contribute to the NEO by promoting more efficient operation and use of electricity services.

We note that this could result in significant implementation challenges and costs for AEMO. The Commission is interested in making a balanced assessment of the costs against the proposed benefits for the final rule (if made), given the rarity of the specific situation that would need to occur for the benefit to be realised. This is discussed in Section 3.3 and 3.4.

2.3 How we have applied the legal framework to our decision

The Commission must consider how to address issues with the methodology used to calculate the cumulative price in specific situations of market stress, against the legal framework.

We identified the following criteria to assess whether the proposed rule change, no change to the rules (business-as-usual), or other viable, rule-based options are likely to better contribute to achieving the NEO:

- Outcomes for consumers - incentives in section 2.3.1
- Safety, security and reliability - outcomes and services in section 2.3.2
- Principles of market efficiency - concepts of efficiency, incentives and risk allocation in section 2.3.3
- Principles of good regulatory practice - predictability, stability, simplicity and transparency in section 2.3.4

These assessment criteria reflect the key potential impacts – costs and benefits – of both Delta and Snowy's rule change requests, for impacts within the scope of the NEO. Our reasons for choosing these criteria are set out in section 6.2 of the consultation paper. Stakeholders, in their feedback to the consultation paper, did not outline any concerns with the assessment criteria, so there have been no changes to it.

The Commission has evaluated the impacts of the various policy options against the assessment criteria, taking into account stakeholder submissions and our quantitative and qualitative analysis (for more information on this analysis - see Appendix B).

The rest of this section explains why the draft rule best promotes the long-term interest of consumers when compared to other options and assessed against the criteria.

2.3.1 The draft rule would result in price outcomes that better encapsulate market conditions

We consider that the draft rule would result in price outcomes that better encapsulate market conditions than the current arrangement. This is because the draft rule would ensure that the administered pricing arrangements function as intended during times of market volatility, to improve price outcomes for consumers in the long term.

- In response to Delta's rule change request, the draft rule uses received prices, (instead of dispatch prices) to calculate when the CPT is reached in a region. Our draft rule seeks to ensure that the CPT functions efficiently in times of market stress and does not truncate scarcity pricing prematurely. This could strengthen investment and availability signals for peaking generation in specific periods of market stress.

- In response to Snowy's rule change request, the draft rule excludes the market suspension pricing schedule from the calculation of the cumulative price during a market stress-induced market suspension, to ensure that consumers are better protected from prolonged high spot prices. Our draft rule would likely result in an extended APP compared to the current arrangements, leading to the opportunity for more competitive electricity prices for consumers following a market suspension if there is underlying volatility that preceded the suspension. Importantly, this benefit would only be realised if the cost of implementing the draft rule is not significant.
  - The draft rule would connect the cumulative price calculation methodology to the condition that prompted AEMO to suspend the market (i.e. either a technological system failure or another issue, such as market stress). The draft rule is a more targeted change to capture underlying market volatility and does not change the status quo methodology AEMO uses to calculate the cumulative price when it suspends the market due to a technological failure with its systems. Submissions from AEMO and Shell raised concerns about the practicalities of implementing Snowy's original proposal during periods of technology failures. [52] We have considered this feedback, and this informed the differentiation between a market suspension caused solely by a technological system failure and a market suspension where there is underlying market stress.
  - The Commission is working with AEMO to make a balanced assessment about the implementation costs associated with the draft rule, to ensure the final rule (if made) has net consumer benefits. This is because the situation where the benefit of the draft rule would be realised, is very rare.

2.3.2 The draft rule would promote safety, security and reliability

We consider that under the draft rule, the cumulative price calculation methodology would operate as intended to maintain a reliable and secure power system during specific periods of market stress. We consider that the draft rule would ensure the cumulative price methodology arrangements align with the intent of the market price settings to promote efficient investment in the market that would achieve the reliability standard.

- In response to Delta's rule change request, the draft rule would improve signals for peaking generation to offer competitively priced generation when supply and demand is tightening with multiple regions approaching their CPT and entering into APPs. As peaking generation is important to provide system security and reliability, the draft rule would promote system security and reliability in a specific situation of market stress, to ensure the CPT is functioning as intended. The change would complement other market settings to achieve a safe, secure and reliable electricity system. All stakeholders were supportive of the issue raised by Delta and most supported the proposed solution.[53] One stakeholder expressed a preference for more analysis to understand the impact of Delta's proposed solution.[54]
- In response to Snowy's rule change request, a likely outcome of the draft rule would be an extended APP following a market suspension. The draft rule would also provide a more reliable market outcome when a suspension is lifted because it is a more tailored approach

52 Submission to the consultation paper: AEMO p.3, Shell p.3.

53 Submission to the consultation paper: AEC, AEMO, CS Energy, Shell, Snowy.

54 Submission to the consultation paper: Origin.

that only adjusts the cumulative price calculation methodology for market suspensions where there is underlying market stress. The draft rule was informed by feedback from two stakeholders, who outlined the situation where market suspensions can occur because of an IT system failure.[55] The Commission considers that the draft rule achieves the objective of the Snowy proposal.[56] We acknowledge that the draft rule benefit does need to be balanced with the complexity of implementation, given the benefit to safety, security and reliability would only be realised in a very specific situation (i.e. market stress having caused an APP, then a market suspension being declared by AEMO).

2.3.3 The draft rule would promote principles of market efficiency

We consider that under the draft rule, principles of market efficiency will be achieved because the methodology that informs the calculation of the cumulative price will be a function of market price signals, to promote efficient investment and operational outcomes, during periods of stress in the NEM.

In response to Delta's rule change request:

- Concepts of efficiency: By using settled prices as an input into the cumulative price calculation methodology, the draft rule would result in the cumulative price functioning more efficiently. This is because the revenue potential available to peaking generation when multiple regions are reaching their CPT and entering into APPs, would align with the risk that peaking generation would take on. This could encourage participants to offer generation during periods of market stress and invest in generation capable of providing supply during periods of peaking demand.
- Incentives: The cumulative price calculation methodology in the draft rule would send better incentives to the market, because new and existing peaking generation participants would be able to receive more prices up to the CPT when they are exporting to a region that has entered into an APP.
- Risk allocation: The revenue available to new and existing peaking generation under the draft rule would better align the risk that these participants take on with how best to manage scarce fuel resources when supply and demand is tight. The draft rule would encourage these participants to offer generation, because their revenue potential would not be unnecessarily capped as a result of the region they are exporting to, being in administered pricing. This means that dispatch decision-making would be better aligned with financial outcomes. Referring to the 2022 market event, Delta says this was about 20 dispatch intervals at the market price cap (MPC).[57]

In response to Snowy's rule change request:

- Concepts of efficiency: By excluding prices set by the market suspension pricing schedule in the calculation of the cumulative price during a market stress-induced market suspension, the draft rule would result in a more efficient market outcome. This is because the cumulative price calculation methodology would be linked to the underlying situation that caused the market suspension. The more preferable draft rule was informed by feedback from stakeholders, who mostly agreed with the issue raised by Snowy and provided input on factors that are important to consider in making any rule to address the issue. The Commission is interested in making a balanced assessment of the efficiency benefits under the draft rule

55 Submissions to the consultation paper: AEMO, Shell.

56 Snowy Hydro, Rule change request.

57 Delta Electricity, Rule change request, p. 4.

because of the potential implementation complexity, noting that AEMO's submission raised this in relation to Snowy's original proposal.[58]

- Incentives: The draft rule would apply during a very specific situation of market stress, to ensure that the market settings function to send the correct signals to participants. This would reduce price volatility whilst ensuring the NEM operates to alleviate underlying market stress without putting unreasonable risk on consumers following a market suspension.
- Risk allocation: The draft rule would allow the market settings to function more efficiently in times of stress, because it excludes the input of prices set by the market suspension pricing schedule into the cumulative price calculation. This is consistent with the objective of Snowy's proposal, to adjust the methodology because scheduled pricing does not reflect the scarcity of supply during periods of volatility. Under the current arrangements, the premature ending of an APP following a market suspension is a very specific situation. Although this situation is extremely rare, if it did occur, it could mean that consumers and market participants who are not appropriately hedged may take on the risk of high spot prices.

