

Security and Reliability Council ::: Meeting Number 7
Venue ::: Level 7, ASB Bank tower, 2 Hunter Street, Wellington
Time and date ::: 9:30 am ::: 13 May 2013

Minutes

Members Present

- ::: Kevin Thompson (Chair)
- ::: Albert Brantley
- ::: David Russell
- ::: Bruce Turner (by phone)
- ::: Erik Westergaard
- ::: Vince Hawksworth (by phone)
- ::: Dennis Barnes
- ::: Terrence Currie (by phone)
- ::: Guy Waipara

Apologies

- ::: None

In Attendance

Electricity Authority (Authority):

- ::: Carl Hansen, Chief Executive
- ::: Fraser Clark, General Manager Market Services
- ::: Callum McLean, Adviser System Operations
- ::: Bruce Smith, General Manager Market Performance (10:30 to 10:45 only)
- ::: Doug Watt, Senior Economist (10:30 to 10:45 only)

System Operator:

- ::: Kieran Devine, General Manager

Concept Consulting Group Limited (in support of the SRC secretariat):

- ::: Simon Coates, Director (9:35 to 10:30 only)

The meeting opened at 09:35 am.

1 Welcome and Apologies

1. The Chair welcomed members to the seventh meeting of the Security and Reliability Council (SRC), with a special welcome to Guy Waipara, General Manager External Relations for Meridian, as a new member appointed for a term of three years. The Chair also noted that Albert Brantley and Bruce Turner had each been reappointed for a further three years.
2. No apologies were received.

2 Previous Minutes

3. The minutes of the 8 November 2012 meeting were accepted as a true and accurate record.

(Thompson/Currie)

3 Actions list

4. Fraser Clark summarised progress on the action list.
5. A member queried whether, in respect to action #1 (integrated and prioritised performance measures), the SRC would have an opportunity to provide input into Transpower's system operator review. Authority and system operator attendees confirmed that the proposed performance measures identified in that review would be presented to the SRC for discussion.
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4 Correspondence

6. Outward correspondence – on 14 November 2012 a letter from the Chair was sent to the Authority Board providing the SRC's advice on aspects of the system operator's performance. The SRC noted that no reply had been received from the Authority. Carl Hansen advised that the advice was well received by the Authority. He apologised that the letter had not been formally acknowledged and undertook to ensure that all similar correspondence would be acknowledged in the future.
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5 Disclosure of interests

7. An updated interests register was made available at the meeting.
8. The Chair provided an updated disclosure of his interests.
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Reliability of supply

6 Under-frequency management (UFM) strategic plan

9. Fraser Clark explained the background to the UFM project. The project involves a review of the range of measures used to prevent the collapse of power system frequency in the event of the loss of a major supply asset. The project is being undertaken by the Authority with the support of the system operator.
10. Simon Coates spoke to the presentation slides.
11. Members had an in-depth discussion on system operator's reserve management tool (RMT). The points made were that:
- RMT is not part of the system operator's market system (MSP) and its core functions are unchanged since it was implemented just over ten years ago
 - RMT's analytics functions are fine, and performance has improved following a recent upgrade to use a more up-to-date version of Matlab (this upgrade means that the comment in the papers that RMT "sometimes fails to solve" is no longer correct)
 - in the system operator's view, RMT is fit for purpose in today's environment but will be unsuitable for desired future market developments and will need to be replaced
 - RMT can handle super-fast instantaneous reserve products (i.e. faster than the current six-second FIR)
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- product) but would require more accurate data than is currently available
- the timing of replacement depends on many variables but the capital expenditure plan currently anticipates that it will take place sometime around 2015
 - the \$7M net present value for RMT replacement included in the slides is a preliminary view and the true value of any RMT replacement will be in its enabling the other UFM workstreams
12. A member questioned how the UFM project will impact on load management activities (e.g. AUFLS, peak management by lines companies, dispatchable demand, Transpower’s demand response platform). The group shared a concern that there is a risk of counting loads as being available for more than one load management purpose and therefore not getting the expected response when required. The Authority noted that it was aware of this risk, and was working to ensure all of the load management activities are appropriately coordinated.
 13. Several members shared a concern that cost-benefit analyses may not adequately capture the asymmetric risk in under- versus over-procurement of reserves (i.e. under-procurement increases the potential for load-shedding when an under-frequency event occurs, whereas over-procurement reduces this potential). It was also noted that there were trade-offs in this process and “we will get what we pay for”.
 14. A member highlighted the importance of correct sequencing of requirements with respect to proposals to increase metering resolution requirements. Affected parties are facing hundreds of thousands of dollars of costs and may be forced to incur this expense well in advance of any benefit arising from the proposal. The Authority noted it would be considering these issues in its review of the submissions received on its recent consultation paper.
 15. A member suggested that an important first step is to establish what response providers are actually delivering in an under-frequency event and by how much this deviates from what was expected.
 16. A member suggested that large users are still unsure how the provision of interruptible load and the requirement to provide automatic under-frequency load shedding will interact with one another.
 17. A member suggested that examining net present value over shorter time frames than 20 years may highlight the duration over which benefits need to be achieved in order to break even. Given the technological and societal change possible in that time, it is possible the circumstances will change sufficiently as to negate the benefits. The Authority noted that some of the initiatives, such as the consideration of the impact of changes in system inertia, were intended to ensure the arrangements recognised at least some of these potential changes.
 18. In response to discussion, the Authority noted that the Wholesale Advisory Group is involved in the development of a national reserves market.
 19. A member suggested that the inertia, over-frequency management and wind integration workstreams appear to be relatively analytical in nature and unlikely to provide much value. These workstreams should perhaps be put aside so that the more important UFM workstreams are given priority, and the opportunities resulting from the commissioning of pole 3 are captured.
 20. Overall, the SRC supported the direction of the UFM project.

