

14 October 2024

Anna Kominik
Electricity Authority Chair
Electricity Authority
PO Box 10041
Wellington 6143

Dear Anna,

Advice resulting from the 21 August 2024 meeting of the Security and Reliability Council

The Security and Reliability Council (SRC) is tasked with providing the Electricity Authority Te Mana Hiko (Authority) with independent advice on the performance of the electricity system and the system operator, and reliability of supply issues.

At the August SRC meeting

The focus of the August SRC meeting was the SRC's annual risk and strategy session. The aim for the session was to identify and prioritise key areas to include in its forward work programme.

In addition to the risk and strategy theme, the SRC received presentations from:

- The Authority's legal team on the Northland outage investigation
- The Authority's compliance team on the AUFLS transition
- The project team leading the Authority's SOSPA review and reset
- Transpower, as system operator, on the annual Security of Supply Assessment (SOSA)

This letter is the SRC's advice arising from the meeting.

Annual engagement with the Authority Board

Members appreciated the opportunity to meet with the Authority Board the night before our August meeting. Thank you for hosting the event and taking the time to candidly discuss with us the Authority's priorities and how the SRC can best contribute to ensure the sector delivers for all New Zealanders.

Northland outage investigation

The SRC acknowledged the investigation update from the Authority's legal, monitoring and compliance team. The framework for the review and the approach being taken appear comprehensive.

The SRC notes the contingency plans in place and used to manage the event. Of interest to the SRC is what change may result from the investigation and its findings; is there a way to manage that risk differently to reduce impacts to security and reliability?

Feedback for the Authority is the need for the SRC to spend its time on core matters related to security of supply, with discretion to include additional items, as suggested by Authority staff and others. The Northland investigation is well in hand and the SRC's ability to input is limited, especially given our advice is published. In that context the presentation could have been included in the meeting pack, without a separate presentation or agenda item.

Risk and strategy

The SRC holds an annual risk and strategy session. For this year's session, the SRC's approach was to focus on working to review our priorities and how advice is delivered, while considering the Authority's priorities and work programme.

As a key independent advisor to the Authority, it is important for SRC members to understand the Authority's functions and be able to give candid feedback on issues within the SRC's scope. The SRC received presentations from senior Authority staff on the Authority's vision and security of supply work programme.

As an output from the risk and strategy session, members identified the following, as priority areas for the upcoming year, in no particular order:

- a) Contingent storage management and access
- b) Barriers to use of ripple control and smart metering to support security of supply
- c) Regional resilience
- d) Security Standards Assumption Document (SSAD) review
- e) Gas information transparency
- f) Cascade events
- g) Demand side response

We have refined our strategic aims, as set out in our themes framework and will continue to use a risk radar approach to setting priorities and informing our forward work programme.

Specific points of feedback for the Authority are:

- To acknowledge the Authority's increased focus on reliability through incentivising energy storage and generation firming
- the need for increased Authority communication and education to support broad understanding of how the sector operates and the mechanisms available to support security of supply

An example of where the Authority's voice for the sector is needed is the tree regulations review. The SRC believes the Authority needs to highlight the importance of speed in

updating the regulations, the impact of trees outside of current management zone and the difference between forestry and cosmetic management requirements

The SRC considered its purpose and approach to its work, as an independent advisor to the Authority. Members appreciate understanding the Authority's work programme and having the opportunity to provide advice on it, while not being led by it. One option members discussed was whether an independent secretariat may further enhance perceptions of the SRC's independence. Further discussion is needed on the viability and implications of such a change.

With the pace of change across the sector, members agreed there may be occasions where input from the SRC on certain issues may be needed between meetings in order to provide timely advice. We are open to new approaches, as an opportunity to ensure we provide timely and actionable advice. If there are specific issues or topics the Authority would like the SRC to consider, they can raise these through the secretariat.

We also discussed at the August meeting, how we can better keep track of our advice and recommendations for the Authority and the Authority's response. We are therefore trialling a new approach of including with our letter of advice, a list of recommendations. Recommendations arising from the August meeting are appended to this letter.

Automatic Under-frequency Load Shedding (AUFLS) transition to new scheme

As requested by the Authority's Compliance Committee, the SRC received an update from the Authority's compliance team on progress with the transition to the four-block AUFLS scheme to support increased security of supply.

When the Authority decided to reset the transition project in 2019 the SRC indicated its support for the work. The update indicates the work is progressing well and the anticipated benefits of increased flexibility to manage future changes in the electricity supply mix will occur.

It was positive to hear the system operator's assessments for 2021 and 2022 were that the system was secure at all times, despite individual non-compliance. We trust the Authority will take the appropriate steps to address material non-compliance, as part of the ongoing compliance work and look forward to updates from the secretariat on the 2023 AUFLS assessment due from the system operator next month.

