

Flying your drone near Powerco's network

Please read this important guide on how to operate drones or other remote-controlled aircrafts safely around Powerco's network infrastructure, including its power lines and substations.

If you have any questions, contact generalenquiries@powerco.co.nz.

The risks of flying drones near power lines

Operating a drone close to electricity infrastructure can be hazardous. High-voltage lines generate electromagnetic fields that may interfere with your drone's GPS and navigation systems. This interference can lead to serious incidents, such as collisions with power lines, nearby structures, the ground or people. Electrical wires can be difficult to see and it's often challenging to judge how far away they are from your drone. Beyond safety concerns, flying too close to live equipment could cause an electrical flashover, which can destroy your drone and potentially interrupt power supply.

Safe operation near distribution lines and substations

All drone pilots must comply with **Civil Aviation Authority (CAA) Rules – Part 101** as a minimum when flying. These include the following requirements:

- Aircraft must NOT exceed 25kg and must always be safe to operate and well maintained.
- You must take steps to minimise hazards to people, property and other aircraft.
- Only fly during daylight, unless you are doing a shielded operation.
- Give way to, and remain clear of, all manned aircraft on the ground and in flight. If you see an aircraft near you, it may be safest to land.
- You must be able to see your unmanned aircraft with your own eyes at all times. Don't watch it through binoculars, a monitor or smartphone. Do not fly it behind objects or through or above fog and cloud.
- Fly below 120 metres (400 feet) above ground level.
- Get consent before flying over people and property.
- There is certain airspace where drones must never be flown, and other areas where there are strict conditions. Check for any airspace restrictions in your area before you fly.

Flying near power lines

You must maintain a safe distance from all electrical lines, no matter the voltage. If you must operate nearby, make sure you clearly identify the proximity of the lines before your flight.

Safe distances from Powerco electrical lines	Conditions for flight
Less than 4 m	No flying
4 – 10m	Access is limited to Powerco's employees and approved service providers who must meet stringent requirements for both drone specifications and pilot qualifications.
15m and above	You can fly here without notifying us, however, reach out if you have any questions or concerns. generalenquiries@powerco.co.nz

View our map to identify Powerco's high-voltage network.

View map button (<https://www.powerco.co.nz/who-we-are/our-business#>)

If the lines in your area are owned by another network provider, please contact your local electricity distribution company to confirm their requirements.

Flying near a substation

If you intend to fly near any Powerco substation, please reach out in advance to discuss safety and permissions, you may need a Powerco-appointed safety observer.

Safe distances from Powerco substations	Conditions for flight
Less than 4 m	No flying allowed
4 – 10m	Access is limited to Powerco's employees and approved service providers who must meet stringent requirements for both drone specifications and pilot qualifications.
10 – 20m	Notify Powerco of your proposed flight via generalenquiries@powerco.co.nz you will need to provide your contact details, flight plan, risk assessment, drone specifications, pilot qualifications and proof of insurance (if required).
20m and above	You can fly here without notifying us, however, reach out if you have any questions or concerns at generalenquiries@powerco.co.nz

Sometimes, things go wrong

If your drone becomes stuck on power lines or inside a substation, **do not attempt to retrieve it yourself**. This is extremely dangerous and could result in serious injury or death. Electricity can arc over distances and does not require direct contact to cause harm. Instead, move to a safe distance and immediately call Powerco's emergency number **0800 27 27 27** to report the incident. Provide as much information as possible about the drone's location and surroundings so that Powerco's trained staff can respond safely and remove the drone without risk to you or the network.

Disclaimer

Powerco has published this guide solely for the purpose of assisting safe drone operations around Powerco's network infrastructure.

This guide is not legal advice. The operator of the drone remains the 'Pilot-in-command' and is legally responsible for the safe operation of the drone (including being appropriately trained, qualified, authorised and competent) under any laws and must comply with all relevant aviation laws and regulations, local laws, land-use permissions and site-specific safety protocols, in addition to these guidelines.

The operator is also responsible for obtaining necessary permits or consents, conducting risk assessments and maintaining appropriate insurance coverage.

Powerco accepts no liability or responsibility for an error or omission contained in this guide, or for any injury, loss, damage (including indirect or consequential loss or damage), or any other claim from any reliance on, or failure to rely on, the contents of this guide.