10:30 – Simon Coates left the meeting. Bruce Smith and Doug Watt joined the meeting.

7 Reliability dashboard and reliability centred monitoring

21. Doug Watt summarised the paper's purpose and content.
22. The group discussed the role of proactive measures (such as non-destructive testing and emergency drills) versus reactive measures (such as post-event analysis and performance standards). The SRC concluded that:
 - proactive measures are vitally important and best managed by the relevant organisations that own the assets
 - the role of the SRC is better focussed on reactive measures
 - reporting of relevant post-event analysis (such as that available from the International Council on Large Electrical Systems (CIGRE)) to SRC is a worthwhile activity and should draw on local and international events
 - the sorts of questions the SRC will ask in relation to post-event analysis are: how could an event have been prevented? What would have turned a near-miss into an event? Were near-misses the result of good planning or good fortune?
 - a security and reliability dashboard is unlikely to provide information to support SRC deliberations.

10:45 - Bruce Smith and Doug Watt left the meeting.

Security of supply

8 Concluding discussions on security of supply matters and agreeing on any advice to be provided to the Authority Board

23. Fraser Clark recapped the SRC's conclusions from the November 2012 meeting. Carl Hansen tabled a draft letter to the Authority Board that is based on the SRC's conclusions.
24. The SRC agreed to the Chair sending the letter, subject to it being distributed amongst members for comment.

ACTION POINT:

Secretariat to distribute draft letter to SRC members.

General business

9 General business

25. Kieran Devine gave the SRC an update on three matters

Pole 3 commissioning

26. Testing has progressed satisfactorily. Pole 3 has been used to transfer 741MW southward.
27. A decision on whether to commission at 500MW or 700MW for the winter is imminent and must be made this week. It is an engineering decision rather than a commercial one.
28. Industry assistance has been outstanding.
29. While Pole 3 commissioning has been a major exercise, the commissioning of the replacement control system for Pole 2 will be even bigger. That commissioning will include the umbrella control system that

enables coordinated controls across the two poles, including additional tools such as round power.

Current security of supply situation

- 30. Risks are very low: it would take the loss of two combined cycle gas turbines or the HVDC bi-pole to cause a security of supply emergency.
- 31. Enquiries into the security of supply situation have dried up.

Exercise Tawiri (gas contingency test)

- 32. The exercise was completed successfully. The system operator will take a broader approach next time by including planning matters rather than just real-time operations.
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10 Administration

- 33. The Chair invited members to identify any additional topics for the 18 October 2013 meeting. None were received.
 - 34. The Chair noted the 'floating' teleconference unit was unsatisfactory.
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11 Meeting close

- 35. The meeting closed at 11:00 am.
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