

Putting safety first in bushfire season



During summer, high temperatures and low rainfall can lead to conditions where fires are easily ignited, spread quickly and are difficult to control.

At Western Power, we take bushfire prevention seriously and make a big investment every year to prepare our network for bushfire season. We take a number of steps to ensure the network continues to run safely, which includes a mix of smart network settings, proactive management of poles and wires in high to extreme bushfire zones, and a risk based response to fire restrictions.

Why outages happen more often and take longer to resolve during bushfire season

Most faults on the electricity network are temporary, such as when a falling branch strikes a powerline and causes a short circuit. However, about 30% of faults are more serious and result in an interrupted supply, until we can find and fix the cause.

Our network is designed with equipment to automatically detect and isolate these faults.

Even though trying to re-energise the network may create a spark, in normal conditions the risk of starting a fire is very low.

Part of what we do to reduce bushfire risk is modify settings that monitor the electricity network, to make them more sensitive during bushfire season. When there is a fault or other interference during this time, the more sensitive settings ensure power is interrupted faster than usual. When this happens the power stays off until it is inspected, instead of being automatically restored.

This reduces the likelihood of starting a fire but results in more frequent outages that may last longer.

These changes have the greatest impact on customers in regional communities where electricity is supplied by powerlines that travel through high and extreme bushfire risk areas, often over long distances.



How we prepare high risk bushfire zones

Every year before bushfire season, our crews work hard preparing high risk bushfire zones, to reduce the chances of a network-related spark that could cause a fire.

This includes cutting back vegetation from poles and wires and clearing vegetation at the base of poles. We also wash lines and insulators in country areas where there is a lot of dust and in coastal areas that have salt build up.

What can we do to help

If you experience an outage lasting 12 continuous hours or more, you may be eligible for an \$80 payment under the State Governments Extended Outage Payment Scheme. Visit our website westernpower.com.au and click on 'Make A Claim' to check your eligibility and to submit your claim.

Escalating bushfire weather conditions

For everyone's safety, we operate more cautiously as bushfire weather escalates.

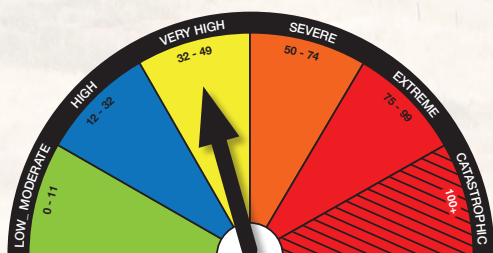
On a Fire Weather Day, we won't turn power back on after an outage without carefully considering any risks. This includes not allowing the network to automatically attempt to turn the power back on until we have sent a crew to patrol the powerline and find the cause of the fault.

Some regional powerlines are hundreds of kilometres long, so this can often take some time.

Escalating bushfire weather conditions

Fire Danger Index

The Fire Danger Index is the scale used to measure the severity of bushfire threat. A Fire Danger Rating is based on forecast weather conditions and advises the level of bushfire threat on a particular day. As the rating increases, the threat of a bushfire increases. For more information about Fire Danger Ratings, visit the Emergency WA website and click on the More button: emergency.wa.gov.au



Fire Weather Day

A Fire Weather Day is a Western Power designation when the Fire Danger Index is forecast to be 32 or greater. If a fire starts or takes hold when the threat of a bushfire becomes Very High, it may be hard for firefighters to control. On Fire Weather Days we take additional precautions to minimise the risk of our activities generating a spark which could potentially start a fire that might be difficult to control.

A Fire Weather Day is different to a Fire Weather Warning issued by the Bureau of Meteorology (BOM) when the Fire Danger Rating for an area is forecast to be Severe, Extreme or Catastrophic (a Fire Danger Index of 50 or higher).

