

Meeting Date: 24 October 2019

## REGISTER OF TOP SECURITY AND RELIABILITY RISKS

SECURITY  
AND  
RELIABILITY  
COUNCIL

This paper is to help the SRC brainstorm about electricity industry risks with the objective of ensuring that they spend their time dealing with the most consequential matters that could manifest over a mix of timeframes.

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

## Register of top security and reliability risks

### 1. Purpose

- 1.1. In its 20 June 2019 meeting, the SRC instructed the secretariat to prepare a list of top industry risks to electricity security/reliability, categorised by the timeframe in which they can manifest. Action item #4 records the exact request:  

“Secretariat to prepare a list of top industry risks (categorised by timeframe in which they can manifest) for the 24 October 2019 meeting.”
- 1.2. Table 1 overleaf contains the first draft list of these industry risks. The secretariat’s work on the risk management framework was the basis for the risks listed, but with significant changes to serve the SRC’s purpose for this list.<sup>1</sup>
- 1.3. In accordance with an SRC request, each future edition of this risk register will receive commentary from a different industry stakeholder. Prior to each meeting, a stakeholder will be asked to consider their own top ten risks and, in light of the SRC’s risk register, provide 2-3 paragraphs or a 2-3 minute video to briefly describe the security/reliability risks they want the SRC to know about. The secretariat intends to seek a diverse range of stakeholder views.

### 2. Top risks

- 2.1 Risks are sorted into three timeframe categorisations:
  - a) risks that could manifest within one year
  - b) risks that could manifest within five years
  - c) risks that could manifest in more than five years.
- 2.2 Five year timeframes were chosen as they are commonly used by other information disclosures and research (e.g. distributor asset management plans).
- 2.3 Risks that are latent and could arise at any time (risk of cyber-attack, natural disaster or economic downturn) have been excluded from this list.

### 3. Questions for the SRC to consider

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

- Q1. What structural or formatting improvements would the SRC like made to this risk register for future meetings?**
- Q2. What content changes would the SRC like made to this risk register for future meetings? In particular, would the SRC like its secretariat to not exclude latent/timeless risks?**
- Q3. What further information, if any, does the SRC wish to have provided to it by the secretariat?**

---

<sup>1</sup>

Previous papers that have listed risks were presented at the SRC meetings on 8 August 2019 ([Link](#)), 28 March 2017 ([Link](#)), 15 March 2016 ([Link](#)), 22 October 2015 ([Link](#)), and 1 July 2015 ([Link](#)).

**Q4. What advice, if any, does the SRC wish to provide to the Authority?**

**Table 1: Top security and reliability risks**

Ref	Short term Within 1 year	Ref	Medium term Within 5 years	Ref	Long term More than 5 years
S1	Commerce Commission's regulatory control period #3 impacts on reliability and asset health	M1	Black out risk increased if four-block extended reserve scheme is delayed or implemented poorly	L1	Impact of increased climate and weather related outages
S2	Risk of shortfalls arising from Kupe outage in November 2019	M2	Government setting of carbon goals	L2	Gas supply running down reduces generation adequacy and availability
S3	Risk of shortfalls arising from HVDC/Pohokura concurrent outages in March 2020	M3	Thermal generation availability (Huntly, Taranaki)	L3	Ageing generation, distribution and transmission assets leads to increased failures
S4	Electricity price review conclusions	M4	Increased capacity demand on some low voltage networks from electric vehicles	L4	Reduced resilience through greater dependence on automation/AI
S5	Dry winter / official conservation campaign			L5	Generation adequacy inefficiently low in face of demand growth from greater electrification of economy
				L6	Low voltage network congestion due to increase in small scale distributed generation
				L7	Loss of industry knowledge and capability through an aging workforce
				L8	Reliability treated less like a public good as new technology makes it more customisable