Meeting Date: 6 August 2020

Forward Work programme

Security and Reliability Council

This paper presents the proposed SRC's multi-year work programme.

The Chair intends the SRC discuss the future programme in light of the discussion in the Strategy and Risk working session.

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.

Work Programme

1. Purpose and background

1.1 This paper presents the SRC's work programme for the period 2020-23 as at the 12 May 2020 SRC meeting.

1.2 The purpose of this paper is to inform the SRC of the multi-year work programme and improve it with SRC feedback.

1.3 The objective of the work programme is to:

a) focus the SRC's attention using a risk-based method.

b) better coordinate the SRC's workload.

c) improve planning and budgeting for the secretariat to fulfil the SRC's workload.

1.4 The themes for each meeting is set out in Table 1 and the SRC work programme for 2020-23 is set out in Table 2 below.

1.5 The associated input information is set out in Appendix A.

2. The multi-year work programme may change

2.1 There will be significant discussion about the future strategy at the Strategy and Risk working session (agenda item 13).

2.1.1 The forward work programme for October 2020 and future meetings should be discussed in light of the discussion at the Strategy and Risk working session.

Table 1: Meeting themes proposed

Meeting		Theme	Related IDs in Table 2	Notes
2020	~~Q2~~ Q4?	Cyber-security – Deferred due to COVID-19 lockdown. SRC to agree when this theme will be presented	6, 8, 17, 18, 20	As this involves 12 presenters it may be necessary to split this theme over the Q2 and Q3 2020 meetings. Repeats in Q2 2023.
	Q4?	System operator functions	4, 5, 11, 27	
2021	Q1	Fit-for-purpose reviews of regulation and monitoring	2, 10, 16, 25, 26	
	Q2	Understanding consumers	36, 37, 38	
	Q4	Emergency preparedness	3, 7, 13, 14, 23, 26	
2022	Q1	Risk and asset management	15, 24	Nine presenters involved
	Q2	Transmission	19, 28, 29, 30	
	Q4	Gas industry reliability and resilience	9	Involves at least four different presenters. When this topic was last covered, the SRC also received a presentation from John Kidd of Woodward Partners.

3. Questions for the SRC to consider

3.1 The SRC may wish to consider the following questions:

Q1. What changes, if any, does the SRC wish to make to the forward work programme?

Q2. What advice, if any, does the SRC wish to provide to the Authority?

Table 2: Multi-year work programme

ID	Information provider	Information to be provided	2020				2021				2022				2023			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
20	Transpower (GO and SO)	Cyber-security management														**DUE**		
6	Vector	Cyber-security management			**?**											**DUE**		
6	Powerco	Cyber-security management			**?**											**DUE**		
6	Orion	Cyber-security management			**?**											**DUE**		
6	Wellington Electricity	Cyber-security management			**?**											**DUE**		
6	Unison	Cyber-security management			**?**											**DUE**		
17	Contact Energy	Cyber-security management			**?**											**DUE**		
17	Genesis Energy	Cyber-security management			**?**											**DUE**		
17	Mercury Energy	Cyber-security management			**?**											**DUE**		
17	Meridian Energy	Cyber-security management			**?**											**DUE**		
18	Advanced metering services	Cyber-security management			**?**											**DUE**		
18	Intellihub	Cyber-security management			**?**											**DUE**		
8	National Cyber Security Centre	Overall cyber-security management of the electricity industry		**DUE**												**DUE**		
33	System operator	Annual self-review of performance				**DUE**				**DUE**				**DUE**				**DUE**
4	System operator	Ancillary services (frequency keeping, instantaneous reserves, over-frequency reserve, voltage support, but excluding black start).				**DUE**												

3	System operator	Emergency preparedness and business continuity planning.											DUE										
5	System operator	Preparedness for rolling outages							DUE														
7	System operator	Power system restoration arrangements including black start											DUE										
11	System operator	Credible Event Reviews							DUE														DUE
21	System operator	Generation capacity security (NZ Generation Balance)	DUE								DUE						DUE					DUE		
22	System operator	Generation energy security (Security of supply updates)				DUE							DUE						DUE				DUE	
40	Secretariat	Industry Understanding of Risks	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE	DUE
35	Secretariat	Risk and strategy environment scan				DUE							DUE						DUE				DUE	
36	Secretariat	Understanding consumer behaviour and expectations							DUE															
37	Secretariat	Understanding Demand for Electricity							DUE															DUE
38	Secretariat	Understanding the value of electricity to consumers	DUE						DUE															
39	Secretariat	Understanding the impacts of climate change																	DUE					
23	Contact Energy	Emergency preparedness, including fuel supply availability in a post-emergency situation											DUE											
23	Genesis Energy	Emergency preparedness, including fuel supply availability in a post-emergency situation											DUE											