Escalating bushfire weather

	Bushfire season (days with Low, Moderate or High Fire Danger Rating only)	Fire Weather Day (Very High, Severe, Extreme or Catastrophic Fire Danger Rating)	Total Fire Ban (prohibits any activities that may start a fire)	Vehicle Movement Ban (must not operate a vehicle likely to cause or contribute to the spread of a bushfire)
Responsible agency	Western Power's assessment of bushfire threat based on reported fire statistics and seasonal advice from BOM and DFES	A Western Power designation when the Fire Danger Index is forecast to be 32 or greater. A Fire Weather Day is not the same as a Fire Weather Warning issued by the Bureau of Meteorology (BOM)	Issued by the Department of Fire and Emergency Services (DFES)	Issued by the Bushfire Control Officer in individual local government areas
How long does it last?	At Western Power this is usually from December to March, although sometimes it is extended	As long as the Fire Danger Index is 32 or above (Very High or higher)	Usually for 24 hour periods from midnight to midnight	It varies but usually during the heat of the day

How are our activities affected in high or extreme bushfire risk zones?

Preparedness	Standard bushfire readiness including asset inspections and replacement Bushfire protection setting scheme activated	Inform operational Western Power employees of Fire Weather Day. Field crews will follow appropriate work practices and process during these periods	Inform operational Western Power employees of Total Fire Ban. Field crews will follow appropriate work practices and process during these periods	Inform operational Western Power employees of Vehicle Movement Ban. Field crews will follow appropriate work practices and process during these periods
Operating conditions		A risk assessment is required before power can be restored after an outage.	A detailed risk assessment is required to meet DFES Total Fire Ban Exemption conditions before power can be restored after an outage	Vehicles are not permitted to leave gazetted roads to inspect poles and powerlines
Fast protection settings	Fast protection settings are modified but not yet activated		Fast protection settings are activated on reclosers that can be controlled remotely	
Auto reclose minimisation	The auto reclose minimisation scheme is activated	Where auto reclosers can be controlled remotely, a single auto	Auto reclose is disabled in high and extreme bushfire risk zones	

<p>Restoration</p>	<p>Auto reclose is disabled on reclosers that can't be controlled remotely so there will be no auto reclose attempts</p>	<p>reclose sequence is attempted. Any successive attempts are blocked as a reasonable compromise between reliability and risk</p>	<p>When those risks aren't present, one auto reclose sequence is attempted</p>	
	<p>If the auto reclose attempt is unsuccessful, manual restoration of power can be attempted after 30 minutes if no cause has been identified and there is no reported possible cause</p>	<p>If the auto reclose attempt is unsuccessful, line patrols are required to visually identify the cause</p> <p>If the cause is found, the damaged part of the network can be isolated and, where possible, power to other customers can be restored. Once repaired, the affected network can be re-energised restoring supply to all customers</p> <p>If the fault can't be found or we can't complete the patrol, we will not restore power to any affected customers until the Fire Danger Index is below 32 and falling (often late in the evening)</p>	<p>If the auto reclose attempt is unsuccessful or was disabled, line patrols are required to visually identify the cause</p> <p>Even if the cause is found, if the risk of starting a fire is too great power will not be restored until conditions ease in the affected section</p> <p>If the cause can't be found or we can't complete the patrol, we will not attempt to restore power until the BOM forecast period is over and the Fire Danger Index is below 32 and falling (often late in the evening)</p>	<p>Line patrols by vehicle are restricted to gazetted roads</p> <p>Foot patrols are possible for powerlines close to roads, if it is safe to investigate</p> <p>Helicopter patrols for regional powerlines may be possible within range and in daylight but not at night or if it's windy</p>
<p>Impact on communities</p>	<p>Outages may be more frequent</p>	<p>Large parts of the network may be off for long periods of time</p>	<p>Larger parts of the network will be off for longer periods of time</p>	<p>Communities may have no power for significant periods of time</p>

Bushfire protection setting scheme

The bushfire protection setting scheme applies to all remotely controllable reclosers in a particular district for the entire bushfire season.

The scheme consists of two approaches - auto reclose minimisation and fast protection settings.

- **Auto reclose minimisation** restricts the number of automatic reclose attempts after a fault occurs on a feeder to reduce the risk of starting a fire. The settings for the number and duration of reclose attempts depends on the bushfire risk zone and the fire danger rating.
- **Fast protection settings** reduce the duration of a fault and the duration of discharged energy, reducing the subsequent fire risk. They are applied to devices protecting high and extreme fire risk areas during Total Fire Bans.

