

SECRETARIAT PLANNING FOR THE RISK MANAGEMENT FRAMEWORK

SECURITY AND RELIABILITY COUNCIL

The secretariat failed to meet deadlines for actions related to the Security and Reliability Council's risk management framework. This paper sets out the proposed actions the secretariat commits to undertaking and notes some future possible developments that will not proceed without further endorsement from the Security and Reliability Council.

Note: This paper has been prepared for the purpose of the Security and Reliability Council. Content should not be interpreted as representing the views or policy of the Electricity Authority.

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1. Actions related to the risk management framework are overdue

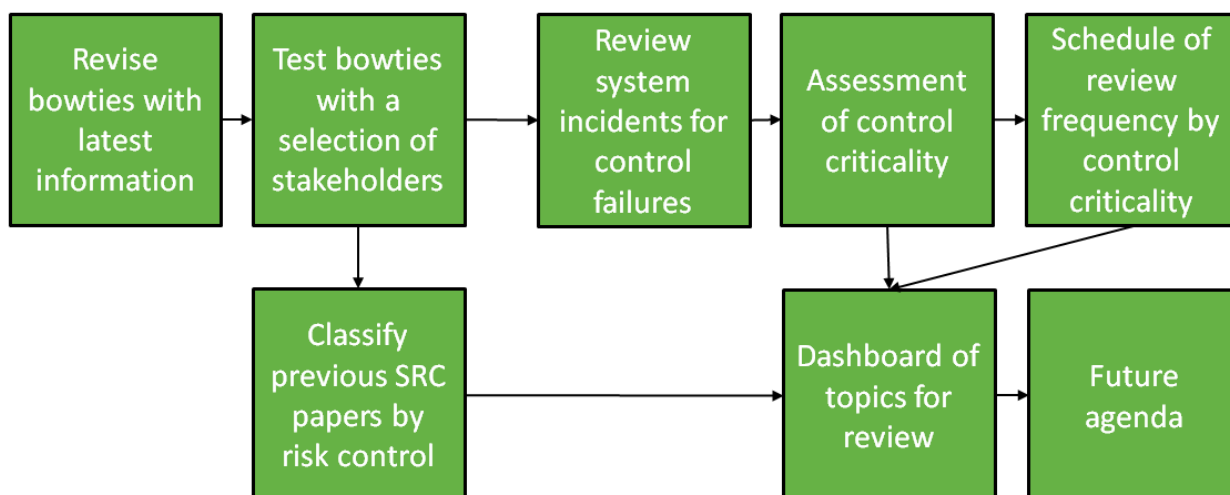
- 1.1. The SRC has previously received and considered papers on the development of a risk management framework (RMF).
- 1.2. The primary purpose of the RMF is to inform the SRC whether it is focussing its time and attention in a risk-based manner. That information should lead to assurance that the SRC is receiving papers on the right topics or lead to improvements in the topics that the SRC receives papers on.
- 1.3. The secretariat undertook to complete the following RMF-related actions by the first meeting of 2019:
 - “Secretariat to engage with industry and the Commerce Commission in further development of the risk management framework (RMF)”*
 - “Secretariat to assess what the threshold should be for a risk that the SRC ‘can live with’ and incorporate into further development of the RMF.”*
 - “Secretariat to organise a bespoke briefing on the SRC’s risk management framework for the Chair, new members and any other members wishing to attend.”*
- 1.4. Of these three actions, the first two have not been completed. The secretariat apologises for the failure. The bespoke briefing referred to in the third action was attended by Heather Roy, Greg Skelton and Nathan Strong.
- 1.5. This paper sets out the secretariat’s plan of proposed RMF development. The secretariat expects this work to be completed mid-year. If ready, this will be presented to the 20 June 2019 SRC meeting. If it is not ready for the June meeting, the RMF will be presented to the 24 October 2019 SRC meeting.

2. Proposed RMF development

Overview of proposed development

- 2.1. Figure 1 below provides an overview of proposed RMF development.

Figure 1: Overview of RMF development



2.2. The above tasks are described in detail below.

Detail of proposed development

Revise bowties with latest information

2.3. Since there has been little material progress on the development of the RMF bowties since mid-2018, the secretariat will review the bowties in light of relevant information since then, such as:

- (a) possible changes in the regulatory settings of official conservation campaigns
- (b) extended reserve project updates
- (c) the SRC's environment scan and strategic priorities.

Test bowties with a selection of stakeholders

2.4. A key piece of feedback from the SRC during the development of the RMF has been that the SRC expects governance-level involvement with the RMF bowties (and not to have management-level involvement). This was the catalyst for the SRC to require the secretariat to test the bowties with a selection of suitable industry experts.

