

## Appendix B Format for submissions: Integrating hosting capacity into small scale distributed generation connections

Submitter	Wellington Electricity Lines Limited (WELL)
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Please use the following table to provide your feedback on the questions included in this paper.

Question		Response
Q1.	Do you agree the issues identified by the Authority? If not, why not?	<p>Yes, in general, we agree with the identified issues.</p> <p>However, the issues are wider than expressed in the consultation documents. The Authority should also consider how to support the integration of all Distributed Energy Resource (DER) devices (instead of Distributed Generation (DG) only), by enabling Electricity Distribution Businesses (EDBs) to improve network visibility and data collection (both static and real-time) for network congestion modelling, and establishing standards for demand response requirements.</p> <p>WELL recognises this is outside of the proposed scope of changes and will probably need an additional code change process.</p> <p>The consequence of not including the integration of DER in the code is that distribution networks may not be able to integrate customer DER devices while maintaining network security.</p>
Q2.	Do you agree with the proposals identified by the Authority? If not, why not?	<p>Yes, WELL agrees with the proposed amendments. WELL also suggests that a bond fee for new connection applications is included. The bond would be refunded once the new connection is completed in the “final application process”, or all requested data / CoC is received. A bond would provide an incentive for the customer to complete their connection, adhere to the connection requirements and submit additional data captured during installation,</p>

		<p>testing and commissioning process.</p> <p>WELL believes a bond is needed because of the additional complexity introduced by enabling the non-default power quality mode which requires extra scrutiny and setting guidance. A distributor may not be able to obtain all relevant information from the customer at the approval stage when the inverter is not powered up / purchased. A bond will help ensure a customer is engaged throughout the installation process.</p>
Q3.	Do you agree with the objectives of the proposed amendment? If not, why not?	<p>Yes. However, the objective also needs to consider how to minimise the adverse impacts due to high DER penetration. E.g. stability during system disturbance events. As noted in the response to Question 1, this is outside the proposed scope of changes and would require an additional changes to the code.</p>
Q4.	Do you agree the benefits of the proposed amendment outweigh its costs? If you don't agree, please explain your reasons.	<p>Yes, we agree that the amendment benefits could outweigh the costs if the overall system can be implemented properly. This requires EDBs to provide detailed guidelines and standards on connection requirements and the ability to verify the actual installation settings and validate the system behaviour. A bond fee will incentivise customers and installers to provide the information required to install DG.</p> <p>As the Authority outlined in the consultation paper, inverters in New Zealand broadly conform to the latest Australian standards. However, some inverters do not include New Zealand configuration settings and some installers do not know how to configure inverters to the New Zealand standards. To ensure the proposed amendment provides the desired outcomes, the industry may have to keep a list of approved inverters and approved installers.</p>

Q5.	Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.	<p>WELL agrees that the proposed amendment is preferable to the other two options listed in the consultation paper.</p> <p>WELL would like to suggest an improvement to the preferred option. Rather than listing the industry requirements in the code, WELL recommends that the code references an addendum published by a nominated industry body, like the Electricity Engineers Association or the Electricity Networks Association, which provides the industry requirements or technical standards. An addendum provides an agile pathway for the timely update of changes to industry requirements or technical standards on inverter technologies.</p>
Q6.	Do you agree the Authority's proposed amendment complies with section 32(1) of the Act? If you don't agree, please explain your reasons.	<p>Yes, WELL agrees.</p> <p>However, the scope of the changes should be extended to include establishing a distribution market model and DER demand response capability. The potential impact from other DER devices (e.g. like electric vehicles) could be substantially higher than DG in New Zealand.</p>
Q7.	Do you agree with the drafting of the proposed amendment? If not, why not?	<p>Yes, WELL agrees with the proposed amendments. The proposed amendment should also consider:</p> <ol style="list-style-type: none"> <li>1. Extend the application process to other DER devices.</li> <li>2. Under 9B, add "any additional information or documents that are reasonably required by the distributor".</li> <li>3. Enable distributors to charge a bond fee that will be fully refunded once the connection commissioning is complete and any additional data requested by the distributor is submitted.</li> <li>4. Distributors may wish to publish a list of approved DER installers and approved DER compliance inspectors.</li> <li>5. Enable distributor to disconnect an approved connection if there is evidence that the connection no longer meets the code requirements or deviates from the information submitted in the application. This is additional to the "deficiency" clause that is more relevant to distributors'</li> </ol>

	<p>enforcement ability during the application process.</p> <ol style="list-style-type: none"> <li>6. Increase the schedule 6.5 application fee for Part 1A from \$100 to match the Part 1 - \$200. This ensures the additional modelling cost for network congestion capacity study and configuration can be recovered from the DER owner, and is not subsidised by other consumers.</li> <li>7. Increase the testing and inspection fee for each inspection, and deficiency fee to \$120. This reflects the actual cost of this process and will ensure the cost is not subsidised by other consumers.</li> <li>8. Any fees written in a Code should also have an escalation process which is indexed to inflation.</li> </ol>
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