

10 December 2021

Dr James Tipping  
Chief Executive  
Electricity Authority  
By email to [fsr@ea.govt.nz](mailto:fsr@ea.govt.nz)

Dear James

### **Future Security and Resilience, Phase 1 draft report**

1. This is a submission from the Major Electricity Users' Group (MEUG) on the three papers published as part of the Electricity Authority's (EA) Future security and resilience (FSR) workstream. Those papers are an EA Phase 1 Draft report published 16<sup>th</sup> November 2021, a report by the System Operator dated November, and an earlier report by Sapere dated June.<sup>1</sup>
2. MEUG members have been consulted in the preparation of this submission. This submission is not confidential. Members also make separate submissions.
3. The FSR workstream is a multi-year work programme that commenced this year. The EA paper explains that FSR is one of six interrelated workstreams by the EA supporting New Zealand's transition to a low-emissions energy system.<sup>2</sup> The EA is also concurrently conducting three significant reviews of the wholesale electricity market. The EA note<sup>3</sup>:  

"Each of these reviews will be considering issues critical to the low-emissions transition, and has the potential to give rise to a number of important workstreams."
4. The System Operator report similarly discusses interrelated workstreams. Figure 3 (p11) titled 'known future security and resilience interdependencies and dependencies' illustrates the relationship between workstreams with two differences compared to the EA's list of workstreams. First the System Operator includes MBIE's NZ Battery Project

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<sup>1</sup> Document URL <https://www.ea.govt.nz/assets/dms-assets/29/01-Authority-Discussion-Paper-FSR-Phase-1.pdf>, <https://www.ea.govt.nz/assets/dms-assets/29/02-FSR-Phase-1-draft-report-Nov-2021-v2.1332512.1.pdf>, and <https://www.ea.govt.nz/assets/dms-assets/29/03-Review-of-security-reliability-and-resilience-with-electricity-industry-transformation-final.pdf> respectively at web page <https://www.ea.govt.nz/development/work-programme/risk-management/future-security-and-resilience-project/consultations/>.

<sup>2</sup> EA paper, paragraph [2.2]. Those other workstreams are MDAG's pricing with 100% renewables, updating regulatory settings for EDB, RTP, TPM and EDB pricing.

<sup>3</sup> Ibid, paragraph [2.4] and [2.5]. Those reviews are the EA's Phase 2 review of 'black Monday' 9<sup>th</sup> August 2021, the wholesale market competition review, and review of events early 2021.

and The Grid Owner's Net Zero Grid Pathways workstreams. Second the System Operator has not included the following workstreams listed by the EA and currently being implemented: Real-Time-Pricing (RTP), Transmission Pricing Methodology (TPM), and facilitating efficient distribution (EDB) pricing. The System Operator has also not included outputs from the three concurrent reviews of the wholesale electricity market that may be relevant to the transition to a low-emissions energy system.

5. MEUG suggests the EA publish a diagram like Figure 3 in the System Operator report that is a comprehensive list of all relevant EA, MBIE and Grid Owner electricity sector workstreams and include interdependencies and dependencies.
6. A topic discussed at the workshop I attended was the opportunity and challenge to move from deterministic standards and criteria for real-time decision making to more probabilistic approaches. This has been an issue discussed for many years. It's complex and requires additional decision-making tools that can develop and weight a realistic set of scenarios with relevant real-time prices and values to compare in dollar terms the net benefit or least cost of alternative decisions. MEUG believes it is worth considering given the expected improvement in the quality of pricing data across the supply chain in real-time compared to the status quo.
7. Under the theme titled "The rise of DER," where DER refers to Distributed Energy Resource, an issue to re-consider is if the provision of Automatic Under-Frequency Load Shedding (AUFLS) should change from a mandated physical obligation to a least cost provision. MEUG suggests this is worth considering, following on from the above paragraph discussion on new tools and probabilistic methods for ancillary services, to consider those changes incorporate AUFLS. If the potential of DER is to be maximised, then AUFLS should also need move to a least cost procurement basis. Not to do so will both inhibit maximising potential DER and result in an AUFLS regime that is higher cost than needed. This is a critical issue to consider now so that implementation of the "new" mandated physical obligation AUFLS with 4-steps to replace the existing 2-steps does not foreclose early migration to a market or market-like least cost procurement basis.
8. Please contact me if you would like further elaboration on any of the above. MEUG looks forward to engaging in the future phases of this important work.

Yours sincerely



Ralph Matthes  
Executive Director