

Meeting Date: 4 August 2021

OUTLINE OF THE AUTHORITY'S REVIEW OF THE 2021 DRY YEAR EVENT

SECURITY AND RELIABILITY COUNCIL

The Authority seeks the SRC's input into its review of the 2021 dry year event. The review is intended to be a full system review of the policy behind the various elements of the regime, the details of each element, and the actual performance of the various participants, including the Authority itself.

Note: This paper has been prepared for the purpose of an SRC discussion and eliciting SRC feedback. Content should not be interpreted as representing the views or policy of the Electricity Authority.

Contents

1. Introduction	3
1.1 The 2021 dry year event was unusual	3
2. Review of the 2021 event	3
2.1 The Authority is proposing a wider than normal review	3
3. Questions for SRC	4
Appendix A – Proposed event review – Dry year 2021	5
1. Overview	5
2. Regime purpose	5
3. Scope	5
Policy	5
Process	6
System operator's performance	6
Authority's performance	6
Out of scope	6
4. Deliverables	7

1. Introduction

1.1 The 2021 dry year event was unusual

1.1.1 Most years start with the generators forecasting and conserving hydro storage in anticipation of meeting winter demand. This generally leads to higher wholesale market prices to incentivise thermal generation to conserve hydro storage. In normal years there is sufficient summer rainfall to ensure the hydro lakes are in a good position for winter. In stressed (dry) years lower summer rainfall and/or the previous year may have depleted storage meaning hydro storage needs to be more actively conserved during autumn in anticipation of winter demand. Conserving hydro storage leads to higher wholesale prices, incentivising thermal generation to run instead of hydro.

1.1.2 The current year (2021) wholesale prices are higher than both a normal and a stressed year due to a confluence of four unusual factors; scarce gas; higher carbon prices; low wind generation; and La Niña weather patterns.

1.1.2.1. Gas supplies are reduced and the spot price for gas is higher than historical averages. This means gas fuelled generators are pricing higher to recover fuel costs.

1.1.2.2. Carbon prices are nearly \$40 per unit, up around 50% from a year ago. As thermal generation pays this cost, it is built into their offers.

1.1.2.3. Wind generator output has been lower than normal for this time of year. As wind generation cannot normally be controlled or stored, it is usually fully dispatched when available, displacing other more expensive generation.

1.1.2.4. A La Niña year is occurring, and therefore generators are expecting inflows to remain lower than normal.

1.1.3 There is an established dry year management regime in place to manage stressed years. This unusual confluence of factors resulted in additional work outside the established processes, and adaptation of the established processes.

2. Review of the 2021 event

2.1 The Authority is proposing a wider than normal review

2.1.1 After each stressed year, the Authority and/or the system operator review how the systems and processes performed. These reviews are normally limited in scope to process, and usually result in minor enhancements to the processes.

2.1.2 This year, the review is proposed to be wider, and include the fitness for purpose of the policies as well as the operational systems and processes.

2.1.3 A proposed review outline is attached as Appendix A. The Authority seeks the SRC's input to finalise the review scope and other details.

2.1.4 The Authority requests the SRC assess the results of the review and give appropriate advice to the Authority.

3. Questions for SRC

Scope

Q1. Does the SRC agree with the proposed scope (and out of scope items)?

Q2. If not, what changes (inclusions or exclusions) does the SRC suggest?

Q3. Does the SRC have any other comments on the review?

Conducting the review

Q4. Does the SRC have any views on an appropriate external reviewer to review the Authority's performance?

Q5. Does the SRC want to be interviewed or have input (as a group) into the Authority's performance, separately from assessing the final results/report?

Advice to the Authority

Q6. Does the SRC require further information at this stage?

Q7. What advice, if any, does the SRC wish to provide to the Authority at this stage?

Appendix A – Proposed event review – Dry year 2021

1. Overview

- 1.1. This review is intended to be a system-wide review of the 2021 Dry Year event.
- 1.2. The review will look at the policy (principles and settings), processes, and the performance of the industry (system operator and participants) and the Authority in managing the dry year event, and its impact on industry and non-industry parties and consumers.
- 1.3. The outcome will be to confirm if each of these areas was working well or if changes are needed, and if changes are needed, are they needed and achievable in time for next autumn/winter or longer term.