2.3.4 The draft rule would promote principles of good regulatory practice

We consider that under the draft rule, principles of good regulatory practice would be achieved because the cumulative price calculation methodology would provide greater predictability and stability to participants during unique situations of market stress, while also providing greater transparency and simplicity.

In response to Delta's rule change request, the draft rule would introduce more efficient market signals to new and existing peaking generators during specific periods of market stress, as it will provide more predictability that generators will be able to receive adequate price signals to encourage the right level of investment. This would provide greater benefit than under the current arrangement, where the calculation of cumulative price during administered pricing is inconsistent with the intention of the market setting. Stakeholders supported the issue raised by Delta, with most stakeholders recognising that Delta's proposal would be a reasonable solution to provide greater predictability and stability in the way the cumulative price is calculated when multiple regions are reaching their and exceeding their CPT.[59]

In response to Snowy's rule change request, the likely outcome of the draft rule would be that the CPT would achieve its objective of providing a safety valve during periods of extended volatility (ie. where an APP precedes a market suspension) and providing more protection for consumers from price volatility. As this benefit would be realised in a very specific situation of market stress, so the Commission is interested in making a balanced assessment of this benefit against the significance of implementing the draft rule. This consideration aligns with the sentiment in stakeholder submissions, that although the methodology proposed by Snowy (that the Commission has partly adopted in the draft rule) could lead to a better regulatory outcome than the current arrangements, its net benefit needs to be contemplated.[60]

58 Submission to the consultation paper: AEMO, p 2.

59 Submission to the consultation paper: AEC, AEMO, CS Energy, Origin, Shell, Snowy.

60 Submission to the consultation paper: AEC, AEMO, CS Energy Delta, Origin, Shell.

3 How our draft rule would operate

The Commission has made a draft determination for the draft rule.

This chapter outlines how the draft rule would operate:

- Our draft rule in response to Delta's rule change request would provide a new calculation of cumulative price during administered pricing periods - discussed in section 3.1
- Our draft rule in response to Snowy's rule change request would provide a new calculation of cumulative price during periods following market suspension - discussed in section 3.2
- Amending the cumulative price calculation methodology would deliver benefits - discussed in section 3.3
- Our final determination will be informed by further information regarding implementation - discussed in section 3.4

3.1 Our draft rule would provide a new calculation of cumulative price during periods during administered pricing periods

Box 2: Our draft rule would amend the methodology in the NER for calculating the cumulative price when one or more regions have reached the CPT

It would see received prices, instead of dispatch prices, used to calculate when the CPT is reached in a region. The draft rule is consistent with the proposal in Delta's rule change request. We consider that the draft rule would promote the efficient operation and investment in electricity during specific periods of market stress.

3.1.1 The draft rule would address an issue with the current arrangements

Currently, when a region is not under administered prices but is exporting electricity to a region that is under administered prices, the settled price that is received by the generator is lower than the dispatch price as a result of capping the dispatch price at the administered price cap and scaling it down as per clause 3.14.2(e)(2) of the NER:[61]

> **3.14.2 Application of Administered Price Cap**
>
> (e)If during an administered price period the spot price:
>
> (1)**[Deleted]**
>
> (2)at any regional reference node is set to the administered price cap under clause 3.14.2(d1)(1), then spot prices at all other regional reference nodes connected by a regulated interconnector or regulated interconnectors that have an energy flow towards that regional reference node must not exceed the administered price cap divided by the average loss factor that applies for energy flow in that direction for that trading interval and determined in accordance with clause 3.14.2(e)(5).
>
> (3)**[Deleted]**
>
> (4)at any regional reference node is set to the administered floor price under clause 3.14.2(d1)(2), then spot prices at all other regional reference nodes connected by a

61 Delta Electricity, Rule change request, p. 4.

regulated interconnector or regulated interconnectors that have an energy flow away from that regional reference node must be equal to or greater than the administered floor price multiplied by the average loss factor that applies for energy flow in that direction for that trading interval and determined in accordance with clause 3.14.2(e)(5).

(5)AEMO must determine the average loss factors applicable to clause 3.14.2(e)(2) and 3.14.2(e)(4) by reference to the inter-regional loss factor equations relating to the relevant regulated interconnector.

This creates an outcome where a region's CPT is reached based on higher dispatch prices, while lower prices are received in settlement.[62]

Importantly, the purpose of clause 3.14.2(e)(2) of the NER is to manage negative settlement residues on regulated interconnectors. We do not consider this provision needs to be changed. AEMO noted that its forthcoming Guide to Administered Pricing (Victoria-South Australia-New South Wales pricing loop) appears to be compatible with the logic in Delta's rule change request.[63]

3.1.2 Under the draft rule, received prices would be used to calculate when the CPT is reached in a region exporting to another region in administered pricing

Our draft rule would require AEMO to use received prices, instead of dispatch prices, to calculate when the CPT is reached in a region that is exporting to a region in administered pricing. This would mean that when a generator in a region is not under administered prices, but is exporting electricity to a region that is under administered prices, the cumulative price in its region will be calculated based on the prices it receives. The effect of this would be to remove the inconsistency in the current arrangements.

Delta's proposal was to insert a new clause to clarify that the price used for the calculation of the cumulative price, where an APP has not been declared in a region exporting electricity to another in administered pricing, should be the received price.[64]

All submissions from stakeholders supported this change for a number of reasons, including the proposal would:

- improve the integrity of a CPT as it will enhance predictability during times of market volatility[65]
- provide more clarity in the rules[66]
- provide a more accurate reflection of factors contributing to high prices (including when they have diminished)[67]

One stakeholder conditionally agreed with Delta's proposal and suggested that it is important to understand how the proposed change would perform across a wide range of realistic and extreme market scenarios.[68] In response, we have considered the draft rule in the context of two historical dual region APP scenarios - 2022 and 2019. Our analysis shows that the draft rule would see the

62 Delta Electricity, Rule change request, p. 4.
63 Submission to the consultation paper: AEMO p.2.
64 Delta Electricity, Rule change request, p. 5.
65 Submission to the consultation paper: AEC p. 1.
66 Submission to the consultation paper: Shell p.1.
67 Submission to the consultation paper: CS Energy p. 3.
68 Submission to the consultation paper: Origin p.1.

CPT reached slightly later than under the current arrangements. See Appendix B for more information.

Given our analysis against the assessment criteria and feedback from stakeholders, we consider that our draft rule gives effect to Delta's proposal. Our draft rule proposes to replace the deleted clause 3.14.2(e)(3) with a new clause:

> **3.14.2 Application of Administered Price Cap**
>
> "(e) If during an administered price period the spot price:
>
> .....
>
> (3)is subject to the application of subparagraph (2) in a *region* where AEMO has not declared an *administered price period*, AEMO must calculate the sum of the *spot prices* for that *region* under clause 3.14.2(c)(1) as if clause 3.14.2(c)(1) did apply.

Question 1: Do stakeholders consider that our proposed change to clause 3.14.2 (to use received prices to calculate when the CPT is reached in a region) would address the issue with the cumulative price methodology raised by Delta? If so, would this change have net benefits or costs ?

3.1.3 The draft rule does not require a definition of regional original price in the NER

One stakeholder noted that to provide more clarity to Delta's proposal in the rules, the Commission should add a definition of 'regional original price' (ROP).[69] The Commission considers that a definition of ROP is not necessary for the operation of this draft rule.

While both spot price and regional reference price are separate defined terms in the NER, the generally understood interpretation is that both terms have the same meaning and are interchangeable.[70]

For the cumulative price calculation, AEMO currently uses the spot price in accordance with clause 3.9.2 of the NER prior to the application of the APP provisions.[71] We understand this price is the ROP. While the term is not defined in the rules, AEMO refers to the 'regional original price' in its procedures and guidance material.[72]

For our draft rule, the calculation of the cumulative price in a region where an APP has not been declared sees the regional reference price as effectively the same as the settled price. Then, to monitor the cumulative price in a region after an APP has been declared, the regional original price is effectively the same as the dispatch price.

Since clause 3.14.2(c) of the NER makes it clear that AEMO must calculate the sum of spot prices as if administered pricing did not apply (i.e. using the "regional original price"), we do not consider that there is a need to include a definition of regional original price in the rules.

