

Meeting Date: 22 June 2018

A DISCUSSION OF THE SRC'S STRATEGIC ENVIRONMENT

SECURITY AND RELIABILITY COUNCIL

This paper is to aid the Security and Reliability Council's (SRC) discussion of its strategic environment. It provides a framework for considering the SRC's strategic issues, sets out some discussion material, and includes an environment scan of current strategic issues.

Note: This paper has been prepared for the purpose of discussion. Content should not be interpreted as representing the views or policy of the Electricity Authority.

Background

The Security and Reliability Council (SRC) functions under the Electricity Industry Act 2010 (Act) include providing advice to the Electricity Authority (Authority) on security of supply matters.

From time to time the SRC reserves space on its agenda to discuss the strategic environment for security and reliability issues. The SRC's last substantive strategic discussion was in June 2016.

The SRC Chair's 2017 survey of SRC members is also relevant. The survey highlighted some possible areas of improvement, three of which are relevant here:

- *"Occasionally, for instance after new members join, the scope and role of the SRC should be confirmed or debated."*
- *"The SRC would benefit from an annual "scanning" exercise as a discussion item on its agenda. This could take the form of the SRC receiving a Secretariat report on the potential security and reliability issues emerging on the horizon internationally and in New Zealand."*
- *"Once a year there should be an opportunity to discuss any emerging strategic issues."*

In light of several significant changes on the horizon, it seems timely to revisit the material from 2016 and consider the strategic landscape facing the SRC. The secretariat also notes that this is the first SRC meeting for two new SRC members.

The attached slides are to aid SRC discussion

To facilitate the SRC's discussion, the secretariat has developed the attached supporting material. It draws heavily on the strategic framework established in the June 2016 material, noting that many of the issues identified in 2016 are still relevant in 2018. The material has been refreshed to reflect significant developments in:

- the electrification of the economy
- climate change policy.

Although set out as a series of Powerpoint slides, the secretariat does not intend to verbally present that material in the meeting. Rather, the material provides a framework for considering the SRC's strategic issues and sets out some discussion material and a first-pass environment scan based around that framework. It also poses four key strategic questions for the SRC to consider (slide three) when discussing the changing landscape and the 2018 environment scan:

- Are the activities of the SRC well-aligned with the Authority's statutory objective and strategic planning?
- Is the SRC receiving the information it requires to be able to fulfil its role?
- Are there any specific issues the SRC considers it should be focussing on, or increasing its focus on, in the current environment?
- Is the SRC well-placed to provide the Authority with informed and timely advice across all aspects of its role?
 - forward and backward looking?
 - reactive and proactive?

The SRC may want to consider the following questions.

- Q1.** What comments would the SRC like to make in relation to the key strategic questions set out in slide three and repeated above?
- Q2.** What comments does the SRC have on the first-pass 2018 environment scan?
- Q3.** What further information in this area, if any, does the SRC wish to have provided to it by the secretariat?
- Q4.** Does the SRC consider that the knowledge areas required for the SRC to fulfil its role and functions are appropriately represented in the SRC forum?
- Q5.** What advice, if any, does the SRC wish to provide to the Authority?

