Bushfire Management

Safety is essential every day for our landholders, community, first responders and our people.

About this brochure

Bushfires underneath or near transmission lines pose a safety risk for the community and have the potential to interrupt power supply. This brochure provides important information outlining how bushfires can impact our network and what we do to prepare.
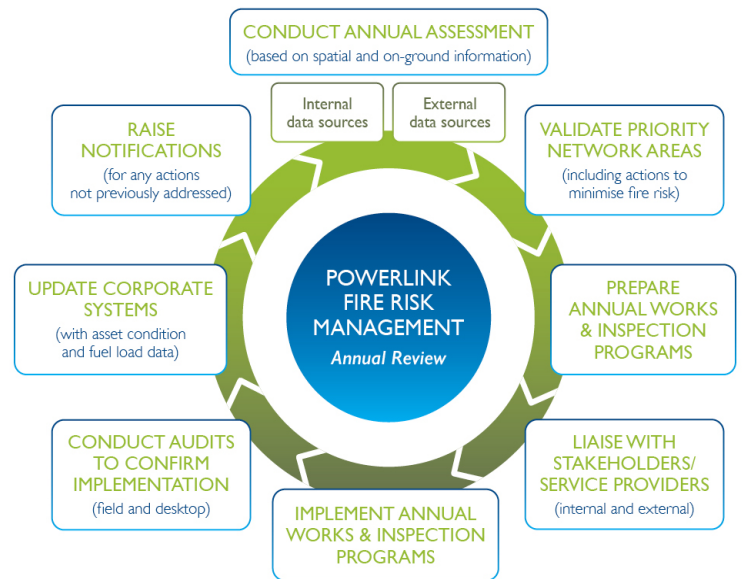
Key facts

- Electricity and safety risk management regulations require us to manage the transmission network for risks related to bushfires

- We undertake preventative work to minimise the impact of bushfires on the network and communities

- We work closely with emergency services during bushfires
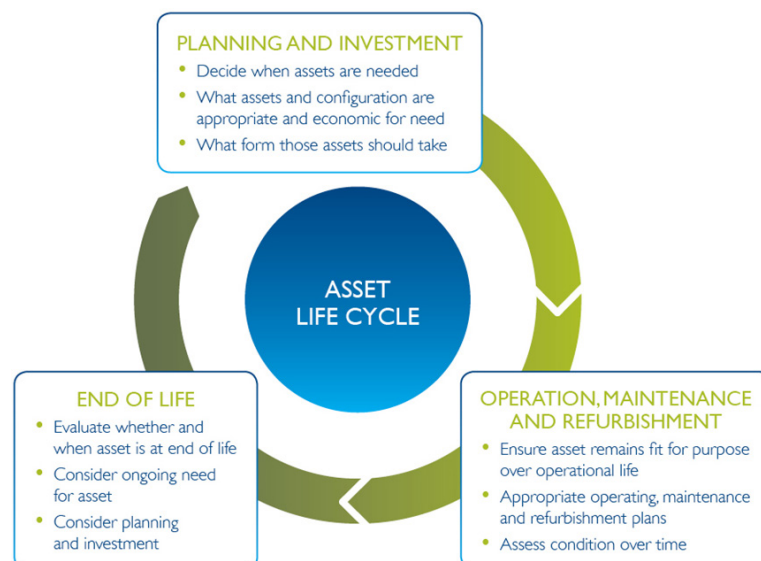
General safety information

We have an obligation under the *Electrical Safety Act 2002* and *Electrical Safety Regulations 2013* to manage risk to the safety of the public, our people and the environment so far as is reasonably practicable. The Queensland Bushfire Plan identifies hazard mitigation, public safety and collaboration and coordination as the key principles for the management of bushfires in Queensland. The plan also identifies the priorities for bushfire management in Queensland, including the protection of Powerlink's critical infrastructure. Powerlink's key commitments are outlined in the plan and community requirements for protecting our critical infrastructure are available on Powerlink's website.

Powerlink maintains systems and processes to ensure it plays its part in bushfire mitigation, including prevention, preparedness, response and recovery aspects. We follow a framework to ensure our fire risk management remains contemporary and appropriate for Powerlink's network and customers.

POWERLINK FIRE RISK MANAGEMENT *Annual Review*

- CONDUCT ANNUAL ASSESSMENT (based on spatial and on-ground information)
  - Internal data sources
  - External data sources
- VALIDATE PRIORITY NETWORK AREAS (including actions to minimise fire risk)
- PREPARE ANNUAL WORKS & INSPECTION PROGRAMS
- LIAISE WITH STAKEHOLDERS/ SERVICE PROVIDERS (internal and external)
- IMPLEMENT ANNUAL WORKS & INSPECTION PROGRAMS
- CONDUCT AUDITS TO CONFIRM IMPLEMENTATION (field and desktop)
- UPDATE CORPORATE SYSTEMS (with asset condition and fuel load data)
- RAISE NOTIFICATIONS (for any actions not previously addressed)

Safe working habits

Powerlink takes a whole of life approach to managing its assets and associated risks, including bushfire mitigation. The diagram below outlines the key stages in our approach to managing the transmission network.

