

10 June 2024

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

Dear Anna,

Advice resulting from the 23 May 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 May SRC meeting

The May SRC meeting was structured around two themes: *the new government approach for the sector* and *a deep dive on gas resilience*. In addition to the meeting themes, presentations were received from:

- Transpower, as both owner and system operator, on managing geomagnetic storms
- Lucie Drummond, on behalf of the Energy sector framework team and
- Mike Underhill, departing long-standing SRC member.

The new government approach for the sector

To support this theme, the SRC received presentations from:

- Hon. Simeon Brown, Minister for Energy and
- The MBIE energy policy team

This theme was chosen to increase the understanding of the government's aspirations for the sector, especially through the transition.

A deep dive on gas resilience

To support this theme, the SRC received presentations from:

- Enerlytica
- The Authority's Policy Operations Team
- The Gas Industry Company
- Clarus
- OMV

This theme was chosen to understand the issues facing the gas sector in New Zealand and the likely implications for security of supply and impacts on electricity consumers.

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

Government aspirations

The SRC received a comprehensive update from Hon Simeon Brown, Minister for Energy. The minister provided a clear indication of direction of travel for this government's energy policy and his engagement was much appreciated.

We were encouraged to hear the Minister's support for the Authority's work and his confidence in, and preference for, market solutions. The SRC acknowledged the Minister's focus on the need for energy storage and firming.

SRC noted to the Minister the importance of keeping standards up to date. We encourage the Authority to work alongside Worksafe and MBIE to ensure related policies and processes are fit for purpose.

SRC members strongly consider the Authority should, in its Kaitiaki role for the electricity market, lead security of supply commentary through unbiased communication and education programmes. This education should include modelling and assessments of supply risk and their impacts on consumers.

Government policy direction

SRC members were encouraged by the recent announcement of the changes to the tree management regulations but are concerned further thought is needed as to the scope of the revised regulations.

In particular, the SRC encourage the Authority to highlight three key issues on tree regulations to the MBIE team:

- Importance of speed in updating the regulations, and regularly updating on progress
- Impact of trees outside of current management zone and
- Difference between forestry and "cosmetic" tree management requirements

The SRC recommends the Authority support the current work on tree regulation (Phase 1) and ensure that further work follows to address the three issues highlighted in Phase 2.

Gas Resilience

As part of our main theme for the meeting, the SRC received presentations from Enerlytica, OMV, GIC and Clarus on current state of the Gas market and future prospects. A further presentation from Authority staff on the gas disclosure regime and its impact on security of supply monitoring was also received.

The key message across presentations was the erosion of investment certainty through previous government policy, with concern as to whether this is sufficiently recoverable to support current and future peaking/firming capacity. With gas an important enabler of the transition, there are concerns this may no longer be relied upon.

The presentations from OMV and Enerlytica reinforced that Methanex is the current fulcrum of gas supply and the need to better understand their near-term consumption forecasts and its impact on gas supply for electricity generation.

The Enerlytica and GIC presentations and discussion also highlighted the relatively small part of the gas consumption mix taken up by domestic consumers (~5%). The SRC encourage the Authority to highlight to MBIE the need to consider the merits of whether consumers should continue to be encouraged to transition to electricity ahead of industrial gas consumption. There needs to be a balance struck between the cost of replacing consumer appliances with likely increase in gas transmission costs as other users transition away.

The Clarus presentation highlighted the high level of resilience to weather related events experienced in the gas transmission system and Clarus' project to include biomethane in the North Island gas supply. They did note investing in further gas storage was challenging in the near term due to investor appetite in the gas sector and current regulatory uncertainty.

OMV noted the collateral required to be reserved for decommissioning activities and the inability to obtain insurance are key barriers to new investment in New Zealand. Investment in gas exploration is generally competing against international options with potentially more relaxed decommissioning requirements.

A common theme through several presentations was the lack of regulation through the gas sector when compared to the electricity sector. With the interrelated nature of gas supply and electricity generation, there would appear to be a strong argument for increased regulation of the gas sector – particularly regarding supply contract disclosure and consistency of information.

As New Zealand transitions to greater electrification, the need for more flexible gas generation and storage becomes more pressing, though this need is against a backdrop of enduring uncertainty as to the long-term view of gas supply. This uncertainty greatly concerns the SRC, given the support gas provides in the transition to a low emissions future. We recommend the Authority continues to work with MBIE and other stakeholders to reduce this uncertainty and develop a roadmap for the future of the gas sector, aligned with emissions reduction planning and an overall energy sector strategy.

Transpower update on geomagnetic storms

The SRC acknowledges the excellent work by the system operator and wider industry in ensuring the integrity of the power system through the geomagnetic storm event of 11 to 13 May 2024.

