

RISK RADAR – 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 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.

Risk Radar - security and reliability risks

1. Purpose and background

- 1.1. This paper presents the latest version of the SRC's risk radar (Table 1). The risk radar supports the SRC to triage their time and attention in a risk-based way.
- 1.2. Risks are sorted into three categories:
 - a) risks that could manifest within one year.
 - b) risks that could manifest within more than one year.
 - c) persistent risks that could manifest at any time.
- 1.3. Within each category, risks are ordered by the SRC secretariat's rough estimation of consequence and likelihood, however this may change over time, and the order may not represent the current priorities.

2. Changes since the previous version

- 1.4. There are no proposed changes to the risk radar arising from the August meeting.
- 2.1 However, in discussion at the August meeting, members noted the following risks:
 - 2.2 The need for more energy (in addition to capacity), gas, firming capacity, geomagnetic storm resilience, and progress with tree regulation reform
 - 2.3 The need to maintain a balance between security of supply and affordability
 - 2.4 The reactive nature of the energy market, and the need for more forethought (for example with contingent storage) rather than responding to a crisis
 - 2.5 Cascading events, for example losing plant needed for the sector, on top of a lack of appropriate fuel sources
 - 2.6 We're not seeing entities take responsibility for the issues or the solutions
 - 2.7 Lack of load control being used by distributors (to address peaks) following changes to the Transmission Pricing Methodology
 - 2.8 The need to more efficiently use gas, to maximise its benefits to the sector under constrained hydro conditions
 - 2.9 Inaccurate commentary going unchecked and leading to political intervention and a perceived need to be seen doing something
 - 2.10 The impact on security if Huntly goes on outage during low hydro conditions
 - 2.11 Lack of understanding of, or work to address, the diversity of demand (differences between winter and summer consumer electricity-use profiles)
 - 2.12 The need for greater education about the sector to avoid inaccurate commentary going unchecked and leading to political intervention and a perceived need to be seen doing something

- 2.13 Dry sequences following dry sequences, impacting supply, and trust and confidence in the sector
- 2.14 increasing peak demand and degradation of after diversity maximum demand as consumers increasingly electrify their homes and businesses.
- 2.15 In the light of these noted risks, members are asked to consider what changes, if any, these require to the risk radar to ensure they are both captured and inform prioritisation of future SRC work. Please bring suggestions along for discussion at item #7 for the October meeting.
- 2.16 The current version of the risk radar is included at the end of this document.
- 2.17 As a reminder, the secretariat incorporated member-feedback into a revised risk radar, with the aim to:
- Reduce duplication of stated risks
 - More clearly set out cause and effect for each risk
 - Cluster items, as appropriate
- 2.18 A copy of the risk radar will be appended to the draft August minutes.

3. Questions for the SRC to consider

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

- Q1. What content changes would the SRC like made to the risk radar?**
- 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?**

SRC Risk Radar – Cause and Effect layout

Priority	Cause	Effect	Horizon	Comments
	Reduced gas supply	Reduced peaking and last resort generation	P	
	Insufficient collaboration	Increased costs, reduces reliability	P	
	Government policy misaligned with industry objectives	Reduced investment and confidence & reduced water for hydro output & reduced gas	P	
	Increased small scale DG	Network congestion	P	
	Weather events	Increased outages	P	
	Inadequate AUFLS	Blackouts	P	
	Cyber attack	Damages system assets	P	
	Physical attack	Damaged system assets	P	
	Pandemic	Reduced workforce, restricted travel	P	
	Less live work	Increased outages	P	
	Social media	Personnel/asset attacks	P	
	Natural disasters and fires	Damaged system assets	P	A resilience issue
	Delayed tree regulations	Increased outages	S	
	Regulator strategic priorities misaligned with industry objectives	Reduced investment and confidence	S	
	Commerce Commission regulations	Inhibits investment	S	
	Supply chain	Reduced goods/services	S	
	Dry Year	Increased prices and emissions & reduced market confidence and investment	S	
	Increased intermittency	Reduced capacity and flexibility at peaks	S	
	Poor extended reserve implementation	Increased blackouts	S	
	Fragmented government approach	Delays	S	
	Lack of thermal	Reduced capacity and flexibility	L	
	Demand increases outpace generation capacity increases	Causing outages	L	
	Inefficient market response	Insufficient generation	L	
	Early thermal exit	Reduced capacity and flexibility	L	
	Poor/unenforced standards	Reduced power quality	L	Through noncompliance
	Insufficient DER uptake	Network instability	L	
	Generation market misaligned with policy changes	Reduced capacity and flexibility	L	
	Inadequate maintenance of Aging assets	Increased failures	L	* Does this need a change in prioritisation as well?
	Over-reliance on AI and automation	Reduced emergency human input	L	Inadequate response leading to outages

	Ageing/emigrating workforce	Reduced institutional knowledge and people available to plan, design and build	L	
	EV uptake	Undermined LV network stability	L	
	Stranded asset costs	Reduced network viability	L	
	Simultaneous asset replacement	Reduced asset availability	L	
	Low-risk approach by industry	High-cost and consumer disengagement		*
	Consumer disengagement	Inadequate demand response and peaking issues		*

Key	Symbol/colour	Meaning	Horizon	Meaning
	Red	High priority	P	Persistent risks – could happen any time
	Amber	Medium priority	S	Risks that can manifest anytime in approx. the next year
	Green	Lower priority	L	Risks that can manifest in approx. 1-5 years

*** Proposed new entries/changes - Need further discussion at the October meeting**