System Operator Service Provider Agreement (SOSPA) review and reset

The SRC appreciated the Authority's presentation on the SOSPA review and reset. The purpose of the presentation was to inform the SRC of the objectives of the work and give an opportunity for the SRC to raise any potential security and reliability concerns.

In our previous letter of advice, the SRC recommended including provision for an external independent review, as part of the SOSPA reset, believing such a review may give more information to the Authority, and the system operator may benefit from going through a comprehensive independent review process.

The presentation gave an overview of the nine objectives for the reset, which appear to give good coverage and provide a range of measures to track. The objectives could form terms of reference for an independent review.

The SRC supports the potential change to a contractual term of three years for future SOSPA but urges caution as to the impacts a shorter term could have on existing systems and processes.

The SRC would be open to deeper dives on certain aspects of the work, where appropriate, to support the work.

Security of Supply Assessment (SOSA)

The SRC received the annual SOSA presentation and acknowledges the work that underpins this key reporting from the system operator.

The SRC is extremely concerned the required thermal generation sources will not be available in the right quantities for the report horizon. There is also concern things are worse than may appear, given the reference (base) case includes continued generation from thermal units that are slated for retirement (eg, Taranaki Combined Cycle), generation from new thermal plants that are not being actively progressed by developers, and demand is in the middle of the spectrum when demand is actually increasing. We are concerned the reference case is likely to give readers undue confidence and we believe a clearer sense of the balance of risk facing the sector is needed.

Members also raised concerns about how some generation sources, for example solar, are accounted for in the SOSA and Security Standards Assumption Document (SSAD). It is disappointing the system operator has had to add in multiple scenarios to support the report's accuracy, strongly indicating the SSAD review is long overdue.

We have included a deeper dive into the SSAD in our Q4 (October) agenda to better understand the underpinning assumptions and how various elements are treated. The aim is to inform the Authority of areas it may wish to focus on, as part of a wider Authority review of SSAD in 2025.

Other concerns about the system operator's 2024 SOSA included:

- There is granularity of generation information but demand growth, especially its timing, needs to be better understood. This is particularly important as South Island demand increases due to the electrification of drying processes in the dairy industry
- System operator to consider what analysis would help quantify the cost to country of falling below the margins across a range of scenarios
- The Authority should form a view of the necessary policy setting changes needed to increase confidence in investment for the long term
- There's an opportunity to use the current supply/demand situation to reset expectations and drive investment. The Authority's peak capacity work should support this

We encourage the Authority to lead action to address these issues and work with the system operator to incorporate learnings into consideration for future editions of the SOSA and the system operator's annual review.

The SRC's next meeting

The SRC's Q4 (October) meeting agenda includes:

- a. Energy and capacity for winter 2025 (including initiatives and how they're working)
- b. A deeper look into the scope of the review of the Security Standards Assumptions Document (SSAD)
- c. Feedback on the system operator's self-review of performance (July 2023-June 2024)

The SRC welcomes feedback from the Authority about its forward work programme and looks forward to ongoing engagement with the Authority Board.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'H Roy', is positioned above the typed name.

Hon Heather Roy
Chair of the SRC

cc: SRC members, Chris Otton and James Blake-Palmer (Authority)

2 December 2024

Hon Heather Roy
Chair
Security and Reliability Council (SRC)

By email: heatherjroy@gmail.com

Dear Heather,

Response to your letter of 14 October 2024

Thank you for your letter of 14 October 2024 giving the SRC's advice from its 21 August 2024 meeting. The Electricity Authority Te Mana Hiko (Authority) Board considered the advice at its 19 November 2024 meeting.

Annual engagement with the Authority Board

The annual engagement with the Authority Board is incredibly valuable. We need to sustain and further develop the opportunities for candid discussion on priorities for the sector, and the Authority Board is committed to working with the SRC to continue to improve all our interactions. The Authority Chair and CEO are keen to discuss this further with the SRC in the New Year, recognising both the SRC's importance and the Authority's overall focus on continuous improvement.

We recognise that an important function of the SRC's role is to provide a consensus view that represents an independent view from the Authority. SRC members should also feel they can bring their views to the group to consider and discuss, regardless of whether the SRC reaches consensus on final advice for the Authority. If members have any questions or concerns about how the SRC functions, they are always welcome to raise these through the secretariat, the SRC Chair or the Authority representative.

It is positive that SRC members are open to supporting time-critical Authority workstreams through out-of-cycle feedback, where needed. The Authority continues to look for SRC input to support security and reliability-related work and will raise opportunities through the secretariat.