What is an auto recloser?

Auto reclosers are automatic reclosing circuit breakers.

A recloser responds to a fault by shutting off the supply of electricity on a powerline. It then waits a few seconds and attempts to automatically switch the power back on. Sometimes it has to do this two or three times before the fault is cleared. Every time a protection device recloses onto a network fault, energy is discharged. This discharge may cause a spark which can ignite a fire. This is why we make changes to the way auto reclosers operate during bushfire season.

How we find and address the cause of outages is also restricted when the Department of Fire and Emergency Services declares Total Fire Bans and local authorities declare Vehicle Movement Bans. When this happens, we have to wait for bushfire risk conditions to ease or the bans to be lifted before we can patrol the powerline or attempt to restore power. This means you may be without power for an extended period of time, possibly until late in the evening.

Fire Weather Day: This is something we enforce when the Fire Danger Rating is forecast to be Very High or greater. We take extra precautions to minimise the risk of our activities generating a spark, which could start a fire that might be difficult to control.

Total Fire Ban: The Department of Fire and Emergency Services declare this for days when fires are most likely to threaten lives and property. We approach days like these just as we would on a Fire Weather Day.

Vehicle Movement Ban: Issued by local authorities, this places a higher restriction on our activities. It is declared when the use of engines, vehicles, plant or machinery (including mobile generators) is likely to cause a fire or contribute to the spread of a bushfire. When this happens, our crews can't use vehicles to patrol faults in bushfire areas, which may delay restoring your power.

Are you bushfire ready?

Need to prepare your own property for bushfire season? The Department of Fire and Emergency Services has developed resources for property owners to be bushfire ready.

Despite our best efforts, you may still lose power for extended periods during bushfire season. Without power, you may not be able to operate cordless phones (including NBN), automatic doors, water pumps and other electrical devices, so it is important to have a backup plan.

Total Fire Ban

A Total Fire Ban is declared on days when fires are most likely to threaten lives and property. In Western Australia, Total Fire Bans are declared by the Department of Fire and Emergency Services following consultation with local governments based on a range of criteria including forecast weather provided by BOM, bushfire activity and availability of emergency resources.

In addition to prohibiting lighting any fires in the open air, a Total Fire Ban also extends to any other activities that may start a fire. It is generally issued from midnight to midnight but may be revoked if the forecast weather does not eventuate or if weather conditions ease.

Vehicle Movement Ban

Vehicle Movement Bans are issued by local governments and place an even stronger restriction on Western Power's activities. Local governments will impose the ban when their Bushfire Control Officer is concerned that the use of engines, vehicles, plant or machinery (including mobile generators) is likely to cause a fire or contribute to the spread of a bushfire. Vehicle Movement Bans may be imposed for any length of time but are generally imposed for the 'heat of the day' and may be extended or revoked by the local government should weather conditions change. A Total Fire Ban may be in place at the same time as a Vehicle Movement Ban but not necessarily.

Are you bushfire ready?



Power may also be turned off in areas around bushfires for the safety of emergency services crews working in the area.

Tips to stay aware and prepare

- If you care for someone who is sick or elderly, run a business or you rely on electrical pumps for water, we recommend you maintain your own emergency electricity and water supply.
- If you have a generator, keep it fuelled and ready to operate.
- If you have automatic garage doors or gates, learn how to operate them manually before an outage occurs.
- Keep your mobile phone and other important devices charged. Remember, you can recharge many devices in your car.
- Keep a torch and radio within reach and have spare batteries on hand.
- If you don't have a surge protector, during an outage unplug sensitive appliances such as computers, TVs and sound systems to protect them when power is restored.
- Stay informed by checking the Fire Danger Rating and Total Fire Bans at: emergency.wa.gov.au
- If you see a fallen powerline, stay at least 8m away and make the safe call to our 24/7 emergency line on 13 13 51.
- For up to date information about outages visit the power outages map at: westernpower.com.au



If you are concerned about the distance between a tree and an overhead powerline in your area, please contact your local council or Western Power on 13 10 87.