

MINUTES

Meeting number: 48

Venue: Rūnanga, Electricity Authority, Level 7, AON Centre, 1 Willis Street, Wellington

Time and date: 8.30am until 4.00 pm, Wednesday 21 August 2024

Members Present

- Hon Heather Roy (Chair)
- Ben Gerritsen
- Chris Ewers
- Nanette Moreau
- Phil Gibson
- Karen Frew
- Allan Miller
- André Botha (via Teams)
- Rebecca Larking (via Teams)

Apologies

- Paula Checketts

In attendance

| Name | Title | Agenda item # attended |
|--|---------------------------------------|------------------------|
| <u>Electricity Authority (Authority):</u> | | |
| Sarah Gillies | Chief Executive | Items, #8, #10-14 |
| Andrew Millar | GM, Policy | All items |
| Chris Otton | Manager, Market Policy Operations | All items excluding #3 |
| James Blake-Palmer | Senior Analyst, Policy (Secretariat) | All items excluding #3 |
| Sara Mateparae | Senior Legal Counsel | #6a |
| Clive Bull | Consultant, Authority | #6a |
| Peter Wakefield | Senior Investigator | #9 |
| Peter Taylor | Commercial Manager | #10 |
| Michael Clark | Consultant | #10 |
| | <u>Other:</u> | |
| Chantelle Bramley | Executive GM, Operations, Transpower | #11 |
| Ramu Naidoo | Market Operations Manager, Transpower | #11 |

The meeting opened at 8.31am, Andrew Millar, Chris Otton and James Blake-Palmer joined the meeting at 8.31am.

4. Attendance and apologies

- 4.1. The Chair welcomed members to the 48th meeting of the Security and Reliability Council (SRC). A quorum was established.
- 4.2. The Chair noted there were apologies from Paula Checketts.
- 4.3. The Chair noted André Botha and Rebecca Larking attended remotely.

5. Changes to disclosure of interests

- 5.1. The Chair reviewed the interests register.
- 5.2. The secretariat noted a change to the Chair's and Karen Frew's interests.
- 5.3. There were no further changes disclosed. The Chair approved members to act despite those declared interests.

Andrew Millar, James Blake-Palmer, and Chris Otton left the meeting at 8.37am.

6. Members-only session

- 6.1. The members discussed their priorities for the meeting.

Andrew Millar, Chris Otton and James Blake-Palmer joined the meeting at 8:46am.

7. Minutes of previous meeting

- 7.1. The minutes of the 23 May 2024 SRC meeting were discussed.
- 7.2. Chris Ewers noted the minutes should include the discussion about the need for more worst-case scenarios and planning in advance, not during the 'fog of war'
- 7.3. The minutes, with that change, were accepted as a true and accurate record.

Chris Ewers moved. All members approved.

8. Correspondence

- 8.1. The Chair noted the correspondence including the letter sent to the Authority and the Authority's reply.
- 8.2. There were no other comments from members.

9. Action list and updates

- 9.1. The secretariat noted the ongoing and completed actions in the table.
- 9.2. The Chair asked the secretariat to remove the action referencing member interests and note the risk radar changes as an ongoing action.

Sara Mateperae and Clive Bull joined at 8.48am

10. (Agenda item 6a) – Authority's Northland Outage Investigation - update

- 10.1. The Chair welcomed Authority staff to the meeting and introduced the presentation on the 20 June 2024 Northland Outage investigation.
- 10.2. The presentation noted the Minister's 21 June request for the Authority to investigate, the scope and timing of the investigation report, and gave a summary of the facts and the lessons learned so far.
- 10.3. **Confidentiality:** Presenters noted both the presentation and discussion with the SRC needs to remain confidential, due to the ongoing

investigation and ministerial reporting requirements. Findings will become public once the investigation is complete and the report presented to the Minister,

