



Fact sheet

Wind Farms Managing fire risks

Do wind turbines pose a fire risk?

Under normal operating circumstances, it's extremely unlikely that a wind farm can cause or adversely affect a bush fire.¹ The Australasian Fire and Emergency Service Authorities Council (AFAC) confirms that wind farms are not expected to adversely affect fire behaviour, nor create major ignition risks.²

In Australia, lightning is one of the main sources of bushfire ignition³ accounting for 90% of the total area burnt by all fires.⁴ AFAC highlight that wind turbines may reduce the risk of bushfires caused by lightning due to their in-built lightning protection mechanisms.⁵

Modern wind turbines are fitted with automatic controls that activate in the unlikely event of a fire, which may include shutting down equipment, fire suppression, and notifying emergency services.

How are fire risks around the wind turbines prevented and managed?

Wind farms are designed to include extensive fire mitigation measures and have detailed fire and emergency response management plans. The plans are prepared in consultation with state and local fire services.

We install fire breaks around infrastructure to reduce the fuel load and prevent the spread of a fire. Water and fire fighting equipment may be stored onsite at strategic locations.

The internal road network will provide improved mobility for farmers, support staff and emergency services. Access roads also reduce the likelihood of fire moving through, or leaving the property as they act as an effective firebreak in many circumstances.⁶

Do wind farms prevent aerial firefighting?

Wind farms do not prevent aerial firefighting activities, instead pilots navigate to avoid wind turbines in the same manner as they avoid other obstructions, such as buildings, radio towers and power lines.

We will record wind turbines and met masts in the tall structures database maintained by Air Services Australia.

We will develop a Fire and Emergency Response Management Plan specific for the project. This plan will contain any required protocols to shut down wind turbines to assist in aerial firefighting activities.

Endnotes

- Wind Energy, NSW Climate and Energy Action, 2024. https:// www.energy.nsw.gov.au/nsw-plans-and-progress/major-stateprojects/shift-renewables/wind-energy
- AFAC, 2018 Wind Farms and Bushfire Operations. https://www. energy.nsw.gov.au/sites/default/files/2022-08/2018_10_AFAC_ windfarmsbushfiresoperations.p2
- 3. Understanding fire weather BOM, 2023 http://www.bom.gov. au/weather-services/fire-weather-centre/bushfire-weather/ index.shtml
- How weather affects fires BOM, 2023 http://www.bom.gov.au/ weather-services/fire-weather-centre/how-weather-affectsfires/#:~:text=Dry%
- **5.** AFAC, 2018 Wind Farms and Bushfire Operations. *https://www.energy.nsw.gov.au/sites/default/files/2022-08/2018_10_AFAC_windfarmsbushfiresoperations.pdf, p2*
- 6. AFAC, 2018 Wind Farms and Bushfire Operations. *https://www.energy.nsw.gov.au/sites/default/files/2022-08/2018_10_AFAC_windfarmsbushfiresoperations.pdf, p3*

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