One stakeholder also noted that a definition of ROP would help to clearly set out what price is to be used in the cumulative price calculation during a period where the provisions of clause 3.9.3

69 Submission to the consultation paper: Shell p. 1.

70 Submission to the consultation paper: Shell p. 1.

71 Clause 3.14.2(c)(1) of the NER requires AEMO to calculate the sum of spot prices "as if this clause did not apply".

72 See AEMO's Guide to administered pricing here.

are applicable.[73] We consider this to be outside the scope of this current request because clause 3.9.3 of the NER relates to AEMO intervention events (i.e. having issued a direction or exercising its Reliability and Reserve Trader Mechanism).

3.1.4 The draft rule does not apply to frequency control ancillary services (FCAS)

The draft rule does not apply to FCAS. This is because the price scaling in clause 3.14.2(e) of the NER only adjusts spot prices, not FCAS prices, meaning Delta's issue is not relevant to FCAS.[74]

3.2 Our draft rule will result in a new calculation of cumulative price during periods following market suspension

Box 3: The draft rule would amend the NER to adjust the methodology for the calculation of the cumulative price when AEMO has suspended the market due to market stress.

The draft rule retains the calculation methodology proposed by Snowy, combined with the suggestion from Shell, to differentiate between market suspensions caused by market stress and technological failures with AEMO's systems.

Our draft rule seeks to generate more efficient market outcomes. We are seeking stakeholder feedback on the magnitude of the benefit, given the rarity of these events, and the extent of changes needed to AEMO's systems.

3.2.1 The draft rule would address an issue with the current arrangements

The logic of the CPT suggests that when breached, the protection offered by the APC should remain in place until the market conditions that caused the extreme spot prices subside.[75] Under the current arrangements, when a market suspension event occurs, prices set by the MSPS serve as an input into the calculation of cumulative price.

In accordance with clause 3.14.5(b) of the NER, prices are set in accordance with the market suspension pricing schedule (based on the 28-day historical average for the relevant region and capped at the APC).[76]

> 3.14.2 Application of Administered Price Cap
>
> (a)**[Deleted]**
>
> (b)AEMO must immediately notify all Market Participants of the commencement and closing of an administered price period under rule 3.14.
>
> (c)Each of the following periods is an administered price period in a region:
>
> (1)a trading interval, where the sum of the spot prices in the previous 2,016 trading intervals, calculated as if this clause did not apply, exceeds the cumulative price threshold;
>
> (1A)a trading interval, where the sum of the ancillary service prices for a market ancillary service in the previous 2,016 trading intervals, calculated as if this clause did

73 Submission to the consultation paper: Shell p. 2.

74 Submission to the consultation paper: AEMO p. 2.

75 Snowy Hydro, Rule change request, p. 1.

76 Snowy Hydro, Rule change request, p. 3.

not apply, exceeds the cumulative price threshold; or

(2)a trading interval in a trading day in which a prior trading interval is an administered price period.

(2A)**[Deleted]**

(2B)**[Deleted]**

(3)**[Deleted]**

This means that the cumulative price, during an administered price period, is calculated based on the spot price irrespective of whether the spot price is set by AEMO in accordance with the market suspension pricing schedule.

Clause 3.14.2 of the NER can create issues where there is underlying market stress prior to the market suspension (i.e. an APP preceded the market suspension). In this specific situation, if the market suspension is in place for long enough, the input of prices from the market suspension pricing schedule into the calculation of the cumulative price can result in the cumulative price being below the CPT. This means that when scheduled pricing is removed and the market suspension is lifted, the cumulative price calculation (informed by prices from the market suspension pricing schedule) can give the impression that the market stress has subsided.[77] This may occur despite the underlying market stress persisting, because spot prices that reflect this underlying stress have not been a direct input into the calculation of the cumulative price during the market suspension.

3.2.2 Stakeholder feedback informed the Commission's decision

The proposal by Snowy sought to address this issue, by suspending the calculation of the cumulative price when the market suspension pricing schedule is used.[78] Snowy proposed an amendment to clause 3.14.2 of the NER, to exclude any trading interval in respect of which the spot price is set by AEMO in accordance with the MSPS in the calculation of the cumulative price.[79]

The Commission agrees that excluding any trading interval in respect of which the spot price is set by AEMO in accordance with the market suspension pricing schedule would address the issue raised by Snowy.

Stakeholders mostly agreed with the issue raised by Snowy, although they had mixed feedback about the solution.

- Some supported the proposal, because it would:
  - better align the rules with the original policy intent of the market setting, as the status quo deprives market participants of the benefit of the CPT.[80]
  - restore the financial protection against periods of extended volatility as the APC period would not be artificially shortened due to the use of scheduled pricing [81]

77 AEMO, in lifting a market suspension, has clear processes to follow and conditions to meet. More information is available here.

78 Snowy Hydro, Rule change request, p. 4.

79 Snowy Hydro, Rule change request, p. 4.

80 Submission to the consultation paper: AEC p. 1.

81 Submission to the consultation paper: CS Energy p.2.

- One stakeholder suggested the Commission explore whether there are any potential trade-offs and unintended consequences.[82]
- One stakeholder raised concerns that it would be challenging to practically implement the proposed solution.[83]
- One stakeholder preferred an alternative solution that:[84]
    - diffentiates between a market suspension period where the National Electricity Market Dispatch Engine (NEMDE) process has failed and the NEMDE is unable to continue to operate for dispatch and pricing purposes, and
    - a market suspension period where the NEMDE process has not failed and the NEMDE can continue to operate for dispatch and pricing purposes.
    - Its suggestion is to use the regional original price in the cumulative price calculation when NEMDE has not failed, and to use regional original price inputs into the market suspension pricing schedule calculation for the cumulative price calculation when the NEMDE has failed.
- One stakeholder also raised some issues with clarity about when AEMO can declare a market suspension.[85]

3.2.3 The Commission has decided on a draft rule

The Commission considers that its draft rule would meet its assessment criteria, noting that it has been informed by both Snowy's proposal, and submissions from stakeholders.

The draft rule would add a new clause after clause 3.14.2(c):

> After clause 3.14.2(c), insert:
>
> (c1) AEMO must exclude a *trading interval* from the calculation of the sum in clause 3.14.2(c)(1) or (1A) if:
>
> (1) AEMO sets a relevant price for the *trading interval* in accordance with the *market suspension pricing schedule* under clause 3.14.5(b); and
>
> (2) AEMO considers that a technological failure with its systems was not the sole reason for the *market suspension*.

By differentiating a market suspension caused solely by a technological failure with AEMO's systems from situations with underlying market stress, the Commission considers that the draft rule is more targeted to the situation Snowy's proposal is intended to address, i.e. where an APP precedes a market suspension.[86]

It is a high threshold, that would mean that if there are any other factors that contributed to the market suspension:

- market suspension prices will be used in the cumulative price calculation, and
- trading intervals will not be excluded from the calculation.

This means the draft rule retains the current arrangement where a market suspension has been solely caused by a technological failure with AEMO's systems. This was in response to AEMO's

82 Submission to the consultation paper: Origin p.2.

83 Submission to the consultation paper: AEMO p.3.

84 Submission to the consultation paper: Shell pp.2-3.

85 Submission to the consultation paper: Shell p.3.

86 Snowy Hydro, Rule change request, p. 1.

submission, that a market suspension is “typically assumed to be either a consequence of a major systems technical outage, or a major transmission disruption, such as a system black”.[87] The ‘technological failure’ is drafted broadly, to capture the variety and unpredictability of technological issues that could see AEMO suspend the market, including situations that prevent NEMDE from solving and AEMO’s Electricity Market Management System (EMMS) from sending dispatch instructions to market participants. [88]

The Commission’s view is that the drafting should not be so narrow that it inhibits the intended application of the methodology. In saying this, we are interested in views from stakeholders about whether the ‘technological failure’ should be more narrow in scope.

Noting that all stakeholders agreed with the issue raised by Snowy, the draft rule would amend the calculation of the cumulative price during a market suspension only when there is a situation of underlying stress. This aligns with the methodology proposed by Snowy, to exclude market suspension prices from the cumulative price calculation.[89] The Commission considers that the draft rule will adjust the cumulative price calculation methodology, so that it reflects real-world scarcity of supply, where the market stress precedes a market suspension (i.e. an APP event before the market is suspended).