Sara Mateperae and Clive Bull left at 9.40am

11. Risk radar (Agenda item #7)

- 11.1. The Chair led an around-the-table discussion on the risks impacting the sector over the short, medium and long term.
- 11.2. Members noted and discussed the following risks:
 - a) The need for more energy (in addition to capacity), gas, firming capacity, geomagnetic storm resilience, and progress with tree regulation reform
 - b) The need to maintain a balance between security of supply and affordability
 - c) The reactive nature of the energy market, and the need for more forethought (for example with contingent storage) rather than responding to a crisis
 - d) Cascading events, for example losing plant needed for the sector, on top of a lack of appropriate fuel sources
 - e) We're not seeing entities take responsibility for the issues or the solutions
 - f) Lack of load control being used by distributors (to address peaks) following changes to the Transmission Pricing Methodology
 - g) The need to more efficiently use gas, to maximise its benefits to the sector under constrained hydro conditions
 - h) Inaccurate commentary going unchecked and leading to political intervention and a perceived need to be seen doing something
 - i) The impact on security if Huntly goes on outage during low hydro conditions
 - j) Lack of understanding of, or work to address, the diversity of demand (differences between winter and summer consumer electricity-use profiles)
 - k) 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
 - l) Dry sequences following dry sequences, impacting supply, and trust and confidence in the sector
 - m) increasing peak demand and degradation of after diversity maximum demand as consumers increasingly electrify their homes and businesses.

12. (Agenda item #8) Facilitated risk and strategy session

- 12.1. The Chair opened the SRC's annual risk and strategy session, reminding members about the SRC's functions under legislation, the Charter for Advisory Groups and the SRC's Terms of Reference.
- 12.2. The Chair noted the scope of the SRC's advice, and how it covers aspects of the Authority's and the Commerce Commission's functions.
- 12.3. The Chair noted the goals of the session, including review of its forward work programme and thematic approach.
- 12.4. The Chair introduced presentations from Authority staff to set the scene for the group's discussion and inform the SRC about the Authority's work to support greater alignment of the SRC's advice.

Authority vision and security of supply work programme.

- 12.5. Authority staff presented on the Authority's vision and programme of work to support security of supply.
- 12.6. Points of discussion noted:
 - a) The Authority's vision and outcomes, regulatory functions and statutory objectives
 - b) The SRC's work complements the Authority's work, as a trusted independent advisor to the Authority
 - c) Key Authority actions: improve large energy users' confidence and access to tools to support security of supply, enable the transmission and distributions systems to accommodate a large increase in renewable generation, and work closely with industry participants who focus on affordability and security of supply for vulnerable consumers
 - d) The Authority's priorities are security of supply, over hours, days months and years, data and the need for flexibility, enabled by investment, competition and innovation
 - e) Regional resilience is a particular focus, to ensure rural, vulnerable and isolated communities are protected against risks to security of supply
 - f) The sector is still in transition to a low emissions future and the Authority is agnostic to the end point of energy options. Net carbon goals are implicit in the Authority's vision
 - g) Intended outcomes from the programme of work include participants bringing grid forming capacity into the market, effective management of emergency situations and consumers being aware of their options and placed to access them
 - h) Distributors regulations do not incentivise demand response measures. There is no commercial benefit for distributors to manage demand within the regulatory framework.
 - i) The need for the Authority and other agencies to provide expertise and education for consumers to provide a political 'air gap'

Rebecca Larking left the meeting at 10.55am

Group workshop discussions

- 12.7. The Chair facilitated smaller group discussions to identify what the SRC does well and what it could do differently; areas of focus and priority for the coming year; and how the SRC can work with the Authority to achieve these priorities.
- 12.8. The results of these discussions will inform the SRC's risk radar, future themes and topics to include in its forward work programme.