Northland outage investigation update

We appreciate the SRC's feedback on the comprehensive approach the Authority took with the Section 18 report for the Minister. We sent a copy of the final report to the minister on 13 September, which he publicly released on 25 September.

The SRC has indicated an interest in changes that may result from the work. The recommendations in the final report can be broadly split into two categories:

- 1) improving processes, training, and documentation to mitigate the risk of similar events happening in the future
- 2) enhancing regional resilience to minimise the impact of future outages.

By way of update, we have set out some of the recommendations, outcomes and how we're working with Transpower below:

1. Enhancing risk management through processes and training

Ultimately, we want to improve security and reliability by ensuring that Transpower has, as best it can, identified and addressed critical risks in high priority areas where maintenance is undertaken. Transpower is reviewing and updating its technical specifications, Grid Skills training and minimum training and competency requirements for foundation maintenance and baseplate refurbishment.

We also recommended that Transpower use a risk-based framework to determine high priority areas where any other technical specifications and training should be reviewed. Where necessary, this framework should be regularly reviewed and revised to ensure that critical risks are identified and addressed. The risk-based framework should consider the risk of harm from human error or departure from good industry practice when work is undertaken, both in terms of health and safety of works and risk to the power system.

For critical assets (including towers, lines and substations) Transpower has a responsibility to ensure that it exercises all the powers available to it to ensure that those assets are maintained safely and appropriately.

Increased assurance processes were recommended, including:

- promoting a best practice consistently across all service providers work procedures (all service providers had different procedures for baseplate refurbishment for example)
- specific audit plans for field audits of high priority areas so that key risks are not missed
- review of minimum training and competency requirements for service providers.

2. Strengthening regional resilience

Regional resilience is essential to ensuring long-term security and reliability and reflects and evolving energy system. By strengthening the ability of local regions to withstand and recover from disruptions and for generation to be closer to demand, we significantly reduce the overall risk to the power system and the impact of events on consumers and provide opportunities for more efficient and affordable access to electricity.

Transpower is creating regional operating forums and regional electricity development plans (in consultation with a range of stakeholders) for all regions in New Zealand that are vulnerable to high impact electricity supply events. These forums will help Transpower develop controls that enable greater resilience through coordination of multiple resources.

Cooperation by multiple parties is needed to explore opportunities to improve regional resilience. These opportunities include the potential to run resources in islanded mode, increase BESS technology in vulnerable regions, and coordinate intermittent generation operation.

A regional electricity development plan is well underway in Northland and being undertaken in other regions (Queenstown/Wanaka, upper South Island and Western Bay of Plenty).

The Authority is working to promote regional resilience and accommodate changes to the power system, ensuring that regulation keeps pace with the evolving power system (largely driven by new technologies). This work is also being incorporated into the Future Security and Resilience work programme.

We understand the SRC are looking at regional resilience as a potential theme for its Q1 2025 meeting. Regional resilience is an important focus for the Authority, and we are very supportive of this meeting theme by the SRC.

We will pass on to future Authority presenters, the SRC's suggestions about how information or updates are best presented at SRC meetings. The aim is to provide the SRC with sufficient clarity about the purpose, scope and intended outcomes from bringing items to the SRC. We strongly encourage the SRC to do the same when requesting information from the Authority to support its advice.

Risk and strategy

The Authority acknowledges the SRC's approach of prioritising its work, informed by an annual risk and strategy session and risk radar. The way the SRC delivers its advice is also important for timeliness and effectiveness. So, as noted above, we welcome the SRC being open to changing things up and providing advice and guidance outside its usual meeting cycle.

Regarding the SRC's independence, your letter raises an important point – the SRC is independent of the Authority and this independence is an important part of its successful function and approach. We note that conversations have begun about implementing an independent secretariat for the SRC and this is also part of what the Authority Chair and CEO would like to discuss in the New Year.

The priority areas the SRC identifies through its risk and strategy session appear to provide broad coverage. We appreciate the SRC's acknowledgement of the Authority's work in incentivising increased energy storage and generation firming.

We appreciate the inclusion with your letter of advice a list of recommendations as a means to capture and record your advice. The secretariat has updated the Authority's response section, and we understand that the SRC will be reviewing this list and updating the progress status at its next meeting in March 2025.

Increased Authority communication and education

We agree about the importance of enhanced communication and education. This is also a focus of the Government Policy Statement. The Authority is developing a programme of work to improve understanding of how the electricity market and power system operates. This includes an update to the "Your Power" section of the Authority's website (we acquired the yourpower.nz domain name to support consumer campaigns and identifying new/updated content, increased social media presence and working with other sector stakeholders to better share content and information.

We are also increasing the detail and frequency of information to the sector about security of supply, including regular seasonal outlook reporting. This is discussed further below.