While the Commission sees the benefit in implementing this change, it notes the rarity of the events will impact the overall magnitude of the benefit over time. This is consistent with AEMO’s submission, that “freezing the accumulation of the rolling price during market suspension is conceptually simple, however its implementation potentially challenging”.[90] It outlined that “although it is possible to develop systems in APP accumulation to detect whether a historical price had been replaced with a market suspension price, it is doubtful of its utility”.[91]

The Commission is interested in views from stakeholders, about whether the threshold is sufficiently high, so that there is certainty about when the new methodology would apply.

The Commission is interested in making a balanced decision of the potential benefits against the potential costs in its final determination and rule (if made).

Question 2: Do stakeholders consider that:

(a) our proposed clause 3.14.2(c1) to adjust the methodology for the calculation of the cumulative price when AEMO has suspended the market due to market stress, would address the issue raised by Snowy?

(b) the application of the methodology in the draft rule should be limited to situations where ‘a technological failure with its (AEMO’s) systems is not the sole reason for the market suspension’, ie. so it would apply to a situation where there is market stress that preceds the suspension?

(c) If you support this change, do you think it would result in net benefits or costs?

87 Submission to the consultation paper: AEMO p. 3.

88 Noting that AEMO suspended the market on 5 September 2024 for an IT issue - more information is available here.

89 Snowy Hydro, Rule change request, p. 1.

90 Submission to the consultation paper: AEMO p.3.

91 Submission to the consultation paper: AEMO p.3.

3.2.4 The draft rule does not require a definition of ROP in the NER

One stakeholder did not agree with the solution proposed by Snowy, and provided an alternative. It suggested that the regional original price should be an input in the cumulative price calculation when NEMDE has not failed.[92]

Although the differentiation between situations where NEMDE has and has not failed was useful, the Commission has not introduced a definition of regional original price in the draft rule. This is because the definition would not be required to give effect to the adjusted methodology for calculating the cumulative price when a market suspension is not solely caused by technological failure with AEMO's systems.

Additionally, the Commission did not adopt Shell's full proposal, which suggested using the ROP during market suspension to calculate the cumulative price. Based on discussions with AEMO, we understand that whilst the ROP is calculated during a market suspension, it is often not complete or accurate. During a market suspension, some generators are directed to generate when they have not put in bids into dispatch, hence the ROP is spurious. Hence, the Commission's draft determination adopted Snowy's proposed calculation for situations when technology failure isn't the sole contributor to market suspension.

3.2.5 It could be challenging for the draft rule to apply in a system black scenario

It would be rare for a period of market stress, followed by an APP and market suspension that remains in place for a prolonged period of time, to occur in the NEM.

A system black scenario is a hypothetical example that illustrates how the draft rule could better align real-world scarcity of supply with the cumulative price calculation methodology that applies during a market suspension, based on the reason for AEMO declaring a market suspension. In saying this, it also reveals that there could be some practical challenges in the way that AEMO would implement the draft rule.

A system black event could be a rare situation where market stress may coincide with a technological failure in AEMO's systems, and a situation where AEMO would likely suspend the market. For example, in this situation, the draft rule would require AEMO to:

- exclude the market suspension prices from the cumulative price calculation, if market stress from the system black event is contributing to AEMO's decision to suspend the market, and
- include market suspension prices in the cumulative price calculation, if AEMO considers that there is no longer any market stress (e.g. the system black event has ended) but AEMO has decided to keep the market suspended solely because of an ongoing technological failure with AEMO's systems.

While the Commission sees the benefit in implementing this change, it notes the rarity of the events will impact the overall magnitude of the benefit over time. As such, the Commission is seeking feedback from stakeholders on the implementation costs, predominantly from changes to AEMO systems, and the expected magnitude of benefits of the draft rule from participants.

3.2.6 The NER is sufficiently clear about when AEMO cannot declare market suspension

One stakeholder submitted that there is a need for more clarity in the operation of clause 3.14.3(b) of the NER.[93] It considers that 3.14.3(b)(1) of the NER infers the market should not be suspended simply because the spot market is experiencing high prices. In addition, 3.14.3(b)(2) of the NER

92 Submission to the consultation paper: Shell pp.2-3.

93 Submission to the consultation paper: Shell pp.2-3.

sets out that the market should not be suspended simply because a clause 4.8.9 direction(s) has been issued. This stakeholder proposed that an additional clause be added to indicate:[94]

> (4) an administered pricing period has been declared in accordance with clause 3.14.2

The Commission does not consider that there is a need for additional clarity in the operation of clause 3.14.3(b). This is because:

- The rules state that AEMO must not suspend the spot market solely because prices have reached the market price cap, market floor price or AEMO has intervened in the market (through directions or in accordance with rule 3.12).
- AEMO have maintained that:
  - a market suspension is designed to manage circumstances where the market dispatch process is unworkable
  - there is no apparent correlation between high prices, which would trigger APP, and such a suspension.

For these reasons, and noting the rarity of a dual APP and market suspension event in the future, the Commission does not consider additional clarity is needed in the NER.

3.2.7 The draft rule does not currently include a timeframe for AEMO to adjust the calculation following a market suspension

The draft rule does not currently include a timing horizon for when AEMO must make any adjustments to the calculation of the sum in clause 3.14.2(c)(1) or (1A), as a result of the market suspension. However, we understand AEMO's systems may require it to manually adjust prices during a market suspension, so that the cumulative price calculation reflects the manually adjusted market suspension prices. Depending on the extent or timing of the market suspension, the time taken to undertake manual adjustments could vary significantly.

We are interested in stakeholder views about whether there is a need for a timeframe in the NER, to provide greater clarity about when AEMO must make any price adjustments.

Question 3: Do stakeholders consider that the NER should set out a timeframe for when AEMO must manually adjust the cumulative price calculation as a result of a market suspension and ensure any price capping is correct?

If so, should this be drafted more broadly (ie. 'as soon as practicable') or narrowly ('within X period of time')?

3.2.8 Application to ancillary services

The CPT also applies to the ancillary services market. For consistency, the draft rule would apply consistently across the spot market and ancillary services market to manage perverse outcomes, such as the generators reserving their capacity for the ancillary services market.[95]

3.3 Amending the cumulative price calculation would deliver benefits

Delta's rule change request

94 Submission to the consultation paper: Shell pp.2-3.

95 Submission to the consultation paper: Snowy p. 3, CS Energy p.2.

The draft rule would have the likely impact of providing more certainty to generators exporting to a region that is in an APP, because their CPT would be reached based on the prices that the generators have received. This would improve the alignment of the cumulative price calculation methodology with the prices that generators are receiving.

As discussed in Section 2.3, the draft rule would improve efficiency in market signals, as it seeks to ensure that the CPT functions efficiently in times of market stress and does not truncate scarcity pricing prematurely. This could strengthen investment and availability signals for peaking generation in specific periods of market stress.

Snowy's rule change request

The draft rule would result in a tailored solution to the niche issue raised by Snowy, because the cumulative price calculation methodology will be based on the situation that caused AEMO to suspend the market. This would see the cumulative price calculation during a market suspension reflect real-world scarcity of supply, when there is underlying volatility that preceded the suspension (i.e. an APP occurring before a market suspension).

As discussed in Section 2.3, the draft rule would likely extend an APP following a market suspension, meaning that the price settings can better support efficient investment and operational outcomes, during periods of stress in the NEM. This is in the long term interest of consumers.

3.4 Further information regarding implementation will inform the final determination

Delta's rule change request

The draft rule will require a change to AEMO's system to adjust the cumulative price calculation methodology. AEMO considers that it will be a 'small to medium size' implementation project, with most effort expended on pre-production testing of various scenarios.[96]

Our analysis, (see more detailed analysis in Appendix B), shows that the draft rule would have the likely impact of providing more certainty to generators exporting to a region that is in an APP, because their CPT would be reached based on the prices that the generators have received. It is not feasible to analyse the impact of this draft rule in all 'realistic and extreme' situations, because it would only take effect in rare situations where multiple regions approach and exceed their CPT.

Although more information regarding implementation is needed for the Commission to make a balanced decision in the final determination, the Commission considers that the draft rule would likely lead to improved market outcomes.