Sarah Gillies left the meeting at 12.15pm

The meeting broke for lunch at 12.15pm

Rebecca Larking joined the meeting at 12.45pm

13. (Agenda item #12) Wrap up discussion on next meeting's papers and forward work programme

- 13.1. Members identified potential areas of priority for future meetings to include:
 - a) Energy and capacity for winter 2025
 - b) Security Standards Assumptions Document (SSAD) that underpins the annual Security of Supply Assessment (SOSA) undertaken by Transpower each year
 - c) The system operator's outage planning process
 - d) Avoiding and managing cascade events
 - e) Contingent hydro storage
 - f) Barriers to use of ripple control and smart meters information
 - g) Regional resilience
 - h) Gas information transparency
- 13.2. Members identified the following, as priorities for the next (Q4 – October) meeting:
 - a) An update from Authority staff on energy and capacity for winter 2025 (including initiatives and how they're working)
 - b) Aspects of the policy systems and processes theme included, as appropriate, into a winter theme.
 - c) A deeper look into the scope of the review of the Security Standards Assumptions Document (SSAD)
 - d) The system operator's outage planning process
- 13.3. The Chair obtained agreement from members to work further with the secretariat to put together more detailed scopes for circulation and input from members following the meeting.
- 13.4. André Botha and Karen Frew agreed to put some material together for the October meeting covering roadblocks to greater use of ripple control and Advanced Metering Infrastructure (AMI), as part of demand response mechanisms to support security of supply

13.5. At the October meeting, the system operator will present on its annual self-review

13.6. Members agreed on a 9.00am start time for the October meeting

Action 1: Secretariat to prepare a base Q4 agenda and work with the Chair to scope options for Q1-3 2025 and present both for member input and approval via circular email, with the option of a short teleconference, if required

Action 2: Secretariat to draft a proposed action list to append to the letter of advice, enabling greater monitoring of SRC recommendations, outcomes and follow-up actions.

Action 3: The secretariat to arrange for system operator input into the proposed SSAD deep dive at the October SRC meeting

Peter Wakefield joined the meeting at 12.46pm

14. (Agenda item #9) Automated Under-frequency load shedding (AUFLS)

14.1. The Chair introduced the presentation from the Authority's compliance team.

14.2. The presentation and discussion noted:

- a) The Authority's work on AUFLS arises from the compliance monitoring framework, to reduce the possibility of undetected noncompliance and ensure the largest risks are covered.
- b) The 18-month transition from the two-block scheme to the four-block scheme, with the aim to increase the granularity of information available to the system operator, and to the Authority (for example, operation of the Transient Stability Assessment Tool (TSAT)
- c) The aim is for an evenly distributed scheme, with simple and robust processes, with an increase in system operator monitoring
- d) The system operator is modelling AUFLS transition preparedness via monthly system security reviews
- e) Real-time monitoring of system security is managed via snapshots of the power system every 5-8 minutes
- f) The regime requires annual testing of relays and related equipment to ensure connected assets will function as required
- g) Annual assessments for 2021 and 2022 concluded the power system was secure at all times, despite individual non-compliance (including limited instances of both under and over-arming)

Peter Wakefield left at 1.30pm

Peter Taylor and Michael Clark (Authority) joined the meeting at 1.32pm

Sarah Gillies joined at 1.45pm

15. (Agenda item #10 (System Operator Service Provider Agreement (SOSPA)

15.1. The Chair welcomed the representative from Authority's commercial team and introduced the presentation.

15.2. The presentation and discussion noted:

- a) The purpose is to update the SRC of the Authority's objectives for its review and reset of the SOSPA and seek the SRC's advice on the security and reliability implications for those objectives.
- b) The importance of the system operator service for facilitating the wholesale market, ensuring quality of supply and managing short- and medium-term security of supply
- c) The alignment of SOSPA with the system operator's statutory obligations, including consistency, prudence and impartiality
- d) A shorter term of three years (previously five) for future SOSPA, to allow more flexibility, given increased uncertainty in the electricity system in coming years
- e) A set of objectives the Authority is progressing through negotiations, including:
 - Better data sharing by the SO, including insights and experience, and identification, mitigation and management of risk
 - High-quality and continuous performance and improvement and its measurement and reporting
 - Active participation in industry-wide system stress testing
 - Enhanced impartiality obligations to ensure operations are (and are perceived to be) sufficiently impartial and transparent
 - The SO challenging its own processes and proactively advising the Authority of any required changes, for example to the Code
- f) Member concern about the need to streamline system studies for consenting new generation plant, to reduce roadblocks/bottlenecks
- g) A member noted participants need to undertake their own risk assessments, rather than relying on information from others
- h) KPI's have a low dollar value to incentivise positive behaviours but pride and achievement are strong drivers
- i) Positive outcomes from recent system operator work include the annual industry exercises, the high degree of sector collaboration and increased awareness of system operator activities and initiatives
- j) The SRC's previous suggestion of an external/independent review during the three-year period, which Authority staff commented on positively. The first six objectives could be used as terms of reference for the work, with consideration needed, as to how to progress and how outcomes can be measured
- k) The Authority presenters noted they are still developing the approach and welcome further thoughts from the SRC.

