

19 July 2016

Dr Brent Layton
Chair
Electricity Authority
PO Box 10041
Wellington 6143

Dear Brent

Advice resulting from 21 June 2016 meeting of the SRC

The Security and Reliability Council (SRC) is tasked with providing the Electricity Authority with independent advice on the performance of the electricity system and the system operator, and reliability of supply issues.

The SRC considered and discussed ten different papers at its 21 June 2016 meeting. This letter is the SRC's advice arising from seven of those papers.

Advice on risk management lessons arising from Bass Strait HVDC link failure

The SRC received an update on the development of its risk management framework. As part of that discussion, SRC members discussed the failure of Australia's Bass Strait HVDC link¹ as an example of a risk where:

- a consequence of the risk (a long return-to-service time that met neither customer needs nor expectations) had not been well anticipated by any of the risk owners, despite their risk management activities
- each risk owner managed its own risk but the interaction of risks between the different risk owners involved may have been missed, and there may be lessons here for how the SRC views risks that exist on the boundaries of responsibility between industry participants.

The SRC felt that there was a lesson for New Zealand from this event that relates to boundaries of responsibilities and taking account of customers' needs when managing risks.

Advice on 'edge' technologies impacting security and reliability

The SRC received a paper that highlighted some examples of 'edge' technologies that are impacting on security and reliability in overseas jurisdictions. Because of their significant uptake in some jurisdictions, solar photovoltaics featured extensively. The SRC concluded that:

- the various studies currently underway (nationally and internationally) appear to be suitable for New Zealand's purposes at this time
- the increasing internationalisation of standards (such as AS/NZS 4777) are good news for New Zealand as a technology- and price-taker

¹ The HVDC link ([Basslink](#)) connects Tasmania and South Australia. A fault occurred on [20 December 2015](#) and was not completely resolved until [23 June 2016](#). [Responses included](#) increasing gas and diesel generation capacity, agreed load reductions from industrial consumers and a public conservation campaign.

- there is a threat to system reliability posed by the importation and installation of equipment that does not comply with relevant standards (and that may or may not purport to meet the relevant standards).

The SRC will keep a watching brief on this topic and anticipates receiving information annually from its secretariat.

Advice on the impact of thermal generation decommissioning

The SRC received Transpower's detailed report on thermal and voltage limits in the upper-North Island during 2018-2020 (which was prepared prior to Genesis Energy's announcement to extend the availability of the Huntly Rankine units) and a brief overview of the broader implications of this announcement. In light of Genesis' announcement, the SRC notes that:

- without earlier investment or intervention, there are power system issues expected to emerge from 2021
- Transpower's major capital project to mitigate such power system issues has tight, but not unachievable, timeframes (an 'amber light' status)
- stakeholders ought to be aware that the Huntly Rankine units could still come out of service earlier than 2022 if circumstances change, such as the Tiwai aluminium smelter closing
- stakeholders ought to be aware that Tiwai closing has little impact on voltage and thermal limits in the upper-North Island.

Advice on the National Winter Group's report for winter 2016

The SRC wrote to the Authority Board on 21 April 2016 with advice on the National Winter Group's report for winter 2016. The SRC's letter explained the uncertainty at that time arising from a 5 April 2016 customer advice notice from the system operator relating to the period of an HVDC filter outage during 7-13 June 2016. The SRC's letter to the Authority set out some questions the SRC sought answers to.

The Authority's 11 May 2016 letter of response asked the SRC to provide further advice, including advice on whether the communication of the issue in the customer advice notice was satisfactory.

The SRC received advice from, and discussed the matter with, the system operator. The SRC:

- was satisfied with the system operator's response and had no advice for improvements in addition to those already completed or planned by the system operator
- noted that the system operator agreed that its communication on the matter was not ideal and is something that it is looking to improve in future.

Advice on comparing the SRC with international counterparts

The SRC received a presentation from its secretariat that gave a high-level comparison of the SRC's functions with counterparts in Australia (the Reliability Panel), the United Kingdom (the SQSS Review Panel²) and North America (the North American Electric Reliability Corporation, and its subsidiary, the Reliability Issues Steering Committee).

The SRC notes that it has reviewed these comparisons, this but plans no further activity. The most comparable international jurisdictions are still very different to New Zealand and the SRC seems to be functioning well enough so as not to warrant the time and expense of investigating this in further detail.

² SQSS stands for the National Electricity Transmission System Security and Quality of Supply Standard.

Advice on discussions about the strategic alignment and environment of the SRC

In response to members seeking an increased strategic focus, the SRC has received the following strategy-related papers.

- At its 22 October 2015 meeting, a paper discussing the SRC's strategic alignment with its statutory function. The paper concluded that the SRC requires better reporting of reliability-related matters (both loss of supply and quality of supply), though the challenges of improved reliability monitoring have been well-explored by the SRC. The paper also concluded that reporting to the SRC of security of supply and system operator performance is appropriate for the SRC's purposes.
- At its 21 June 2016 meeting, a paper comparing the SRC with international counterparts. This paper identified some entities with a few functions in common with the SRC but did not find any entities that had similar functions and regulatory environment.
- At its 21 June 2016 meeting, a paper discussing the SRC's strategic environment. Some of the environmental influences discussed were: contingent hydro storage, fuel supply risks (particularly gas), power system constraints, demand uncertainty (including Tiwai), 'edge' technologies, aging assets and information security.

The SRC is satisfied that over the course of the last year that it has increased its focus on strategically important matters. For example, the SRC has received three papers on its risk management framework, three papers on 'edge' technologies and three papers on thermal generation decommissioning.

Advice on the performance of the secretariat

The SRC have completed their annual assessment of the performance of the secretariat. Overall, the SRC has been very satisfied with the secretariat's performance, though some suggestions for improvement have been made. A written summary of the SRC's reflections on the secretariat's performance has been provided to the secretariat.

There is no further advice arising from the matters discussed at the SRC's 21 June 2016 meeting.

Yours sincerely



Mike Underhill
Chair
Security and Reliability Council

cc SRC members, Carl Hansen (Electricity Authority)

22 August 2016

Mike Underhill
Chair
Security and Reliability Council (SRC)

Dear Mike

Advice resulting from the SRC meeting on 21 June 2016

Thank you for your letter of 19 July 2016 providing the SRC's advice for the Authority resulting from the SRC's meeting on 21 June 2016. In that letter, the SRC provided advice on seven matters. The Authority notes all of the advice provided and makes some remarks below about one of these matters.

Advice on risk management lessons arising from Bass Strait HVDC link failure

As a result of the SRC's advice on this matter, the Authority has sought a report from Transpower, as asset owner and system operator, about the nature, level and management of risks should New Zealand's HVDC link suffer a major failure.

The Authority has not requested that the SRC also receive and consider Transpower's report on this matter but, if the SRC would also like to consider this report, this should be raised with the SRC's secretariat for discussion with Transpower.

Thank you for the SRC's continued diligent consideration of security and reliability matters.

Yours faithfully

Brent Layton
Chair

Cc: SRC secretariat