Snowy's rule change request

The draft rule will likely require a significant change to AEMO's market suspension pricing systems and processes for calculating the cumulative price after a market suspension. It will likely require AEMO to rework its current system (i.e. with additional conditional statements and links to flagged prices that are generated during a market suspension).

While the Commission sees the benefit in implementing this change, it notes the rarity of the events will impact the overall magnitude of the benefit over time. As such, the Commission is seeking feedback from stakeholders on the implementation costs, predominantly from changes to

96 Submission to the consultation paper: AEMO p.2.

AEMO systems, and the expected magnitude of benefits of the proposed change from participants. This information will be important to inform our final determination.

A Rule making process

A standard rule change request includes the following stages:

- a proponent submits a rule change request
- the Commission initiates the rule change process by publishing a consultation paper and seeking stakeholder feedback
- stakeholders lodge submissions on the consultation paper and engage through other channels to make their views known to the AEMC project team
- the Commission publishes a draft determination and draft rule (if relevant)
- stakeholders lodge submissions on the draft determination and engage through other channels to make their views known to the AEMC project team
- the Commission publishes a final determination and final rule (if relevant).

The Commission has formally consolidated both rule change requests - Delta's Amending the Cumulative Price Threshold Methodology (ERC0356) and Snowy's CPT calculation during administered scheduled pricing (ERC0374). The new project name is 'Calculating the cumulative price' with project code ERC0356.

The Commission found it was desirable to consolidate both rule change requests, because:[97]

- Both rule change requests share the same context (i.e. 2022 market stress event). It is efficient to consolidate both requests together so that there is no unnecessary repetition of contextual information in multiple draft determinations.
- Both rule change requests relate to the calculation of the cumulative price in specific periods of market stress.
- Stakeholders provided their feedback to both rule change requests under the one consultation paper, published on 16 October 2025.
- The process for stakeholder feedback will be more efficient, as stakeholders can provide one submission to a singular draft determination and draft rule, that covers both proposals.

You can find more information on the rule change process on our website.[98]

A.1 Delta proposed a rule to amend the cumulative price calculation during multi-region APP events

Delta Electricity submitted a rule change request to the AEMC on 2 February 2023, proposing an amendment to the National Electricity Rules (NER) relating to the methodology for calculating when one or more regions have reached the cumulative price threshold (CPT).[99]

When a region is not under administered prices but is exporting electricity to a region that is under administered prices, the settled price that is received by the generator is lower than the dispatch price. This is because the dispatch price is capped at the administered price cap and then scaled down.[100]

Delta considers that this is an issue because it creates the outcome where a region's CPT is reached based on higher dispatch prices, while lower prices are received by generators in

97 NEL s.93.

98 See our website for more information on the rule change process: https://www.aemc.gov.au/our-work/changing-energy-rules

99 Delta Electricity, Rule change request, p. 1.

100 Delta Electricity, Rule change request, p. 4.

settlement. Delta considers that this approach to how the cumulative price is calculated is unintended, and it does not provide the correct market signal when multiple regions are under an administered price cap (APC).[101]

Delta Electricity proposes that received prices, instead of dispatch prices, should be used to calculate when the CPT is reached in a region. Once the CPT is reached in a region, Delta Electricity suggests that the dispatch price should be used to monitor the cumulative price.[102]

Delta considers that there is no direct trade-off from this proposed rule change as it represents the intention of the Reliability Standard and Settings Review.[103]

Delta also notes that the proposed change likely reflects how many stakeholders assumed the NER is currently implemented - any region that is subjected to administered pricing and an APC is assumed to have received the full value of the CPT.[104]

The proposed change would only take effect when there is one region already under administered pricing and would ensure other regions, that may be subject to capped and scaled settled prices as per NER clause 3.14.2(e)(2), can still receive the full value of the CPT. This would mean the full value of the prices that reach the CPT would be borne by retailers and passed onto customers.[105]

A.2 Snowy proposed a rule to amend the cumulative price calculation during a market suspension when the market suspension pricing schedule is used

Snowy submitted a rule change request to the AEMC on 28 August 2023, proposing an amendment to the NER to suspend the calculation of the cumulative price when the administered scheduled pricing is used.[106]

Snowy raised concerns about the interaction between market suspension and administered pricing, based on observations in the 2022 market suspension event. Snowy suggested that if the market suspension is in place long enough and the market suspension pricing schedule is used, it results in the cumulative spot prices being below, or well below, the CPT when the market suspension pricing is removed. This can occur despite the market conditions that initially caused the breach of the CPT persisting. This can lead to the immediate resumption of extreme spot prices, undermining the protection that the CPT was designed to provide.[107]

Snowy proposed that administered prices set in accordance with AEMO's market suspension pricing schedule be excluded from the calculation of cumulative price in the spot market and frequency control ancillary service (FCAS) market for electricity.[108]

Snowy considers that its proposal to suspend the calculation of the cumulative price when the market suspension pricing schedule is used will solve the problem with the calculation of the cumulative price. This is because, in Snowy's view, the intent of the CPT and APP, is to provide protection to participants with 'short' positions (i.e. hedging positions with spot market exposure), while balancing the need to provide revenue adequacy for generators. It notes that while, in theory,

101 Delta Electricity, Rule change request, p. 4.
102 Delta Electricity, Rule change request, p. 5.
103 Delta Electricity, Rule change request, p. 5.
104 Delta Electricity, Rule change request, p. 5.
105 Delta Electricity, Rule change request, p. 5.
106 Snowy Hydro, Rule change request, p. 3.
107 Snowy Hydro, Rule change request, p. 3.
108 Snowy Hydro, Rule change request, p. 4.

market participants with short positions will be retailers or large market customers, it is also very likely to include scheduled generators that have sold electricity contracts (probably caps) to retailers.[109]

Snowy set out the expected benefits of its proposed solution, noting that:

- it will remove the distortion to the CPT and APC caused by the use of scheduled pricing and thereby improve the integrity of the CPT and APC. This is because Snowy considers that scheduled pricing does not reflect real-world scarcity of supply during periods of volatility, meaning that scheduled pricing artificially hastens the protection that the CPT and APC is designed to provide to market participants;[110]
- as a consequence of addressing the issue, Snowy considers that the CPT and APC will be better able to achieve its objective of providing a safety valve during periods of extended volatility and, in particular, reducing tail risk for sellers of hedges. It considers that if this is not addressed, sellers of hedges will be exposed to a higher tail risk, increasing the risk premium and the cost of energy;[111] and
- market participants, both generators and market customers, should have increased financial protection against periods of extended volatility, as the CPT and APC will not be artificially shortened by the use of scheduled pricing. Snowy considers that this will improve certainty of the protection offered by the CPT and APC, allowing participants to plan their operations and contacting activity with greater confidence.[112]

The only potential cost Snowy identified with its proposal, would be experienced by those who would otherwise benefit from a shorter APC period occasioned by the use of scheduled pricing (the rule change request notes generators that are not fuel-constrained, who are able to take advantage of pricing volatility when the APC ends as an example).[113] However, Snowy notes that given the near impossibility of accurately forecasting the likelihood of scheduled pricing, this is likely only an opportunistic benefit, because it is unlikely that such generators are able to plan their operations around this benefit or to assume a benefit from it ex ante.[114]

A.3 The process to date

On 16 October 2025, the Commission published a notice advising of the initiation of the rule making process and consultation in respect of the rule change requests.[115]

A consultation paper identifying specific issues for consultation was also published. Submissions closed on 20 November 2025.

The Commission received 7 submissions as part of the first round of consultation. The Commission considered all issues raised by stakeholders in submissions. Issues raised in submissions are discussed and responded to throughout this draft rule determination.

A summary of other issues raised in submissions and the Commission's response to each issue is contained in Appendix D.

109 Snowy Hydro, Rule change request, p. 3.
110 Snowy Hydro, Rule change request, p. 3.
111 Snowy Hydro, Rule change request, p. 3.
112 Snowy Hydro, Rule change request, p. 3.
113 Snowy Hydro, Rule change request, p. 3.
114 Snowy Hydro, Rule change request, p. 4.
115 This notice was published under section 95 of the NEL.