Ramu Naidoo (Transpower) joined at 2.12pm

Chantelle Bramley (Transpower) joined (remotely) at 2.15pm

16. (Agenda item #11 – The Annual Security of Supply Assessment (SOSA))

- 16.1. The Chair introduced representatives from Transpower, as system operator, to present this year's annual security of supply assessment, looking ahead over a ten-year horizon.
- 16.2. The presentation and discussion noted:
- a) The relevant measures informing the SOSA and their purpose
 - b) The reference case, various sensitivities and underpinning assumptions. In response to a member's question about how consenting timeframes are treated in the assumptions, the system operator noted it uses the asset owner's anticipated date of availability
 - c) Survey responses to the system operator indicate reduced thermal generation availability and the need for more unconsented generation to come to market to keep above the margins in *reduced thermal* scenarios
 - d) The system operator's use of grid owner demand forecasts and what's specified in the SSAD, unless there is visibility of other data. Members raised concerns about how solar is treated in the assumptions
 - e) Member concerns about whether the assumptions document is fit for purpose and whether a review is needed to test its fitness for purpose
 - f) Gas sensitivities are based on gas field surveys and 2P forecasts (using a 50% likelihood)
 - g) Members were concerned new intermittent generation supports energy supply, rather than capacity, with solar, for example, contributing little to morning peaks
 - h) The need for thermal investment, as noted in recent Authority publications
 - i) Contact Energy's Taranaki Combined-Cycle (TCC) turbine unit is included in this year's SOSA, but its availability will depend on fuel sources also being available at the right time in the right quantities
 - j) A member asked how the cost-to-country can be quantified. The system operator noted additional analysis would be needed to quantify the cost-to-country of falling below the margins, something the system operator may be interested in looking at
 - k) The system operator will include a 100% renewable case study in next year's SOSA, using five scenarios to see how we're tracking
 - l) Other insights included:
 - The need for system operator to summarise down 'key insights' to ensure the number of insights and how they're presented does not reduce focus on the biggest risks
 - Concerns about the impact of increased South Island demand on North Island capacity and efficient HVDC operation

- Concerns the sensitivities are becoming the reference case, so adjustments are needed, potentially to the assumptions document
- Most new generation is renewable, with consented batteries needed in the market to support capacity challenges
- Concern energy and capacity risks are converging, increasing the need for incentives to keep thermal generation available, and education for the sector and consumers about the risks and options
- The need to address the energy and capacity issues around data centres and electrification of gas-fuelled plant and processes
- Political intervention risk increases as risk increases
- The SSAD review will likely paint a bleaker picture, something has to change

Action 4: The secretariat to obtain a copy of the presentation slides and circulate to members

Sarah Gillies left the meeting at 2.53pm and returned at 2.56pm

Sarah Gillies left the meeting at 3.01pm and returned at 3.05pm

17. (Agenda item 12) - Wrap on items #9-#11

- 17.1. The Chair led a Wrap discussion with members on items #9-11, including areas of concern and points to note in the letter of advice.

The meeting ended at approximately 3:30pm

Please note the latest version of the SRC's risk radar over the page

SRC risk radar – as at 21 August 2024

| 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 | |
| | 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 |