To identify powerline locations, visit

## lookupandlive.com.au

and make a plan to stay safe when working near powerlines.



Scan with smartphone

# Working safely around electricity when LOW-LEVE Flying

# Understand the electricity network

Powerlines have many different configurations ranging from multiple high voltage cables supported on large towers to a Single Wire Earth Return (SWER) system. SWER system spans can be of up to 400 metres and are particularly hazardous to pilots as cables and poles can be difficult to see.

Buildings such as houses and sheds are likely to have power connected through overhead structures. Roads may also provide a convenient path for powerlines. By identifying at least two poles, a pilot can gauge the path of the cable. Insulators on poles generally run in the same direction as the cable and may assist in identifying the number of cables and their direction. Understanding how to read powerline hardware on utility structures is a core skill for low-level flying crews.

# **Call for safety advice**







ergon.com.au energex.com.au

Part of the Energy Queensland Group

There are electrical overhead powerlines criss-crossing the country. Often unnoticed, they are essential to provide electricity to our towns and communities. Contact with overhead powerlines can cause serious injury or death.

### **Practice safe work habits**

- Before starting work, take the time to plan. Visit lookupandlive.com.au - our powerline planning map to identify powerline locations and make a plan to work safe.
- Conduct a pre-flight briefing and do a pre-flight reconnaissance.
- Apply appropriate flying techniques.
- Maintain situational awareness for co-pilot and crew.
- Read the physical structure indicators, eg poles and insulators and identify verbally all structures if flying with others.
- Know the location of powerlines on and around the property or the area you are flying in.
- Consider weather conditions.
- Guard against deviating from low-flying routes and areas that have been previously checked for powerlines and other cables.
- Cross over powerlines at poles or structures rather than mid-span where possible.
- Be aware of reduced powerline heights resulting from damage, often indicated by uneven cables, excessive sag or slack stays.
- Stay well clear of damaged powerlines and report damage immediately by calling triple zero (000).
- Request Installation of rotamarkers on overhead powerlines and stay wires where low-level flying operations occur regularly.
- Request permission to paint poles to highlight structures.
- Provide ground barriers to warn crew of the presence of powerlines and electrical infrastructure, where appropriate.
- Ensure all new members of the crew are inducted on the risks so they understand potential electrical hazards with powerlines.

# What to do if contact with powerlines occurs

- Follow your pilot's training if contact with powerlines occurs. Be aware that there is an elevated risk of fire from fuel in an electrical accident.
- Assume that powerlines or cables are 'live', even if they are not sparking.
- Don't touch overhead powerline cables.
- Call triple zero (000) immediately to report powerlines down and a life threatening situation.
- Stay inside the cabin, unless it is unsafe to do so. Occupants should not leave their aircraft until the power is switched off and they have been given the all clear by an authorised electricity distribution employee.
- Keep bystanders at least 10 metres away from the aircraft and anything else in contact with the powerlines. A potentially dangerous electrical field will be created around anything in contact with the powerline.

#### If immediate evacuation of aircraft is necessary:

- Access your escape route and check for fallen powerlines.
- Jump well clear ensuring you land with your feet together. Be careful not to stumble or fall and don't touch the aircraft and the ground at the same time.
- Jump or shuffle away with your feet together until you are at least 10 metres clear of the aircraft, powerlines or anything else in contact with them.
- Once clear DO NOT go back to the aircraft for any reason.
- Don't try to be a hero. Never approach, attempt to rescue or allow others to approach an aircraft in contact with powerlines.

### **Marking powerlines**

#### Aircraft warning markers

Powerline warning markers should be installed where regular low-level flying operations take place. Refer to AS 3891. The marker's colour should be chosen for visibility and contrast with the surrounding background.

Red and white rotamarkers are the standard powerline markers used by Energex and Ergon Energy. Markers of different colours may be requested to provide contrast when viewed in different directions or conditions (eg. white and orange alternated).

More information on powerline markers can be found in our Marking overhead powerlines and electrical assets brochure.

#### Pole marking

Painting the lower section of the pole up to 2.4 metres above ground with white and red alternating 600mm bands of paint can also provide a visual indication of structures.

## Contact us for safety advice about marking powerlines and poles on your property.

#### Responsibilities

The responsibility for marking overhead powerlines, cables and structures should be as follows:

- (a) The person requesting planned low-level flying operations (eg the land owner) is responsible for requesting installation of markers.
- (b) The pilot or pilot's delegate should be satisfied as to the need for and effectiveness of markers prior to commencing low-level operations.
- (c) Aerial markers should only be installed, maintained or removed by Ergon Energy or Energex.