B Regulatory impact analysis

This Appendix outlines the anticipated impact of the draft rules, exploring both quantitative analysis where possible and qualitative analysis. This analysis informed the Commission's draft view on the respective changes.

B.1 Delta's rule change request

The Commission compared two viable policy options that are within our statutory powers. The Commission analysed these options:

- the rule proposed in the rule change request (the draft rule), and
- a business as-usual scenario where we do not make a rule.

The Commission has undertaken regulatory impact analysis to make its draft determination, a combination of quantitative (using historical scenarios) and qualitative methods.

It involved consideration of impacts within the scope of the NEO, identification of impacted stakeholders, assessment of issues raised in the rule change request and by stakeholders, and assessment of the benefits and costs of the two options. The depth of analysis was commensurate with the potential impacts.

In our analysis, we have made the following assumptions:

- the only change we applied was the CPT rule change calculation based on Delta's proposed methodology,
- all other conditions remained equal - bidding behaviour, demand and the resulting post NEMDE prices remain the same.

We note that the other conditions like bidding behaviour, demand and the resulting post NEMDE prices may change if generators predict that APC will be reached later due to a new rule.

B.1.1 Quantitative analysis

We have conducted a historical scenario analysis, to explore the hypothetical outcomes of the draft rule in two dual region APP events that have occurred in the NEM.

June 2022 APP in Queensland and NSW

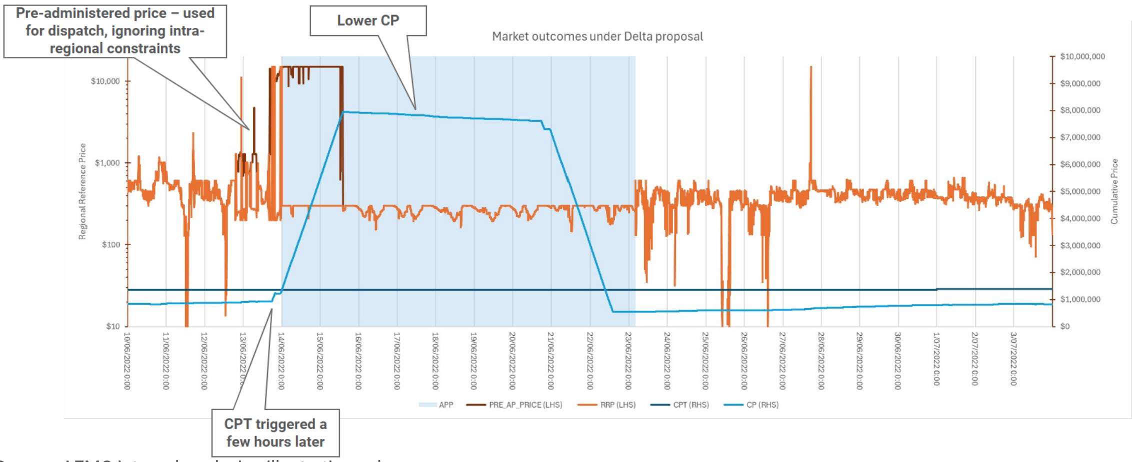
The first historical scenario was the June 2022 event, which prompted Delta's rule change request. For a recount of this event, please see section 1.2 of our consultation paper.

Briefly, price volatility in Queensland on 12 June 2022 saw the regional cumulative price exceed the CPT, marking the start of an APP. Many of the extreme dispatch prices occurring outside Queensland were also capped under the NER's 'price scaling' provisions applying under administered pricing. Consequently, cumulative prices breached the CPT in New South Wales, South Australia and Victoria on the evening of 13 June 2022, triggering APPs in each of those regions.[116]

We explored a hypothetical, illustrative example of a possible outcome if the draft rule had been retrospectively applied to this event.

116 AEMO, NEM market suspension and operational challenges in June 2022, report, p. 13.

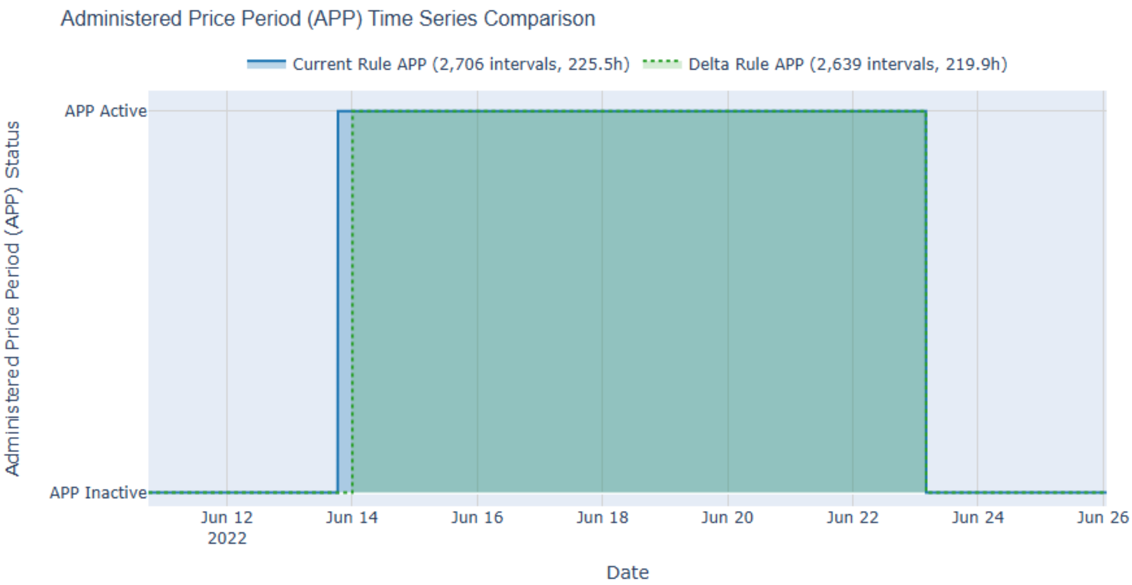
Figure B.1: Market outcomes under the Delta proposal



Source: AEMC internal analysis - illustrative only

Note: This figure shows the spot price, APP period and the cumulative price in NSW during the event. It also denotes the period which the market was suspended. Under the Delta rule change, as the settled price is used in CPT calculations instead of dispatch prices, resulting in a lower cumulative price than what occurred, and the CPT being triggered later. Note this analysis shows a hypothetical scenario where the market was not suspended.

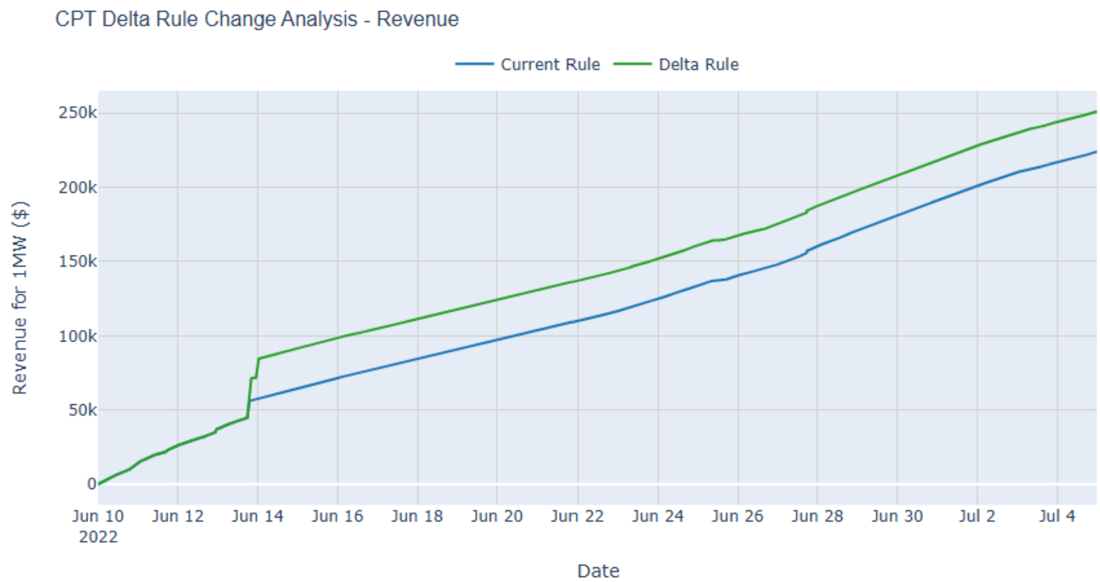
Figure B.2: APP Time comparison



Source: AEMC internal analysis - illustrative only

Note: This figure compares the length of the APP under the status quo against Delta's proposal. It demonstrates that the APP period would be reached approximately 6 hours later under Delta's proposal.

