18 August 2025

Electricity Authority
PO Box 10041
Wellington 6143

Via email: fsr@ea.govt.nz

Consultation Paper – The future operation of New Zealand's power system – Issues and high-level options.

The WEL Networks appreciates the opportunity to provide feedback on the above consultation.

WEL Networks (WEL) is New Zealand's sixth largest electricity distribution company and is 100% owned by our community through our sole shareholder WEL Energy Trust. Our guiding statement of strategic intent is to be leading Waikato's energy future, and we work to ensure that our customers have access to reliable, affordable, and environmentally sustainable energy.

WEL notes the list of models put forward is not exhaustive and is predicated on the existing paradigm for the industry. It is quite likely that disrupting forces (in terms of technology or otherwise) will appear in the future and cause the industry to shift to new paradigms.

At this stage, WEL supports the hybrid Distribution System Operator (DSO) model, which balances responsibilities between Transmission System Operators (TSO) and DSOs, as this allows for more decentralised flexibility and tailored solutions. The hybrid model is also favoured for its potential to enhance market participation and flexibility service dispatch, provided TSO/DSO roles are clearly defined and emergency protocols prioritize grid stability.

Irrespective of the model pursued, clearly defining the roles and coordination between traditional distribution network operators and emerging DSOs, and ensuring a cost reflective and efficient provision of operational data (especially from metering) is needed to ensure a successful implementation.

Our responses to the specific questions sought by the Authority are attached and should you require clarification on any part of this submission, please do not hesitate to contact me.

Yours sincerely

[redacted]

Andrew Maseyk
Regulatory Specialist
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Questions	Comments
Q1. Do you agree with the explanation of the distribution system operator (DSO) role/ entity, and the explanation of the distribution system operation (DSO) functions that one or more DSO entities would be required to perform?	It would be useful to explicitly separate the roles of distribution asset owner and distribution system operator in a context similar to that of the grid owner and the system operator. Asset owners carry out operational activities in respect of the assets (e.g. fault response, repairs, planned outages for maintenance) and transmission and distribution system coordinate generation, storage and load to meet defined objectives across the respective networks. A DSO could manage both operational roles in terms of assets and coordination of resources but this does not have to be the case.
Q2. Do you think we are correct that the themes we identified in submissions to the initial consultation paper mean we should focus mostly on system operation at the distribution level, and on the new functions required for effective distribution system operation?	To enable a successful DSO model implementation, WEL believe that the right level of support from the three key pillars of operations, technical capability in device integration, and commercial incentives are also required.
Q3. Do you think we have accurately covered the main changes to the distribution system in this section? If not, what have we missed or where have we gone wrong?	While there are many uncertainties ahead the industry cannot wait for everything to be clearly laid out before taking actions. One thing that does seem certain is that, regardless of the DSO model or technology changes, real-time visibility (e.g. voltages and real and reactive power at the ICP level) is a vital enabler of DSO actions as well as general EDB improvements. On the majority of networks this data will need to be supplied by the existing metering suppliers, so care is needed that the incremental cost borne by networks is the true costs of the additional data supply to avoid unnecessary additional costs flowing to the end consumers. Schedule 10.6 of the Code could also be reviewed to ensure MEPs supply data direct to EDBs/DSOs (including performance requirements) without the need for involvement of the retailer of the ICPs. With most of the emerging technologies to be connected at the LV level, it is important for

	the EDBs/DSOs to obtain LV visibility of network configuration and supply quality data. There is also a consideration needed that if consumer grade equipment is to be relied on to provide network services (unlike utility or grid owned assets), greater safety margins will likely need to be specified.
Q4. Do you agree with how we have defined the problem, as the need for a more coordinated framework of integrated system operation?	Given the potential volume of DERs and differences in types and performance, it is critical to standardise the integration requirements and the minimum performance required so the DER benefit can be more effectively realised. DSO/DNO will also need to work together to clarify the responsibility of distribution network constraint identification and forecast, new connection planning, load growth scenario planning, etc.
Q5. In your view, what aspects of the Australian and British deliberations around DSO models are relevant to New Zealand?	The hybrid model of TSO(ESO) and DSO working together seems to be the preferred model adopted by AU and UK, and can be implemented in NZ with much less structural change or major reform of the industry.
Q6. What do you think about the direction of research conducted in New Zealand by bodies such as the ENA, NEG and SIDG on the challenges of preparing to perform DSO functions?	WEL supports the idea of the industry working together to assess future options. One suggestion is the Authority be more actively involved in exploring how to enable additional funding for industry bodies to undertake innovation projects.
Q7. What is your view about the need for an independent DSO (iDSO)? Should we consider an iDSO now as an option to perform all DSO functions, or a subset of functions related to market facilitation? Or can that decision wait until the market for flexibility services is more developed?	iDSO will most likely be quite challenging to implement, and lead to a large investment in coordination /communication between the iDSO and all 29 EDBs alone. Of which the customer ultimately pays for this integration and communication work. WEL favours a more de-centralised approach.
Q8. What do you think about the three DSO models proposed by the Authority?	The proposed list of models is not exhaustive. The proposed list of models uses a top-down, command and control framework. Other frameworks which are bottom up and decentralised may be more effective. In the interim, and before the emergence of different paradigms, the Hybrid DSO will provide a more balanced solution between DSO vs. TSO for the consumer. In the hybrid

	model, having the DER submit to the TSO may simplify and enable more customers to participate in the market but the hierarchy for dispatch needs to be clearly defined.
Q9. Do you prefer one model over the others?	Hybrid DSO
Q10. Given the hybrid model can take several forms, what do you think would be the best allocation of DSO functions between the TSO and one or more distributors as DSOs?	TSO work with DSO on grid support requirements. DSOs manage flexibility dispatch to deliver the benefits, procure services from the market, and ensure flexibility solutions are within network limits. During Grid or network emergency, grid takes priority before DSO.
Q11. How would you rank the DSO models in terms of enabling the process of price discovery in the market for flexibility services to approach the wholesale market ideal of security-constrained economic dispatch?	The de-centralised nature of the DSO or Hybrid DSO models means they would have more flexibility in implementing the most needed flexibility services tailored to the local needs in terms of constraints, capacity and supply quality. A total TSO model may not provide the granularity to the local level and maybe harder in which to implement new services. It is likely that wholesale market ideals may evolve over time in response to changes in technology so security-constrained economic dispatch may not be the ultimate goal.