2. Regime purpose

The purpose of the system/regime is:

- 2.1. to manage the risk of generation undersupply leading to consumer outages, ideally while minimising the total cost to consumers arising from the trade-off between more supply (at higher cost) versus less supply (with more frequent outages);
- 2.2. to minimise the gap between actual risk and perceived risk (for example, ensuring there is common understanding of the risk and minimal need for responses or action outside the regime's process) so that the regime isn't undermined by interest groups to compromise the efficiency and effectiveness of the system, ensuring the regulatory and market arrangements are durable;
- 2.3. to ensure the electricity supply to consumers is resilient in the event of a dry year. That is, higher prices are welcomed as a means of rationing to ensure we get through the dry year including promoting efficient operation in the event of dry-year scarcity and efficient investment in generation and demand response to manage dry years.

3. Scope

Policy

- 3.1. Assess the overall fitness-for-purpose of the regime and any regulatory gaps.
- 3.2. Assess the fitness-for-purpose of the system operator policies (SOSFIP, EMP, SOROP). This includes the overarching assumptions such as the electricity risk curves (ERC) being modelled as if storage has reached the 10% risk curve.
- 3.3. Review fitness-for-purpose of the stress test regime (and the specified scenarios) as a tool to assist purchasers assess and manage risk.
- 3.4. Assess whether the customer compensation scheme (CCS) aligns with the regime's purpose (as a tool to incentivise prudent fuel conservation).
- 3.5. Review the regulatory arrangements for the provision of relevant thermal fuel information (gas, coal, diesel and future fuels such as hydrogen).
- 3.6. Assess whether there are adequate incentives for open/transparent 'emergency zone' agreements of material value/quantity for both the supply and demand sides.

Process

- 3.7. Review operation of the SOSFIP (including the ERC assumptions) and EMP (in conjunction with the system operator). This includes assessing the rationale for two sets of curves, multiple triggers, and the various actions at each trigger, and whether changes are required.
- 3.8. Review the OCC process, including the funding and preparation.
- 3.9. Review the rolling outage process, including the end-to-end oversight, the SOROP, the PROPs, the system operator's and industry's preparedness, and the economic impact of rolling outages and the health and safety protection for consumers.
- 3.10. Review the communications for consistency (across agencies) and effectiveness. This should include a media sentiment review to assess how the messaging is being portrayed in public.
- 3.11. Review the operation of the stress test regime (use recent audit results) specifically the calculation methodology for relevance, accuracy and ease of use by participants.
- 3.12. Review the customer compensation scheme (CCS) settings (e.g. eligibility criteria), to ensure it will achieve its intended purpose if the alignment review of the CCS (see paragraph 3.4 above) confirms it should be retained.

System operator's performance

- 3.13. Assess the system operator's internal review of its own performance, and separately review the system operator's performance. It is intended this review will be separate from the BAU annual review of system operator performance.

Authority's performance

- 3.14. Assess the Authority's:
 - 3.14.1. preparation;
 - 3.14.2. reaction to leading indicators;
 - 3.14.3. operational response.

The assessment is to review both the actual performance, and the industry and other key stakeholders' (MBIE, Minister's office, MUEG etc) perception of the Authority's performance.

Out of scope

- 3.15. Assessment of the spot and forward market price levels, and whether this accurately reflected the risk.
- 3.16. Triennial review of the minimum weekly amount payable under the customer compensation scheme.
- 3.17. Annual review of system operator performance.
- 3.18. Annual review of security of supply, and the overdue review of the winter security margins.

4. Who

- 4.1. The review of the Authority's performance will be conducted by a suitable external consultant. This will include interviewing relevant Authority, MBIE, Minister's office and senior industry leaders.
- 4.2. The communications and media sentiment review will be to be conducted by a suitable external party.
- 4.3. The policy and processes reviews will be conducted by Authority staff, assisted by suitable external consultants.
- 4.4. The SRC will be requested to the consider the review's findings and provide appropriate advice to the Authority.

5. Deliverables

- 5.1. Initial outline/scope paper for discussion at the August 2021 SRC meeting.
- 5.2. Draft progress report for discussion at the October 2021 SRC meeting.
- 5.3. Progress/preliminary report and recommendations for the December 2021 Board meeting (TBC on confirmation of the scope).
- 5.4. Final report and recommendations for the February 2022 Board meeting (TBC on confirmation of the scope)