We note the pan-industry work to refine operational and communication plans and support efforts to ensure future events can be managed efficiently. Accurate and timely information about potential shutdown and recovery timeframes is essential to support preparedness and minimise vulnerability.

The SRC considers it important the Authority is across developments in this space and can provide guidance to participants on how public and other stakeholder communications should be implemented. We also note the current working group does not include representatives of the telecommunications industry or civil defence. Given the potential, in the case of an extreme solar event, for the transmission grid to be powered down for a number of days to protect assets, these organisations must be involved to support retailer communications with consumers, including medically dependent customers.

The SRC recommends that the EA work collaboratively with the working group to develop guidelines as to when the transmission grid might be powered down to protect long lead time assets such as transformers.

The SRC further recommends that the Authority satisfy itself the requisite black start plans and tests continue to be performed and any issues highlighted are addressed with urgency.

Mike Underhill presentation

We acknowledge the departure of long-serving SRC member Mike Underhill and appreciate the sharing of his insights and viewpoints over a number of years.

We have passed on Mike's departing letter to the Authority for his parting remarks to be included in consideration of the Authority's ongoing work with the SRC.

The SRC's next meeting

The SRC's Q3 (August) meeting for 2024 is focussed on our risk and strategy planning session for the coming year. We will be receiving presentations from the system operator on their Security of Supply Annual Assessment (SOSA) and the Authority on the AUFLS transition programme, among other items.

The SRC welcomes suggestions from the Authority about its forward work programme and looks forward to its annual meeting with the Authority Board on 20 August.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'H Roy', is positioned above the printed name of the signatory.

Hon Heather Roy
Chair of the SRC

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

6 August 2024

Hon Heather Roy
Chair
Security and Reliability Council (SRC)

By email: heatherjroy@gmail.com

Dear Heather,

Response to your letter of 10 June 2024

Thank you for your letter of 10 June 2024 giving the SRC's advice from its 23 May 2024 meeting. The Board of the Electricity Authority Te Mana Hiko (Authority) considered the advice at its 30 July 2024 meeting.

Government aspirations

The Authority is delighted the SRC engaged with the Minister for Energy and had the opportunity to hear directly about the Government's priorities and aspirations for the sector. It was a timely opportunity for the Minister to engage with you as a key advisory body on security and reliability issues.

The Minister's confidence in the electricity market is encouraging. The Authority has a clear work programme to evolve the market for the future and continue to deliver benefits for consumers. The market will continue to play a critical role in ensuring investment, innovation and affordability across the system. We will continue to engage directly with industry and consumers throughout the decision-making process, as well as increase the transparency of information to support a broader understanding of, and participation in, the electricity system.

We specifically note the SRC's recommendation that the Authority steps up its role in leading security of supply commentary and education and can assure you that this is an area of increased focus and future activity.

Government policy direction

As we have discussed, the Authority strongly supports the tree regulations review, which aims to bring much-needed regulatory reform to the sector to address the significant impact of vegetation on security of supply.

The Authority will pass on the SRC's noted concerns to the Ministry of Business, Innovation and Employment (MBIE) and will continue to highlight and address any relevant issues, using appropriate regulatory levers, as part of our work to support the reliability limb of our main statutory objective.

Regarding the need for energy storage and firming, this is an area of ongoing attention by the Authority. We recently published¹ our decision to implement six measures to support security of supply. This paper also provides information on our wider programme of work dedicated to improving security of supply, including initiatives to increase incentives to invest in demand response and firming resources, such as battery energy storage systems. This is an area that needs ongoing attention and, likely, evolution in our work and we welcome the SRC's ongoing feedback.

We are also reviewing the Security Standards Assumptions Document (SSAD), that underpins the system operator's annual security of supply assessment (SOSA) to ensure it is fit for purpose. MBIE is also looking at the market settings and risks for long-duration energy storage and we are supporting MBIE with this work.

Staff will continue to engage with Worksafe and MBIE to support their work on standards and related processes.

Gas resilience

The Authority endorses the SRC's focus on gas resilience, particularly the state of upstream supply. The role of natural gas in New Zealand's electricity system continues to evolve² through an increased role in peaking and firming, rather than baseload supply, as it supports the transition to a low emissions future. We expect this role to continue.

Investment in additional flexible electricity generation plant is necessary to support the evolving transitional role for gas in peaking and firming generation. There has been significant ongoing upstream investment by gas participants in developing existing fields. However, we can all see that results have unfortunately been disappointing. This highlights the need for further investment to ensure there are sufficient fuel sources and the right generation plants to use them at the right time.