23	Mercury Energy	Emergency preparedness, including fuel supply availability in a post-emergency situation		**DUE**		
23	Meridian Energy	Emergency preparedness, including fuel supply availability in a post-emergency situation		**DUE**		
24	Contact Energy	Risk and asset management			**DUE**	
24	Genesis Energy	Risk and asset management			**DUE**	
24	Mercury Energy	Risk and asset management			**DUE**	
24	Meridian Energy	Risk and asset management.			**DUE**	
9	Gas Industry Company	Reliability and resilience of the gas industry.			**DUE**	
9	First Gas	Reliability and resilience of the gas industry.			**DUE**	
9	OMV	Reliability and resilience of the gas industry.			**DUE**	
9	Todd Energy	Reliability and resilience of the gas industry.			**DUE**	
31	Electricity Networks Association	Improving reporting of 'Various measures of reliability'	**DUE**			
1	Electricity Authority and system operator	Automatic under-frequency load shedding (extended reserve)	**DUE**			**DUE**

27	Electricity Authority and system operator	Regulatory arrangements for official conservation campaign and security of supply forecasting and information policy (SOSFIP) regulatory development.							**DUE**														
30	Electricity Authority and Commerce Commission	Regulatory arrangements for transmission investment.														**DUE**							
34	Electricity Authority	Annual review of system operator performance	**DUE**						**DUE**	**DUE**					**DUE**	**DUE**					**DUE**	**DUE**		
12	Electricity Authority	Various measures of reliability				**DUE**					**DUE**						**DUE**						**DUE**	
25	Electricity Authority	Fit-for-purpose review of regulation and monitoring: consumer-premise equipment								**DUE**													
26	Electricity Authority	Business continuity and disaster recovery of market operation service providers other than the system operator											**DUE**										
32	Electricity Authority	Security/resilience papers arising from Electricity Price Review request	**DUE**	**DUE**	**DUE**	**DUE**	**DUE**	**DUE**															
15	Vector	Risk and asset management.														**DUE**							
15	Powerco	Risk and asset management.														**DUE**							
15	Orion	Risk and asset management.														**DUE**							
15	Wellington Electricity	Risk and asset management.														**DUE**							
15	Unison	Risk and asset management.														**DUE**							

2	Commerce Commission	Fit-for-purpose review of regulation and monitoring: Transpower.	**DUE**	**DUE**		
10	Commerce Commission	Fit-for-purpose review of regulation and monitoring: distributors.		**DUE**		**DUE**
16	Electricity Authority	Fit-for-purpose review of regulation and monitoring: generators.		**DUE**		
13	Transpower and the Electricity Authority	The communications plans and preparedness strategies of key agencies for supply emergencies.	**DUE**	**DUE**		
14	Ministry of Civil Defence & Emergency Management	Emergency preparedness of the electricity industry		**DUE**		
19	Grid owner	Risk & asset mgmt. planning			**DUE**	
29	Grid owner	Transmission capacity planning			**DUE**	
28	Grid owner	Transmission outage management (scheduling, reduced security)			**DUE**	

Appendix A: Changes to dashboard of risk controls

Table 3: Prioritised dashboard of risk controls

ID	Area of interest	Information provider	Information to be provided	Control criticality	Control ineffectiveness	Risk rating	Relates to system operator performance	Review cycle	Last provided to SRC
2	System failure	Commerce Commission	Whether regulation and compliance monitoring of Transpower is adequate, is keeping up with technology and is fit for purpose.	5	3	15	No	2-yearly	In last 5 years
39	Understanding the impacts of climate change	Secretariat	Reliant on climate models from NIWA, Metservice and others. Additional information needed to understand and quantify the impacts.	3	5	15	No	2-yearly	Never or >5 years ago
9	Capacity and energy security	Gas sector representatives	Reliability and resilience of the gas industry (with implications for electricity generation capacity and energy security).	**5**	3	15	No	3-yearly	June 2019
4	System operations	System operator	Ancillary services (frequency keeping, instantaneous reserves, over-frequency reserve, voltage support, but excluding black start).	4	3	12	Yes	4-yearly	Never or >5 years ago
5	Capacity and energy security	System operator	Preparedness for rolling outages	3	4	12	Yes	4-yearly	Never or >5 years ago
6	System failure	Distributors	Cyber-security management	3	4	12	No	4-yearly	Never or >5 years ago
7	System operations	System operator	Power system restoration arrangements including black start	4	3	12	Yes	4-yearly	In last 5 years

