

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 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.

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. The secretariat proposes combining the previous medium term (one to five years) and long term (more than five years) categories. This reduces the number of columns to three, making the table easier to read,
- 1.4. 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

- 2.1 There are no changes to the risk radar arising from the October 2023 meeting.
- 2.2 Members have confirmed they are comfortable for a copy of the radar to be included in the minutes for each meeting.
- 2.3 Members are asked to consider what changes are needed to best utilise the radar in the SRC's work.
- 2.4 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
- 2.5 The changes made for the Q4 2023 (October) meeting include:
 - Merging medium- and long-term risks
 - Use of a cause-and-effect layout
 - Reduced wording, using a headline approach
 - adding a 'cause and effect' table in a spreadsheet layout, to assist members' analysis of risks
 - including a (viewable but non-editable) spreadsheet version in the Diligent resource centre
- 2.6 The current version of the risk radar is included at the end of this document.

3. Questions for the SRC to consider

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

- Q1. Is the SRC comfortable with the changes proposed to the risk radar, and the addition of the 'cause and effect' table in Diligent?**
- Q2. What content changes would the SRC like made to this risk radar for the next meeting?**
- Q3. What further information, if any, does the SRC wish to have provided to it by the secretariat?**
- Q4. 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 generation | P | |
| | Insufficient collaboration | Increased costs, reduces reliability | P | |
| | Government policy misaligned with industry objectives | Reduced investment and confidence & reduced water for hydro output | 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 disaster | Damaged system assets | P | |
| | | | | |
| | 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 | |
| | Ageing assets | Increased failures | L | |
| | 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 | |
|--|--------------------------------|----------------------------|---|--|

| 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 |