ASSET LIFE CYCLE

PLANNING AND INVESTMENT
- Decide when assets are needed
- What assets and configuration are appropriate and economic for need
- What form those assets should take

OPERATION, MAINTENANCE AND REFURBISHMENT
- Ensure asset remains fit for purpose over operational life
- Appropriate operating, maintenance and refurbishment plans
- Assess condition over time

END OF LIFE
- Evaluate whether and when asset is at end of life
- Consider ongoing need for asset
- Consider planning and investment

Planning and investment

We consider bushfire risk in our planning and investment decision making. Planning and design for transmission networks also considers national and international standards and guidelines, including fire prevention. Transmission networks are considerably less prone to either being damaged by or starting a fire than distribution networks as:

- transmission lines are supported on tall towers (up to 80 metres) and poles;

- transmission conductors are usually located further away from trees and branches that could otherwise come into contact with the energised conductors causing an electrical arc which may ignite a bushfire;

- transmission component failures generally occur in extreme weather events, usually accompanied by rain (e.g. cyclones and thunderstorms);

- transmission line conductors are separated by much greater distances and are less likely to clash during extreme weather events; and

- transmission lines have a dedicated easement with an average width of 50 metres with greater control of vegetation growing immediately underneath.

Operations, maintenance and refurbishment

Our network is monitored 24/7. This monitoring includes automated electronic protection systems that detect faults, satellite monitoring and highly trained personnel to make decisions in real time.

A program of pre-summer aerial inspections are conducted in high risk zones to assure the condition of the network prior to bushfire danger period. Conditions that pose a risk to the safe operation of the network are identified and corrective actions taken prior to the bushfire danger period. These annual inspections provide insight into asset conditions and inform our maintenance programs and other asset investments.

Asset failures are investigated and data is analysed to identify trends and forecast degradation of network assets to identify opportunities for proactive replacement or refurbishment of assets.

Vegetation corridors are differentiated on the basis of bushfire risk, with additional management of vegetation being specified in high bushfire risk areas. A combination of spatial analysis and ground inspections help inform the maintenance of vegetation corridors, with corrective works prioritised based on risk factors and asset condition. Hazard trees, those which are outside of the corridor, but present a risk of impacting the network in the event of failure, are assessed by inspectors for health and risk of failure.

Our employees undertake training in the Overall Fuel Hazard Assessment, which is the same methodology and training undertaken by government agencies in assessing fuel loads. We provide information and awareness sessions on electrical dangers and how to work safely with electrical assets in a bushfire.

Safety and our people

The safety of our people is essential. We undertake daily briefings of risks during severe bushfire risk periods. There are also reminders of changes to work practices on total fire ban days.

Our response to any risk from bushfire is managed though incident management processes and involves engagement with stakeholders ranging from maintenance service providers for local intelligence, through to provision of information to the Australian Energy Market Operator (AEMO) for the management of power system security.

Powerlink works closely with Queensland Fire and Emergency Services in responding to control and extinguish bushfires in progress. Coordinating responses to fires occurs through our network control centre.

Safety and the community

Powerlink works with the community to manage fire risks. This includes participating in fire planning at various levels and having emergency contact details available 24/7 (please call 1800 353 031).

Powerlink also partners with relevant agencies that can assist in delivering important messages and training about bushfire risks near transmission networks with local communities. This includes Powerlink's long-standing sponsorship of the State Emergency Service (SES) in partnership with Energy Queensland. This sponsorship delivers vital equipment to SES groups around the state, to assist in their response efforts and community support in times of need, such as the 2019/20 bushfires.

Powerlink also partners with the Queensland Fire and Biodiversity Consortium (QFBC), a program of Healthy Land and Water, delivering innovative and science-based solutions to challenges affecting the environment.

Powerlink encourages landholders and agencies to only perform low intensity burns on easements (i.e. <1m flame height). If fire intensities are higher, only the edges of the clearing area should be considered a suitable location to establish fire breaks and should not be considered a safe place to escape from fires due to the electrical safety hazards.

Our approach and action

The resources provided to deal with a bushfire depend on the severity of the event. Our emergency management procedures require management and senior leaders to ensure sufficient resources are deployed to the correct areas. We have a long-standing capability to mobilise crews from other areas to deal with unplanned outages from bushfires.

During total fire ban days, our network control centre monitors the network to reduce the risk of fire.

Additional precautions are adopted by field staff to minimise the likelihood of starting a fire, such as suspension of planned works, and restrictions on operations of certain equipment.

Coordination and recovery

We use modern communications to allow system operations to remain in contact with our field crews. The agency in charge of the scene will control when it is safe for our crews to enter areas after a bushfire. We have the ability to communicate directly with emergency services control rooms to ensure safe and reliable network operations.