22 June 2018

STRATEGIC ENVIRONMENT

Discussion document

SECURITY AND
RELIABILITY
COUNCIL

SRC Secretariat

A framework for considering SRC strategic issues

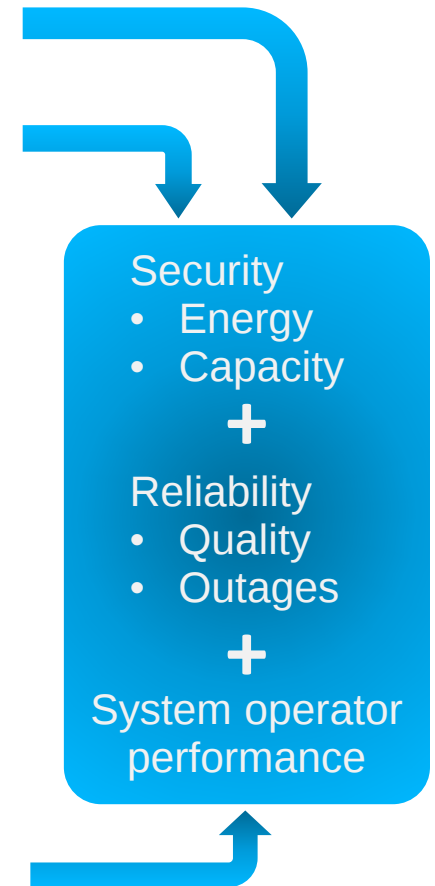
Function

The function of the SRC is to provide independent advice on the performance of the electricity system and the system operator, and reliability of supply issues.

Scope of SRC role

The Authority may seek the SRC's advice on:

- (a) the system operator's performance including against its PPOs, security of supply function and any other function important to the performance of the electricity system and/or to reliability of supply
- (b) system operation issues, including industry development needs and priorities relating to system operations
- (c) security of supply issues, including system security assessments and security of supply forecasts
- (d) reliability of supply issues, including planned and unplanned loss of supply and quality of supply issues
- (e) any other matters that the Authority considers to be within the function of the SRC.



Key strategic questions

Are the activities of the SRC well-aligned with the Authority's statutory objective and strategic planning?



Is the SRC receiving the information it requires to be able to fulfil its role?



Are there any specific issues the SRC considers it should be focusing on, or increasing its focus on, in the current environment?