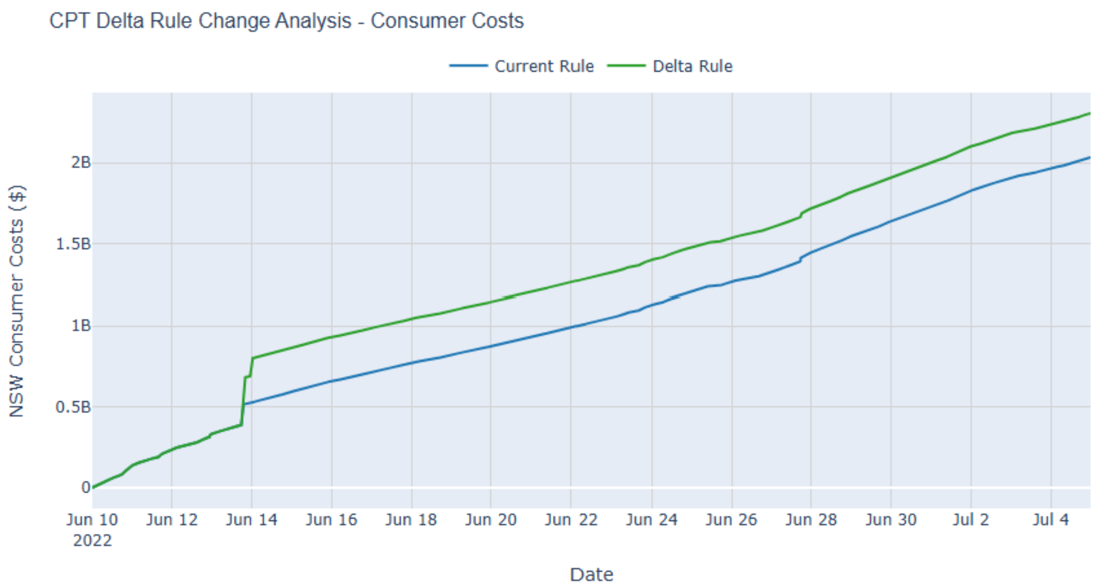
Figure B.3: Revenue outcomes



Source: AEMC internal analysis - illustrative only

Note: This figure shows the projected generator revenue for a NSW generator with 1 MW of capacity that is dispatched throughout the event. It reveals that in this specific scenario, the Delta rule change would increase the spot revenue of a generator (as the delay the CPT being triggered). Note this analysis is illustrative and does not include compensation payments.

Figure B.4: Consumer costs



Source: AEMC internal analysis - illustrative only

Note: This figure illustrates the consumer spot market costs under the specific scenarios explored. It reveals that the Delta rule change would increase the costs to consumers, noting that this analysis is illustrative and does not account for compensation payments.

Figures B.1 to B.4 show that, if the draft rule was in place at the time of the 2022 event:

- The CPT in NSW would have been reached later, because the settled price received by NSW generators (as input into the cumulative price calculation) was lower than the dispatch price.

- 1 MW of generation in NSW would have received approximately $25,000 more, as the APP would have started later.
- Consumer costs in NSW could have increased by $0.25 billion, because the APP would have started later.

From this quantitative analysis, we ascertain that the draft rule would likely result in a more efficient market outcome, because:

- Peaking generation would have likely received price outcomes that align with market conditions, which means that it would send more accurate investment signals, to help encourage more competitively priced generation.
- There would be appropriate signals for peaking generation to offer competitively priced generation when supply and demand is tightening with multiple regions approaching their CPT and entering into APPs. As peaking generation is important to provide system security and reliability, this would ensure the CPT is functioning as intended and compliments other market settings to achieve a safe, secure and reliable electricity system.
- The revenue available to new and existing peaking generation would be a function of the risk that these participants take on with how best to manage scarce fuel resources when supply and demand is tight. This is because the cumulative price methodology would encourage these participants to offer generation because their revenue potential would not be unnecessarily capped because the region they are exporting to is in an APP.

January 2019 APP in Victoria and SA

We have also applied the draft rule to a dual region APP event that occurred in 2019. On 25 January 2019, the spot prices for electricity exceeded $5000/MWh in Victoria and South Australia. Victoria experienced its second day of extreme heat, which drove high demand. Meanwhile, the temperature in Adelaide was significantly lower than the previous day's record setting maximum of 47ºC. Extreme heat and higher than expected demand in Victoria, saw SA export electricity to Victoria at high prices. Victoria still had insufficient supply to meet demand, so AEMO shed 250 MW of customer load, causing the spot price to be set at the market price cap. The spot price for electricity reached $11,340/MWh in South Australia for the same trading interval. As a result, the cumulative price threshold was breached and an administered pricing cap was put in place from 11.30 am.[117]

We consider that if the draft rule was in place at the time of the 2019 event, its impact would have been marginal. This is because both VIC and SA went into APP and exited APP at roughly the same time. The reasoning is:

- The draft rule can change the time that a state goes into an APP, observable where the RRP is less than the dispatch price.
- This situation would typically occur when a state is not in an APP and is exporting to a region in an APP for a period of time. The APP in one state needs to occur over a sustained period with sufficient disparity of RRP and dispatch price to change the timing of when it goes into APP.
- If both states are in an APP (and one state is exporting to the other), then the draft rule would not change the outcome that would otherwise be observed under the status quo.

We consider that, applying the draft rule to the 2019 event, sees the likelihood and severity of the dual APP event impact the benefits generated by the draft rule.

117 AER, Spot prices greater than $5000/MWh Victoria and South Australia,25 January 2019, report, p. 5.

B.1.2 Qualitative analysis

The Commission has also undertaken a qualitative analysis to consider the impacts within the scope of the NEO, identified impacted stakeholders, assessed issues raised in the rule change request and by stakeholders, and assessed the benefits and costs of various policy options.

The potential benefits from the draft rule are improved efficiency in market signals, which may improve investment signals to peaking generation. This is because peaking generation is important to provide system security and reliability, so the draft rule could provide a better signal for peaking generation to offer competitively priced generation when supply and demand is tightening as revenue may better align with the risk that peaking generation takes on with how best to manage scarce fuel resources.

Risks and costs associated with the draft rule derive from the updates that would be required to AEMO's systems. AEMO broadly estimated that 'the implementation project would be of 'small-medium size'. Much of this effort would be expended on pre-production testing of various scenarios. It will be necessary to allocate sufficient development and testing time for this should the Commission determine to make a Rule'.[118]

AEMO considers that the change would use conditional logic, because the source price used for a region's CPT accumulation would change if the APP applied during the relevant trading interval:

- If the APP did apply, then it would need to use the spot price ahead of scaling under NER 3.14.2(e)
- If the APP did not apply, then the accumulation would use the settled spot price.[119]

A balance needs to be struck between the costs of implementation, with the likely benefit, because dual region APP events are rare. The Commission will continue to engage with stakeholders to better understand impacts associated with the draft rule, and continue to assess and analyse policy options. The Commission will also continue to work with AEMO to understand likely implementation costs associated with the draft rule and (if applicable) final rule and whether they would affect the balance of benefits and costs.

B.2 Snowy's rule change request

The Commission compared multiple viable policy options that are within our statutory powers. The Commission analysed four options: the rule proposed in the rule change request (Snowy's proposal), a business as-usual scenario where we do not make a rule, an alternative solution provided by Shell in its submission, and an alternative solution involving a recommendation that AEMO amend their market suspension guidelines.

