Elteco
NZBN 9429043558513

Peter MacMillan
[redacted]

Feed Back on the BESS Regulatory Roadmap
Great to see a discussion document around the BESS installation.

1) A solar farm should be able to integrate and connect to a Battery System, and the Battery system should be able to connect to Transpower. At present the solar farm and BESS must connect individually to Transpower, the cost of the additional connect makes it prohibitive to have a BESS /Solar Installation or BESS/Wind installation (Payback issue). (Transpower)

   The correction would be to have a single connection line charge operating on single price point.

2) The Transpower network modelling, makes decision making for the installers very difficult eg does the site need a harmonic filter. Done correctly this should stabilize the grid. (Transpower)

   Work needs to be done by Transpower to model and decide the requirement of equipment connected to their network. Producing a list of requirements for current off the shelf invertors rather than waiting for the design to arrive. e.g. Requirements for 10 common inverts.

3) FENZ have refused to put out a BESS fire, or enter a yard with a lithium fire, will not attach a hose or hose down the burning BESS container, or cool other BESS containers. A relaxation on water storage onsite and water supply could lower the construction cost. (Council)

   Some work around how to put out a lithium fire or universal guidelines

4) DC Voltage value of over 1500V, to be high voltage, needs to change 1590V this will allow 30 string PV array, which would make the construction of a Solar Farm, far more economical. The value is historical and could be changed to allow a more cost-effective system to be built. Allowing for large consumers to install solar farms. (Electricity regulation)

5) There needs to be a construction standard, and certification applied to the Batteries and Invertors, as well as to the works installation. Which is a bit late in development (standards)

   It is crazy that LED lights in NZ is required to be made to a NZ standard, and yet the manufacture of most HV equipment is not manufactured to a sited NZ standard mostly made to and IEC standard or Japanese Standard

6) With a Lithium hybrid battery, the output gas during a fire is very toxic gas. The battery chemical makeup is toxic to the environment if burnt and discharged into the ground. (Fire and Emergency)

   In my opinion the BESS system should not be installed in any residential areas or by state highways, unless design steps are taken to minimise the Toxic gas, some work needs to be done around this.

7) There is a concern that embedded networks will start installing the BESS system, which left unchecked could be catastrophic (Electricity Act)

   BESS systems require maintenance, the owner should be required to have provide complete drawing and installation Data and a robust maintenance system along with fault current management design and documentation.

Signature [redacted] **Date 27/07/2025**

MEngNZ 1168315 EWRB I2569 REA 5960 Lead Auditor 206299