ID	Area of interest	Information provider	Information to be provided	Control criticality	Control ineffectiveness	Risk rating	Relates to system operator performance	Review cycle	Last provided to SRC
8	System failure and social impact	National Cyber Security Centre	Overall cyber-security management of the electricity industry	3	4	12	No	3-yearly	In last 5 years
10	System failure	Commerce Commission	Whether regulation and compliance monitoring of distributors is adequate, is keeping up with technology and is fit for purpose.	4	3	12	No	Annual	In last 5 years
11	System operations	System operator	Credible Event Reviews (that determine whether, and how, power system risks managed).	5	2	10	Yes	3-yearly	Never or >5 years ago
12	Various	Electricity Authority	Various measures of reliability	2	5	10	No	Annual	June 2018
1	System operations	Electricity Authority and system operator	Automatic under-frequency load shedding (and extended reserve) arrangements.	5	2	10	Yes	3-yearly	March 2020
38	Understanding the value of electricity to consumers	Secretariat	Transpower- Studies on VoLL. The figures currently used are from 15 years ago, but recent research shows they're indicative for most GXPs.	3	3	9	No	4-yearly	March 2020
14	Social impact	Ministry of Civil Defence & Emergency Mgmt	Emergency preparedness of the electricity industry	3	3	9	No	5-yearly	June 2019
15	System failure	Distributors	Risk and asset management (e.g. planning, reporting, documentation, emergency management etc.).	3	3	9	No	4-yearly	Never or >5 years ago

ID	Area of interest	Information provider	Information to be provided	Control criticality	Control ineffectiveness	Risk rating	Relates to system operator performance	Review cycle	Last provided to SRC
16	System failure	Electricity Authority	Whether regulation and compliance monitoring relating to the failure of generation equipment is adequate, is keeping up with technology and is fit for purpose (such as the under-frequency event regime, asset owner performance obligations, dispatch requirements).	3	3	9	No	4-yearly	Never or >5 years ago
17	System failure	Generators	Cyber-security management	3	3	9	No	4-yearly	In last 5 years
3	System operations	System operator	Emergency preparedness and business continuity planning.	4	2	8	Yes	4-yearly	Never or >5 years ago
18	System failure	Metering provider	Cyber-security management	4	2	8	No	4-yearly	In last 5 years
19	System failure	Grid owner	Risk and asset management (planning, reporting, documentation, emergency management etc.).	4	2	8	No	3-yearly	In last 5 years
20	System failure	Transpower	Cyber-security management	4	2	8	No	3-yearly	In last 5 years
21	Capacity security	System operator	Generation capacity security (NZ Generation Balance and the Annual Assessment of Security of Supply).	4	2	8	Yes	Annual	March 2020
22	Energy security	System operator	Generation energy security (Security of supply updates and the Annual Assessment of Security of Supply).	4	2	8	Yes	Annual	March 2019
37	Understanding Demand for	Secretariat	Information from Transpower, GIC, and other sources on greater electrification of the economy including electrification of process heat and substitution	**2**	3	6	No	2-yearly	Never or >5 years ago

ID	Area of interest	Information provider	Information to be provided	Control criticality	Control ineffectiveness	Risk rating	Relates to system operator performance	Review cycle	Last provided to SRC
	Electricity		between electricity and gas						
36	Understanding consumer behaviour and expectations	Secretariat	Aggregating surveys and consumer opinion data from the Authority, EECA and Utilities Disputes, Commerce Commission, Transpower surveys and consumer advisory panel, Federated Farmers, Otago Energy Research Centre, and the Ministry of Business, Innovation and Employment's consumer survey	2	3	6	No	4-yearly	Never or >5 years ago
23	Social impact	Generators	Emergency preparedness, including fuel supply availability in a post-emergency situation	2	3	6	No	4-yearly	Never or >5 years ago
24	System failure	Generators	Risk and asset management (e.g. planning, reporting, documentation, emergency management etc.).	2	3	6	No	4-yearly	Never or >5 years ago
25	System failure	Electricity Authority	Whether regulation and compliance monitoring of consumer-premise equipment is adequate, is keeping up with technology and is fit for purpose (hosting capacity of low voltage networks, frequency and voltage response, standards development, awareness of existence of equipment).	1	5	5	No	3-yearly	In last 5 years
26	Social impact	Electricity Authority	Business continuity and disaster recovery of market operation service providers other than the system operator	2	2	4	No	5-yearly	Never or >5 years ago