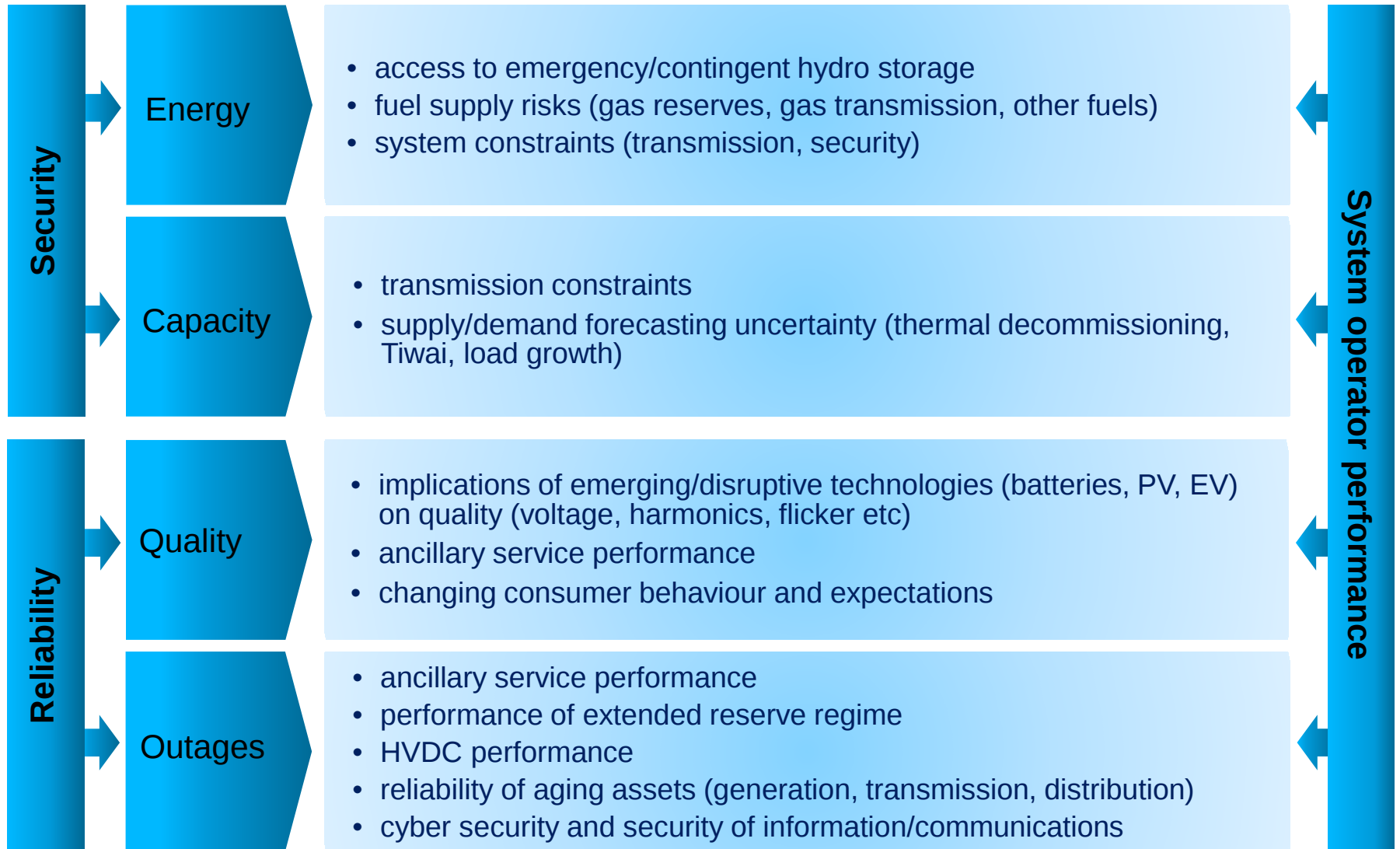


Is the SRC well-placed to provide the Authority with informed and timely advice across all aspects of its role?

*forward and backward looking?
reactive and proactive?*

Key SRC strategic issues

– the environment back in June 2016



Key SRC strategic issues

– the landscape is changing

Many of the strategic issues identified in 2016 remain relevant but significant developments are anticipated in two areas.

Electrification of the economy, leading to:

- increased importance of reliability due to greater dependence on electricity and therefore more significant consequences to the economy if there is a shortage or interruption
- increased exposure to renewable supply shortages in dry years
- challenges to capacity security with increasing charging of EVs/batteries

Climate change developments, including:

- reduced thermal contribution and increased renewables contribution to generation
- recent Government policy on gas exploration
- phasing out of coal at Huntly
- direct impacts of climate change on inflows and demand