The Commission considered these options against the assessment criteria as follows:

Table B.1: Option 0 - retain status quo and option 1 - enhancing AEMO guidelines

Assessment criteria	Option 0: Retain the status quo	Option 1: Enhance AEMO guidelines
Outcomes for consumers	No change. Consumers may not be adequately protected by the APP and CPT if a market suspension reoccurs.	May increase protection for consumers from spot price spikes as AEMO would more critically consider market

118 Submission to the consultation paper: AEMO, p.2.

119 Submission to the consultation paper: AEMO, p.2.

Assessment criteria	Option 0: Retain the status quo	Option 1: Enhance AEMO guidelines
		stress and potentially extend the suspension, allowing underlying conditions to subside before lifting the suspension. This option would likely be lower cost to implement.
Safety, security and reliability	Risk that security and reliability could be compromised if an APP is lifted prematurely, leading to spot price spikes.	Would likely lead to more security and reliability, if it results in an extended administered pricing period.
Principles of market efficiency	No change to market outcomes meaning that the risk of an administered pricing period ending prematurely after a market suspension will remain. The impact of this would be a marginal inefficiency in the market where the market resumes and then is interrupted again with an APP.	Greater transparency in AEMO's considerations for lifting a suspension, may reduce tail risk for sellers of hedges.
Principle of good regulatory practice	Predictability in maintaining the current arrangements, although all stakeholders understood the objective of the issue Snowy proposes to address.	Greater transparency to participants about the considerations AEMO will make before lifting a suspension, providing more certainty about market conditions during high stress periods.

Source: AEMC

Table B.2: Option 2 - Snowy proposal and option 3 - Shell proposal

Assessment criteria	Option 2: Snowy's proposal	Option 3: Shell's proposal
Outcomes for consumers	Both options have costs associated with implementing system changes to support the proposal. However, these options provide greater protection for consumers than under the status quo.	
Safety, security and reliability	If it results in an extended administered pricing period, it could provide a more reliable market outcome when a suspension is lifted.	
Principles of market efficiency	It could allow the market settings to function more	It could result in a more efficient market outcome, as it

Assessment criteria	Option 2: Snowy's proposal	Option 3: Shell's proposal
	efficiently in times of stress, because Snowy considers that scheduled pricing does not reflect real-world scarcity of supply during periods of volatility	tailors the approach based on a NEMDE failure (or not), meaning that the CPT calculation is better aligned with the underlying situation that caused the market suspension. Additionally, when NEMDE is working, the ROP may not be representative of market conditions, as not all generators being dispatched offer bids. This tailored approach could result in a better market outcome, that achieves the objective of the Snowy proposal, although this needs to be balanced with the complexity of implementation.
Principle of good regulatory practice	Snowy considers that the CPT and APC will be better able to achieve its objective of providing a safety valve during periods of extended volatility and, in particular, reducing tail risk for sellers of hedges	Shell considers that its proposal would be fully consistent with the normal framework for the calculation of the CPT value under all market outcomes.

Source: AEMC.

Illustrated in tables B.1 and B.2, the Commission has undertaken regulatory impact analysis to make its draft determination using primarily qualitative methods. It involved consideration of impacts within the scope of the NEO, identification of impacted stakeholders, assessment of issues raised in the rule change request and by stakeholders, and assessment of the benefits and costs of various policy options. The depth of analysis was commensurate with the potential impacts. Where commensurate and feasible, the Commission has quantified the impacts.

The draft rule is a combination of Shell and Snowy's proposals.

The potential benefit from the draft rule is it will allow market settings to function more efficiently in times of stress, as the cumulative price calculation would be better reflective of real-world scarcity of supply during periods of volatility. It is a more targeted solution to the situation Snowy's proposal is intended to address, i.e. where an APP precedes a market suspension.[120] Allowing the methodology for the calculation of the cumulative price during a market suspension, to be a function of the sole cause of the market suspension, where it is not solely caused by technological failure with AEMO's systems, means that the APP will provide a more reliable market outcome when a suspension is lifted, in the long-term interests of consumers.

120 Snowy Hydro, Rule change request, p. 1.

The Commission did not adopt Shell's full proposal, as Shell proposed using the ROP during market suspension to calculate the cumulative price. Based on discussions with AEMO, we understand that whilst the ROP is calculated during a market suspension, it is often not complete or accurate. During a market suspension, some generators are directed to generate when they have not put in bids into dispatch, hence the ROP is spurious. Hence, the Commission's draft determination adopted Snowy's proposed calculation for situations when technology failure is not the sole contributor to market suspension.

Risks and costs associated with the draft rule derive from the updates that would be required to AEMO's systems. This would be somewhat significant, as "AEMO considers its implementation potentially challenging... the nature of a market suspension, especially a market systems failure, cannot be predicted. During a major IT failure, systems may publish meaningless prices, or no prices at all. Upon recovery of systems, these prices will be backfilled with market suspension prices. The CPT detection will automatically respond to the backfilled prices".[121]

The draft rule does present a risk that the implementation may be costly, timely and challenging for AEMO. Given the rarity of market suspensions that follow an APP, it means that the situation where the benefit of the change is realised, is rare.

The Commission will continue to engage with stakeholders to better understand impacts associated with the draft rule, and continue to assess and analyse policy options. The Commission will also continue to work with AEMO to understand likely implementation costs associated with the draft rule and (if applicable) final rule and whether they would affect the balance of benefits and costs.

121 Submission to the consultation paper: AEMO. p.2

C Legal requirements to make a rule

This appendix sets out the relevant legal requirements under the NEL for the Commission to make a draft rule determination.

C.1 Draft rule determination and more preferable draft rule

In accordance with section 99 of the NEL, the Commission has made this draft rule determination for a more preferable draft rule in relation to the requests from Delta and Snowy respectively.

The Commission's reasons for making this draft rule determination are set out in chapter 2.

A copy of the draft rule is attached to and published with this draft determination. The key features are described in chapter 3.

C.2 Power to make the rule

The Commission is satisfied that the draft rule in relation Delta and Snowy's requests fall within the subject matter about which the Commission may make a rule.

The draft rule falls within section 34 of the NEL as it relates to:[122]

- the operation of the national electricity market
- the operation of the national electricity system for the purposes of the safety, security and reliability of that system
- the activities of persons (including Registered participants) participating in the national electricity market or involved in the operation of the national electricity system.

C.3 Commission's considerations

In assessing the rule change request the Commission considered:

- its powers under the NEL to make the draft rule
- the rule change requests
- submissions received during first round consultation
- the Commission's analysis as to the ways in which the draft rule is likely to contribute to the achievement of the NEO
- the application of the draft rule to the Northern Territory
- the assessment criteria and the likely benefits and costs of the draft rule, as outlined in chapter 2.

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for both rule change requests.[123]

C.4 Civil penalty provisions and conduct provisions

The Commission cannot create new civil penalty provisions or conduct provisions. However, it may recommend to the energy ministers' that new or existing provisions of the NER be classified as civil penalty provisions or conduct provisions.

122 NEL section 34(1)(a)(i)-(iii).

123 Under s. 33 of the NEL and s. 73 of the NGL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy.

The draft rule does not amend any clauses that are currently classified as civil penalty provisions or conduct provisions under the National Electricity (South Australia).

The Commission does not propose to recommend to energy ministers' that any of the amendments made by the draft rule be classified as civil penalty provisions or conduct provisions.

D Summary of other issues raised in submissions

Table D.1: Summary of other issues raised in submissions to Snowy's rule change

Stakeholder	Issue	Response
Shell Energy	Shell recommended that the Commission consider an amendment to clause 3.14.3(g) to require reporting on the decision-making process to implement pricing in accordance with clause 3.14.5(b) during a market suspension period (p. 3).	The Commission does not consider that there is need for additional reporting requirements for AEMO, in its decision making process to implement MSPS pricing during a market suspension. This is because the existing provisions are sufficiently transparent, and participants can already request information or reports from AEMO.

Abbreviations and defined terms

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
APC	Administered Price Cap
APP	Administered Price Period
Commission	See AEMC
CPT	Cumulative Price Threshold
EMMS	Electricity Market Management System
FCAS	Frequency Control Ancillary Services
NEL	National Electricity Law
NEM	National Electricity Market
NEMDE	National Electricity Market Dispatch Engine
NEO	National Electricity Objective
NER	National Electricity Rules
NT Act	*National Electricity (Northern Territory) (National Uniform Legislation) Act 2015*
MSPS	Market Suspension Pricing Schedule
Proponent	The individual / organisation who submitted the rule change request to the Commission
ROP	Regional original price
VRE	Variable renewable energy