2.5. The secretariat is planning to test the bowties in separate workshops with relevant personnel from:

- (a) Transpower
- (b) a gentailer
- (c) a distributor
- (d) the Commerce Commission.

2.6. The secretariat will also retest the bowties with relevant Electricity Authority personnel. Through this approach we will obtain advice on the usefulness of the bowties, test the inputs, fill in information gaps, and identify opportunities for further improvement.

- 2.7. Engagement with stakeholders will provide assurance for the SRC will that the bowtie model aligns with industry practice and draws from information that is as accurate as possible.
- 2.8. To hasten the delivery of usable outputs for the SRC, the bowties will not include an assessment of control effectiveness.

Classify previous SRC papers by risk control

- 2.9. The secretariat will complete a review of previous papers provided to the SRC. Each paper will be classified in terms of which bowtie controls were substantively discussed.
- 2.10. The purpose of this task is to assess what the SRC has received to inform the development of a dashboard of topics for review.

Review system incidents for control failures

- 2.11. The secretariat will, in consultation with the system operator, select four to ten major incidents in approximately the last ten years of the power system. The SRC will review previous reports on these incidents (no primary research involved) and identify which bowtie controls failed during those incidents.
- 2.12. The purpose of this task is to provide some empirical input to the following step of assessing the criticality of controls. It should also generate some insight into the effectiveness of controls for future discussion papers for the SRC.

Assessment of control criticality

- 2.13. The secretariat will categorise all of the controls in the bowties by criticality.
- 2.14. This will involve some judgement calls about the potential impact of a control failure. This process is likely to tend to prioritise group controls closest to the central event, as group controls mitigate the widest range of threats and consequences.
- 2.15. The secretariat would present the assessment to the SRC for approval.

Schedule of review frequency by control criticality

- 2.16. The secretariat will develop a schedule that guides the frequency with which the secretariat should report to the SRC depending on how critical the control is. For example, the schedule could specify that:
 - (a) controls with high criticality are subject to SRC review at least annually
 - (b) controls with medium criticality are subject to SRC review at least every three years
 - (c) controls with low criticality are subject to SRC review at least every five years.
- 2.17. The secretariat would present the schedule to the SRC for approval.

Dashboard of topics for review

- 2.18. The secretariat will create a dashboard that ranks bowtie controls from those most in need of SRC attention to least. That dashboard would be presented to every SRC meeting as part of the 'future agenda' paper.
- 2.19. Figure 2 below is an illustration of what information such a dashboard could contain. The data shown is fictitious.

Figure 2: Mock dashboard of bowtie controls ordered by SRC attention

Control name	Control ID	Ranking	Change in ranking	Date last discussed	Criticality
Extended reserve	LG03	1	No change	1/1/2012	High
Instantaneous reserve	LG09	2	 2	9/9/2016	High
Training of Transpower control room operators	LR14	3	 5	6/6/2017	High
Restoration of interruptible load	RG02	4	 2	4/4/2017	Medium
...					
Ancillary services procurement plan	LT34	58	 43	3/3/2019	Low

- 2.20. The dashboard will be the output of the RMF that is most visible to the SRC. The quality of the data in the dashboard will predominantly be determined by the accuracy and thoroughness of the underlying bowties.

Future agenda

- 2.21. The dashboard will influence future agendas to be considered by the SRC. The secretariat will enhance the standing 'future agenda' paper to look further ahead and illustrate the planned pipeline of papers for the SRC's consideration.
- 2.22. The SRC would have visibility of the dashboard and future agenda at every meeting and be able to direct that changes are made.

3. Possible future RMF development

- 3.1. The secretariat is aware of other potential developments it could make to the RMF. However, the secretariat considers these should be put on hold until the SRC is satisfied with the core functionality of the RMF.
- 3.2. Some possible future RMF developments are set out below.
- (a) Determine an effectiveness rating for each control and use this to modify assessments of criticality.

- (b) Review the bowties annually based on the SRC's environment scan and strategic priorities. This will bring a top-down approach to RMF input which would augment the existing bottom-up approach.
 - (c) Review overseas power system incidents for control failures.
 - (d) Use the bowties to frame and illustrate control failures identified in any post-event reviews brought to the SRC.
- 3.3. Any future development of the RMF must be mindful of the level of the SRC's involvement. It is important that the information provided to the SRC is pitched to a governance group.

4. Questions for the SRC to consider

- 4.1. The SRC may wish to consider the following questions.

- Q1. Does the SRC have any concerns with the RMF developments proposed in section 2?**
- Q2. What further information, if any, does the SRC wish to have provided to it by the secretariat?**
- Q3. What advice, if any, does the SRC wish to provide to the Authority?**