Key SRC strategic issues

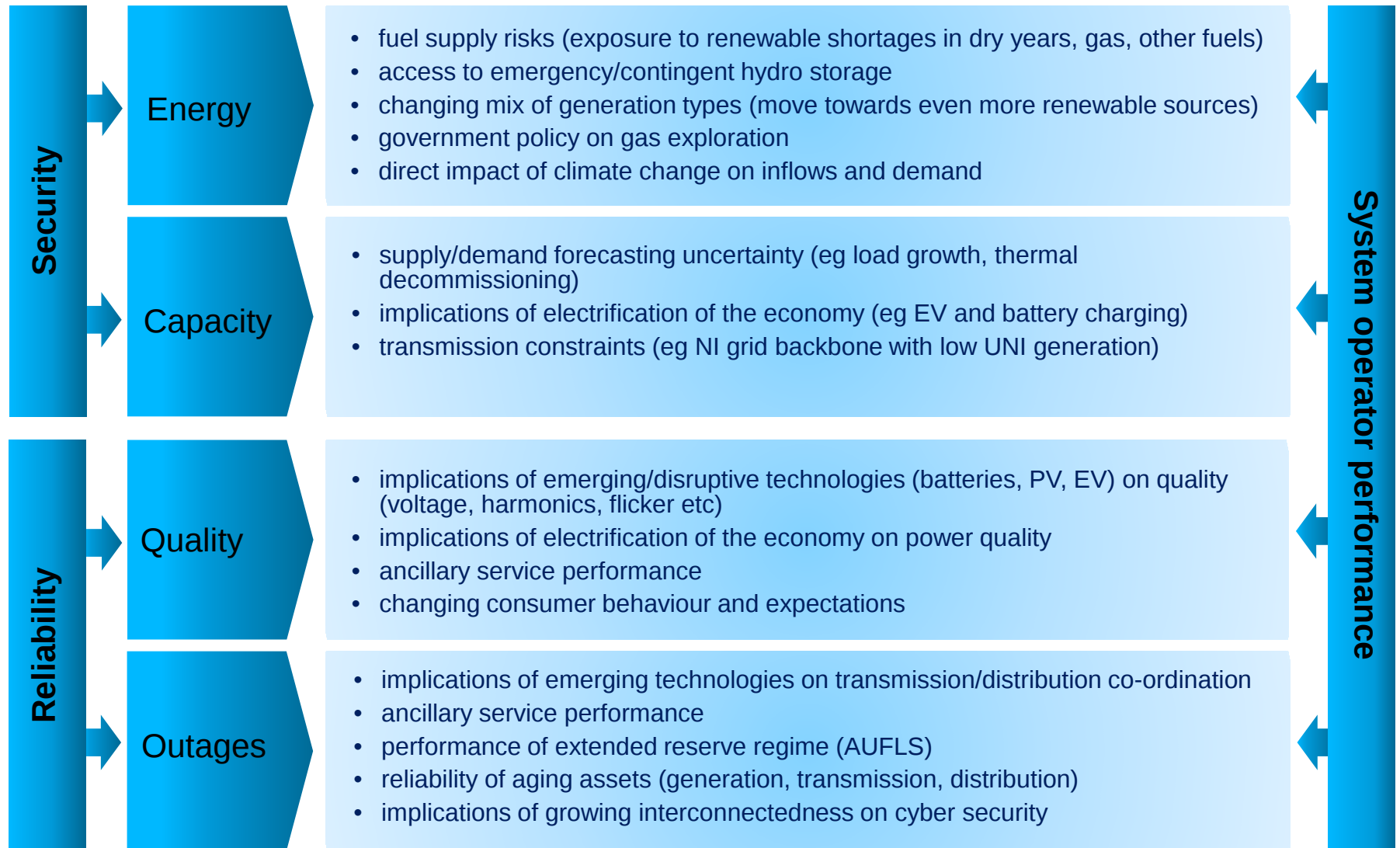
– the landscape is changing (contd)

Key workstreams underway create potential for further change in the sector:

- Productivity Commission recently published its draft report on transitioning to a low-emissions economy
- Interim Climate Change Committee recently established as a precursor to the independent Climate Change Commission
 - tasked with working on how New Zealand transitions to a net zero emissions economy by 2050, including planning now for the transition to 100% renewable electricity generation by 2035
- Electricity Pricing Review objectives include the need to maintain security and reliability of supply as technology evolves and we transition to a lower emissions future
- Transpower recently published Te Mauri Hiko – Energy Futures which explores enabling New Zealand's sustainable energy future
 - closely examines a range of electricity supply, demand and future technology scenarios and the implications for security

Key SRC strategic issues

– environment scan for June 2018



Key SRC strategic issues

– areas of knowledge needed in the SRC forum

Knowledge area	
Long-term interests of consumers:	– directly-connected consumers – commercial and industrial consumers – residential and other small consumers
System operations	
Security of supply	
System performance, reliability and resilience	
Power systems engineering	
Electricity generation:	– hydro generation (South Island) – hydro generation (North Island) – thermal generation (including fuel supply) – wind generation – distributed generation
New risks and technologies (including EVs, batteries, smart grid, cyber security)	
Transmission	
Distribution	
Demand-side management	
Regulatory and governance	
Strategic, commercial and economic analysis	

Does the SRC consider that these knowledge areas are appropriately represented in the SRC forum?

Authority work relevant to the SRC

The Authority's 2018/19 work programme contains a number of key projects relevant to the strategic environment scan:

- Refining and implementing the new arrangements for extended reserve (also known as AUFLS)
- Reviewing Official Conservation Campaign (OCC) settings and the Security of Supply Forecasting and Information Plan (SOSFIP)
 - including treatment of contingent hydro storage
- Reviewing winter security standards
- Business-as-usual workstreams related to security and reliability
 - including system operator performance assessment, annual security of supply assessment, post-event reviews, reliability monitoring

Note: reviewing the under-frequency event charge regime is NOT on the work programme, which means that the current regime will remain for some years yet