JANUARY 2026

Hexham Wind Farm

FACT SHEET

Fire Hazards

The proposed Hexham Wind Farm (the project) is located between Hexham, Caramut and Ellerslie in the Moyne Shire in south-west Victoria. The project would incorporate up to 106 wind turbines with a total height of up to 260 metres from ground to blade tip. The project would also include an on-site terminal station and battery energy storage system (BESS), and other associated infrastructure such as access tracks.

Assessment

Wind Prospect has prepared an Environment Effects Statement (EES) as part of the planning approvals process for the project. The EES assesses the potential environmental, social and economic impacts of the project, ensuring that any impacts on the local community and environment are investigated and addressed.

A Risk Management Plan (RMP) and Fire Safety Study was prepared by Fire Risk Consultants as part of the EES. The purpose of the plan and study is to assess the likelihood and consequences of fire originating within the project site, the potential for fire caused by project equipment or fire encroaching into the project site (for example, by bushfire). The study considers hazards and risks during construction, operation and decommissioning phases and makes recommendations for mitigation measures and procedures to minimise fire risk and manage fire should it occur.

How the Risk Management Plan and Fire Safety Study was prepared

The RMP and Fire Safety Study responded to local government, national and Country Fire Authority (CFA) guidelines and requirements and included:

- An existing conditions assessment based on planning overlays and local bushfire history.
- A bushfire planning assessment in accordance with Clause 13.02 within the Moyne Shire Council planning scheme, including a hazard assessment of the development site, surrounding neighbourhood and surrounding landscape.
- Analysis of the project design against CFA guidelines.
- A fire risk assessment undertaken in accordance with the National Emergency Risk Assessment Guidelines.
- Hazard identification study considering fire electrical hazards, fire spread to adjoining infrastructure, fire spread to adjacent properties, dangerous goods involved in the infrastructure, fire water runoff and hazards to staff and fire fighters.

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Findings

The RMP and Fire Safety Study considered in detail the likelihood and consequence of fire originating within the project site, fire being caused by project equipment or bushfire encroaching into the project site. The key findings of the RMP and Fire Safety Study are summarised below.

What is the risk of wind farm components causing a fire?

While fires within wind energy facilities have been known to happen, these are not widespread. Fires usually occur within the wind turbine nacelle which is located at the top of the tower. To reduce and manage fire risk, nacelles are fitted with smoke detection, suppression systems and other safety systems. These both prevent a fault from occurring, and automatically commence shut down procedures if fire or faults are detected. Wind turbine systems can also send alerts to site operators for monitoring. It is a requirement of wind farm projects that the wind turbines be maintained as per the manufacturer's specification to mitigate the risk of fire.

The importance of following the above design requirements and committing to the ongoing maintenance of the system is therefore critical to reduce fire risk.

What is the risk of a battery energy storage system causing a fire?

Faults in BESS technology can lead to thermal runaway. Thermal runaway occurs when a battery cell temperature rises and is unable to cool down, triggering a chain reaction which leads to more heat and faster reactions, resulting in fire or explosion. Thermal runaway can be triggered by equipment fault, overcharging, physical damage, defects, or exposure to high external temperatures.

To avoid this scenario, BESS units in Australia must be built and installed to stringent electrical standards. A full BESS will have safety measures including automatic cooling systems, externally monitored sensors, barriers between battery module bays and separation distances from other infrastructure to prevent fire spread. BESS units must also undergo a thermal runaway test which examines the battery safety at all assembly levels, from individual battery cell, module, unit to full BESS installation.

With these measures in place, the likelihood of overcharging or fault leading to thermal runaway is greatly reduced and the BESS can be considered safe for installation and operation.

What is the risk of a bushfire reaching wind turbines or battery systems?

The landscape surrounding the property proposed for the Hexham Wind Farm and BESS project has experienced bushfires in the past and has the potential for future fire.

The project site is not identified as bushfire prone due to a lack of vegetation to support large-scale embers from travelling long distances and igniting new fires. Due to the separation between the wind turbines and other infrastructure and the location of the BESS, the possibility of the bushfire impact is also reduced. The provision of fire breaks around the base of the towers, BESS area and other infrastructure will ensure a bushfire is less likely to directly impact site infrastructure.

To ensure staff safety, an Emergency Management Plan (EMP) would be developed prior to construction commencing, which includes the requirements for vacating the site when the fire danger is elevated and enabling remote monitoring systems in the event that the site needs to be closed to personnel.

Managing fire safety risk

The following mitigation measures were identified in the RMP and Fire Safety Study:

Installation of static water supply tanks located strategically across the project site and proposed BESS site, which are compliant with the CFA Guidelines and fire hydrant installation standards.

Provision of fire breaks around the base of the wind turbines, BESS, terminal stations and the operations and maintenance area to reduce the risk of bushfire reaching infrastructure and spreading across the project site.

Installation of smoke detection and fire suppression systems within wind turbine nacelles.

Installation of fire safety systems within BESS enclosures based on manufacturer specifications including but not limited to cooling systems, external monitoring systems and appropriate separation distances and barriers between module bays.

Provision of access tracks including overtaking bays.

Ongoing maintenance programs for the project lifetime in accordance with the relevant standards or manufacturer specifications.

Country Fire Authority guidelines

The project must respond to CFA guidelines by developing an Emergency Management Plan (EMP). The EMP will detail planned procedures and systems, including for example:

- Contact details of a technical expert who is available 24/7 for the fire brigade to contact in the event of an emergency or threat of an emergency.
- Technicians to be deployed to the site when the site monitoring communications are down.
- A site monitoring system which is able to indicate the early stages of a fault or emergency event and can shut equipment down remotely in the event of a fire.

Summary

The RMP and Fire Safety Study prepared for the EES confirms that the proposed Hexham Wind Farm can be built and operated safely and manage fire risk providing the recommendations around safety systems, procedures and maintenance programs outlined within the plan and study are implemented.

If the project is approved and a planning permit issued, the development of a Fire Management Plan and EMP which meets the requirements of the CFA Guideline would assist with managing the risk of fire.

Next steps

The RMP and Fire Safety Study has been submitted as part of the EES documentation. The EES and all technical assessments will be placed on public exhibition for a period of 30 days. You can review the EES and technical reports on the Hexham Wind Farm website at: www.hexhamwindfarm.com.au/ees.

Formal submissions received from the community during the public exhibition period will be summarised in a Submissions Report and considered as part of the Minister's Assessment of the project.

Have your say

During the public exhibition period, you have the opportunity to provide a formal submission on the proposed Hexham Wind Farm. There will be opportunities to meet the project team and hear from technical experts about the proposed project, the EES and technical studies.

Visit the Community page (hexhamwindfarm.com.au/community) of the website for more information on our upcoming in-region engagement activities and ways to get in touch.

Wind Prospect respectfully acknowledges the Traditional Owners of the land on which our office and each of our projects are located. We also acknowledge and uphold their continuing relationship to the land and pay our respect to their Elders past, present and emerging.

Contact

For more information or to speak directly to a Wind Prospect team member contact us.

If you need an interpreter, please call 13 14 50. If you are deaf and/or find hearing or speaking with people on the phone difficult, please contact the National Relay Service on voice relay number 1300 555 727, TTY number 133 677 or SMS relay number 0423 677 767.

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