ID	Area of interest	Information provider	Information to be provided	Control criticality	Control ineffectiveness	Risk rating	Relates to system operator performance	Review cycle	Last provided to SRC
27	Energy security	Electricity Authority and system operator	Regulatory arrangements for official conservation campaign and security of supply forecasting and information policy (SOSFIP) regulatory development.	2	2	4	Yes	5-yearly	In last 5 years
28	Capacity security	Grid owner	Transmission outage management (scheduling, reduced security)	2	2	4	No	4-yearly	Never or >5 years ago
13	Social impact	Transpower and the Electricity Authority	The communications plans and preparedness strategies of key agencies for supply emergencies.	3	1	3	Yes	5-yearly	March 2020
29	Capacity security	Grid owner	Transmission capacity planning (Transmission tomorrow, asset management documentation, demand forecasting, transmission alternatives, demand response etc.).	3	1	3	No	4-yearly	Never or >5 years ago
30	Capacity security	Commerce Commission and Electricity Authority	Regulatory arrangements for transmission investment (grid reliability standards, estimating value of lost load, investment analysis and approval).	3	1	3	No	4-yearly	Never or >5 years ago
31	Various	Electricity Networks Association (Quality of supply working group)	Improving reporting of 'Various measures of reliability'	1	N/A	-	No	Once	In last 5 years
32	Various	Electricity Authority	Security/resilience papers arising from Electricity Price Review request	2	N/A	-	Yes	One-off series of papers	Never or >5 years ago

ID	Area of interest	Information provider	Information to be provided	Control criticality	Control ineffectiveness	Risk rating	Relates to system operator performance	Review cycle	Last provided to SRC
33	Various	System operator	Annual self-review of performance	1	N/A	-	Yes	Annual	24/10/2018
34	Various	Electricity Authority	Annual review of system operator performance	1	N/A	-	Yes	Annual	24/10/2018
35	Various	Secretariat	Risk and strategy environment scan	1	N/A	-	No	Annual	20/06/2019
40	Industry Understanding of Risks	Secretariat	Content of this list to be vetted against a pool of 5 to 10 industry organisations - rotating between the largest generators and distributors	1	N/A	-	No	Every Meeting TBD	Never or >5 years ago

A.1 Changes have been made to items in the dashboard of work programme items since the last meeting. Of those changes, the ones altering the risk assessment are included in the following table.

Table 4: Changes to risk assessment since previous SRC meeting

Reference	Type of change	Description of change
#1	Modified	Control Ineffectiveness was reduced from 5 to 2 based on agenda item #15
#38	Modified	Control Ineffectiveness was reduced from 5 to 3 based on agenda item #11
#13	Modified	Control Ineffectiveness was reduced from 3 to 1 based on agenda item #14

A.2 The dashboard has been used to inform the multi-year work programme, shown in Table 1.

A.3 The following content is unchanged from the previous SRC meeting.

The risk rating process for Table 2

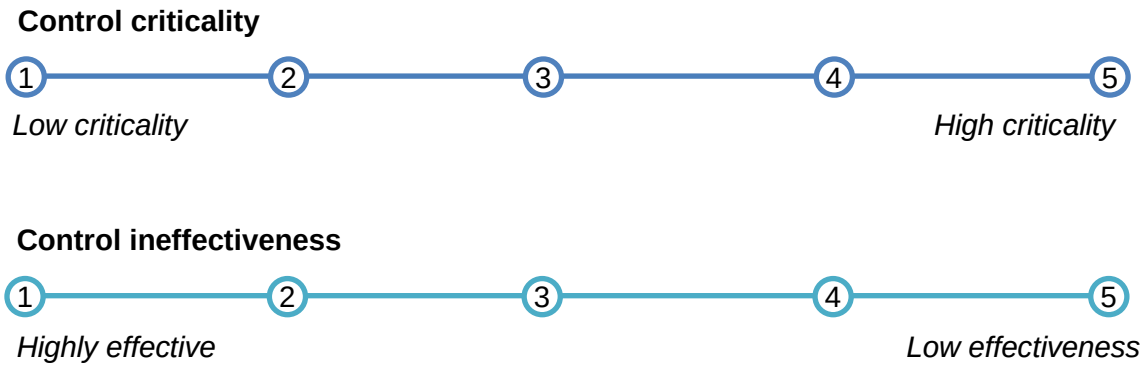
A.4 The criticality and (in)effectiveness of each risk control has been assessed.

A.5 A score of 1 indicates that the item is not critical, while a score of 5 indicates the highest level of criticality.

A.6 The level of effectiveness of each item at controlling for specific risks has also been assessed.

A.7 A score of 1 indicates that the control is highly effective, while a score of 5 indicates the lowest level of effectiveness.

Figure 1: Criticality and Ineffectiveness assessments



A.8 An overall risk rating is then calculated to provide a method of ranking and prioritising the controls. Each control's risk rating is determined by multiplying the criticality score by the effectiveness score. A score of 25 is considered high risk, while a score of 1 is considered very low risk.

Figure 2: Risk rating matrix