Tree regulations

Authority staff have regularly meetings with MBIE to discuss policy work underway and priorities at each agency. Tree Regulations have been discussed previously and we will continue to discuss progress of these, noting their importance to the sector. We will reinforce the importance of this work and will escalate this issue with a letter to the General Manager Energy and Resource Markets at MBIE.

Automatic Under-frequency Load Shedding (AUFLS) transition to new scheme

We appreciate the inclusion of this item in the SRC's agenda. It is important the SRC are aware of 4-block transition progress, given the criticality of AUFLS in maintaining a secure and reliable supply of electricity.

Thank you for the feedback about the need for the Authority to address individual non-compliance in AUFLS readiness. The SRC can be confident that the Authority is taking action to ensure AUFLS providers are engaged in the transition process and planning their activities in a coordinated and secure way. Through our engagement with the system operator transition team, any areas of individual or broader non-compliance are highlighted and followed up by our compliance team. Authority staff will continue to keep the Compliance Committee informed of the AUFLS transition and any non-compliances being dealt with.

We have received the 2023 AUFLS assessment from the system operator and are currently reviewing it, ahead of it going to the Compliance Committee's December meeting. The Authority does not publish the report, as it contains details of individual participants. Once it has been reviewed by the Compliance Committee, we will share an anonymised version with the SRC via the secretariat and welcome any additional feedback.

System Operator Service Provider Agreement (SOSPA) review and reset

Thank you for the feedback on the SOSPA reset. The SRC's openness to further input to support the work is also welcome.

A key focus for the SOSPA reset is around risk, to support the system operator to challenge its own processes and proactively communicate issues; to determine how best to manage such risks and propose solutions early. This includes its use of tools and data sets, automated where possible to avoid human error risk. The work also supports the Authority's priorities around security of supply, data and flexibility.

The Authority did include a number of third-party reviews as part of the process for this reset period. We agree that it is important that there is continued independent verification of the data and performance of the SO. The Authority sees this as an important obligation for the future. The new SOSPA is due to take effect from 1 July 2025.

The term of the SOSPA has been reduced to three years to provide scope more flexibility in the service. This is in response to the considerable changes and increasing uncertainty in the electricity sector in coming years and the demands this means for the system operator role. Any changes will need to address potential impacts on existing systems and processes, as the SRC suggests, which we'll work through with the system operator, as needed.

Security of Supply Assessment (SOSA)

Thank you for your feedback on this key annual reporting from the system operator. The Authority Board appreciates the SRC's lens on the system operator's forward view of security of supply.

The Authority is working closely with the system operator to ensure that they are using both appropriate input assumptions and the discretion they are provided under the Code to adapt their analysis to suit the evolving power system. While the System Security Assumptions Document (SSAD) provides a framework for the system operator's SOSA, the Code does provide the system operator the latitude to deviate from this framework if they provide justification for this. The system operator has yet to exercise this discretion. This discretion could include consideration of the pace of electrification, and the appropriate consideration of variable renewable generation such as wind and solar.

We note the SRC's concerns regarding the lack of thermal generation availability in the later years of the SOSA analysis. As winter 2024 demonstrated, thermal generation availability is dependent on fuel availability. We noted in our response to the SRC's advice following your June 2024 meeting that gas resilience is a key sector concern. We are supporting the Government's Gas Security Response Group with analysis and market insights. We are continuing our work on thermal fuel disclosure obligations to ensure that the sector has the information they need to incentivise investment in both fuels and generation.

An update to the Authority's work on reviewing the SSAD was provided to the SRC at your October meeting. We look forward to receiving the Council's early feedback on this important piece of work.

As part of our wider work programme for supporting security of supply, the Authority is developing a seasonal outlook report and looking to longer term planning. The first of these reports is expected to be published before the end of 2024. These reports will consider a range of sensitivities affecting security of supply for the coming three months and highlight actions both the Authority and participants may need to take to prepare for potential security of supply situations. These reports will highlight the short-term issues facing the power system and highlight areas that need further investment to ensure that security of supply can be managed in the longer term.

The SRC's next meeting

We note the SRC's October agenda includes a strong emphasis on security of supply (energy and capacity) for winter 2025. As we navigate the transition, we are seeing a range of 'winter' issues impacting at different times of the year, increasing the need for flexible approaches to security of supply and how the industry plans and responds.

We appreciate your sharing of the SRC's action tracking table. We have made significant progress on the actions highlighted in your August advice letter and, accompanying this letter, we have provided an update against each action for the Council to consider at its next meeting.

We look forward to engaging further with the SRC, to support our work to ensure all New Zealanders are as protected as possible against risks to security of supply.

Yours sincerely,



Anna Kominik
Chair
Electricity Authority Te Mana Hiko