

15 February 2018

Dr Brent Layton
Chair
Electricity Authority
PO Box 10041
Wellington 6143

Dear Brent

Advice resulting from 6 November 2017 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 six different papers at its 6 November 2017 meeting. This letter is the SRC's advice arising from five of those papers.

Advice on security of supply matters

The SRC received two papers relating to security of supply. The first was a forward-looking view of security of supply activities; the second was the system operator's review of winter 2017.

The SRC's advice to the Authority is that:

- in general, the power system and market arrangements operated as intended during the dry winter of 2017
- the SRC is looking forward to hearing further from the Authority about the schedule for reviews of security of supply regulatory settings
- when reviewing regulatory settings, the Authority should regard the ability to successfully explain the security of supply regime to the public as an essential design parameter of the regulatory settings.

Advice on the impact of greater solar photovoltaic (PV) penetration in New Zealand

The SRC received a presentation from Transpower on its findings from its investigation into the future impacts on solar PV in New Zealand.

The SRC's advice to the Authority is that:

- neither the transmission network nor national power system characteristics are likely to impede or limit the uptake of solar PV generation
- the scope of Transpower's report does not extend to distribution network impacts, so some of the demonstrated problems in overseas distribution networks remain valid concerns for New Zealand
- Transpower found a commonly used inverter did not comply with the AS/NZS standards as purported. If this is indicative of a problem with this type of inverter, the SRC:
 - o understands this could affect ~20% of all current installations with direct current distributed generation

- considers preventing non-compliant installations is far cheaper than letting the problem grow and be costly to remediate when it eventually causes network management issues
- considers this may indicate problems with the standards certification process or the installation process
- wishes Transpower to share its inverter testing results with relevant organisation(s) such as Worksafe New Zealand, Standards New Zealand, International Accreditation New Zealand.

Advice on Waikato and upper-North Island Voltage Management Investigation

The SRC received a presentation from Transpower's grid development personnel about their project investigating options to manage Waikato and upper-North Island voltage beyond 2022.

The SRC's advice to the Authority is that:

- there are some interactions between regulated grid development investments and market-based generation investments and these, in principle, could be uncoordinated at considerable cost to consumers
- in practice, commercial negotiations could lead to announcements in 2018 in regards to the Huntly Rankine units. While any announcement is expected to provide a roadmap for those units, if Genesis Energy does decide to operate the Rankine units beyond 2022, Transpower could avoid some capital spend. While ideally Transpower would know this before it applies to the Commerce Commission in late 2018 or early 2019 any capital spend related to any Huntly Rankine decision can be ringfenced within the application and only triggered once the direction is known.
- the future focus of the yet-to-be-established Climate Commission could have a significant effect on the timing and nature of decisions with respect to thermal plant in New Zealand.

The SRC has directed its secretariat to keep the SRC informed of any significant developments on this matter.

Advice on the performance of the system operator for the year ending 30 June 2017

In relation to the performance of the system operator for the year ending 30 June 2017, the SRC received the system operator's annual self-review and the Authority's draft executive summary of its annual review.

The SRC's advice to the Authority is that:

- overall, performance seems to be good and trending the right way
- the SRC encourages the system operator to reduce the likelihood of breaches and other issues being caused by manual errors.

There is no further advice arising from the matters discussed at the SRC's 6 November 2017 meeting.

Yours sincerely



Mike Underhill
Chair
Security and Reliability Council

cc SRC members, Carl Hansen (Electricity Authority)