Wellington Electricity's Earthquake Readiness Programme

Reducing risk and improving earthquake readiness

Seismically strengthen 91 buildings

Strengthening 91 substation buildings to 67% of the NBS (New Building Standard).

Strengthening substation buildings will:

- Protect the public and workers who operate around and maintain the equipment
- Make it easier and safer to access equipment, which will expedite the restoration of power
- Help equipment to withstand a major earthquake.

Increase spare stock

Stock which is critical to an emergency response will be purchased and stored at different locations.

This will facilitate the ability to:

- Restore critical power supply across the region more quickly
- Construct around 19km of critical 33kV emergency powerlines
- Reduce significant outage impacts in the event of an 11kV cable failure.

Construct two portable substations

New substations with separable components can be deployed in a number of configurations.

Infrastructure will include:

- Two mobile substations ready for deployment - one in the Wellington CBD and the other in the Hutt Valley region
- One 11kV mobile switchboard to enable the restoration of the electrical load at substations damaged by liquefaction and/or ground shaking.

When deployed with emergency overhead lines, these options will have the potential to improve power restoration time by up to 12 weeks from the current state in the Hutt Valley and up to 6 weeks from the current state in the Wellington CBD.

Construct three data centres

Data centres will ensure access and recovery of vital information, independent from potentially vulnerable locations.

These three data centres will help to:

- Reduce risk and improve staff safety should a key site be unreachable or unsafe in emergency conditions
- Ensure critical network systems are accessible should telecommunications links fail
- Provide ready-access to critical information, including plans, specifications and manufacturers' records.

Upgrade radio and phone system

Improve voice communications systems for use prior to and immediately after an event.

Upgraded systems will help to:

- Improve safety through communication with field workers and restoration crews
- Facilitate effective communication with service providers
- Effectively manage high volumes of information used for situational reporting, prioritisation of recovery efforts and response planning
- Eliminate reliance on public communication systems.

Milestones

2018

March 2018
Commerce Commission approve proposal for earthquake resilience

October 2018
Phase one of building strengthening complete

2019

March 2019
Over 20% of entire programme complete

September 2019
All spares in place

2020

March 2020
Over 40% of entire programme complete

September 2020
Longer-lead items arrive

2021

March 2021
Three year plan complete

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