The Authority is focused on enabling and informing to support this. The permissive approach underpinning the Code supports the high levels of investment required, while the Authority's ongoing work on supply contract disclosure obligations and consistent and transparent information is looking to further address uncertainty. By making sure the right information is available and that key agencies are sharing the right information, we will ensure the monitoring and reporting of both energy and capacity margins remains accurate and credible. This helps to build confidence in the market for investors, innovators and consumers.

The Authority is also continuing to input on gas policy to the Government and MBIE officials, including as part of the Gas Security Response Group. We also continue to engage with, and offer support to, the gas sector to support greater gas resiliency into the future.

The SRC's feedback about which gas consumers should be encouraged to consider alternative energy options and when is important as it acknowledges that the pace of transition for different gas consumer groups will have implications on the electricity system. We all acknowledge there is a balance to be struck between the pace at which residential, commercial and industrial users transition. We will pass on the SRC's advice to MBIE to include in its gas transition. The Authority is also considering the gas transition within the context of the future demand in the electricity market and will continue to engage with the SRC on our thinking and work.

¹ <https://www.ea.govt.nz/news/general-news/six-solutions-to-assist-with-peak-demand-issues/>

² <https://www.ea.govt.nz/news/eye-on-electricity/natural-gas-and-the-electricity-sector-transition/>

Regarding gas transmission, it is positive to hear from Clarus about the resiliency of gas transmission assets to weather-related events. It is good to see the trials using biomethane in the gas supply, increasing fuel-source options and extending the operational lifespan of existing North Island gas supply assets. In light of the increasing number of extreme weather events around the country, regional resilience is going to be an increasingly important focus.

Multiple responses may be required to address falling gas production. These need to be underpinned by strong consenting arrangements and a fit-for-purpose regime for infrastructure decommissioning to factor in future costs for investors. The Authority will continue to voice its views on these issues, and use appropriate and available regulatory levers, where needed.

Geomagnetic storms

Thank you for your advice regarding the recent geomagnetic storm event.

Transpower, as both system operator and grid owner, had engaged proactively with Otago University and other agencies to develop protocols for such events. This enabled timely changes to the grid configuration to avoid asset damage in areas considered vulnerable.

Overall, the Authority considers Transpower is required and incentivised to plan appropriately for these events and minimise their impact on both the electricity system and consumers. It was pleasing no consumer supply was required to be disconnected as a result of the event or how it was managed.

However, there are always lessons to be learned. We are aware that Transpower will apply lessons learned in future planning and preparation. Authority staff will raise the potential need for powerdown/restoration guidelines, to be included. The Authority will also raise the need for Transpower to include civil defence and telecommunications industries on the Space Weather Electricity Industry Working Group and confirm testing of black start plans occurs, as required.

As the SRC suggests, the Authority also has an important role also to provide communication and guidance about stakeholder communications. We have ongoing engagement with Transpower on improving our collective public communication around significant events of this magnitude.

We acknowledge the SRCs advice that the Authority take a more proactive approach to communicating potential security of supply issues, such as the geomagnetic storm event, with consumers and the wider industry. We will incorporate this advice into our wider review of our communications function and strategy.

We also encourage the SRC to continue to push us in continuous improvement in this area. The SRC plays an important monitoring and review role and we value your advice to the Authority Board.

Mike Underhill's presentation

Thank you for sharing Mike Underhill's presentation paper. The Authority Board acknowledges Mike Underhill's dedication and commitment to the SRC's work, recently as a member, and previously as Chair.

The paper raises a number of high-level concerns and issues facing the sector. This feedback has been passed on to relevant Authority staff to include as part of ongoing work programmes and to inform future thinking.

The Authority is happy to provide updates and/ or further information how the current work programme is seeking to address many of the issues raised and this can be raised through the secretariat for inclusion in the SRC's forward work programme.

The SRC's next meeting

We strongly support the SRC's annual focus on risk and strategy planning and are comfortable with the SRC's change of approach for this year - to give greater emphasis on member input and discussion, leveraging member experience and the SRC's risk radar to highlight areas for the SRC to focus on.

We would like to see closer alignment between the Authority's and the SRC's work programmes to support the SRC in its role as trusted advisor to the Authority Board. To achieve this, Authority staff will work closely with the SRC on its strategy planning, including presenting on its strategic priorities and security of supply work programme, so the SRC can complement it with its independent expertise and advice.

The Authority's review into the recent Northland tower collapse and resulting outage is well underway. The Minister for Energy requested the review under section 18 of the Electricity Industry related Act 2010. We have published terms of reference and appointed Sarah Sinclair, as independent Chair.³ The Authority will provide an update on the review to the SRC at the August meeting and will seek SRC input on this major security event.

We look forward to talking further with you on these issues and meeting the new SRC members at our annual engagement the day before your August meeting.

Yours sincerely,



Anna Kominik
Chair
Electricity Authority Te Mana Hiko

³ Media release.