



# Wind Farms and Bushfire Operations

A large, stylized graphic in the background of the page. It consists of three overlapping, curved shapes in green, orange, and red, forming a circular, flame-like or wind-turbine-like pattern. The shapes are layered, with the green shape on top, the orange shape in the middle, and the red shape on the bottom. The overall effect is a sense of movement and energy.

**POSITION**

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## **1 Introduction**

Wind power is a rapidly expanding mode of renewable energy production in Australia with installed capacity doubling in the past five years. As of September 2013, Australia has 64 wind farms with an installed capacity of 3058 megawatts (MW), with another ten wind farms under construction.

The increasing number of wind farms makes it important for AFAC member agencies to clarify their position and to identify those issues important for their operations in and around these facilities.

## **2 Purpose**

This is a position to state AFAC member agencies attitude towards wind farms and their development. It aims to clarify the risks in order to inform stakeholders including regulators, members of the community and the wind farm industry.

## **3 Scope**

The scope of this paper is limited to the issues relating to planning for bushfire prevention, preparedness, response and to recovery operations in and around existing and planned wind farms.

It excludes the environmental, social and economic issues associated with wind farms. It does not provide any judgments on the values or otherwise of wind farms.

## **4 Position**

Bushfire management issues are best treated at the planning stage of a wind farm project. This includes the impact of bushfires on the wind farm and the potential for fires to start within the development boundaries. Local planning controls are in place to regulate these issues with respect to any infrastructure development and some local planning controls refer specifically to wind farms.

Wind monitoring towers associated with wind farm investigations and planning can be very much taller than the planned turbines and can be less visible. The location and height of monitoring towers should be noted during aerial firefighting operations.

Wind farms can interfere with local and regional radio transmissions by physical obstruction and radio frequency electromagnetic radiation. Any interference can be minimised or eliminated through appropriate turbine siting at the planning stage and by moving away from the tower if experiencing local interference during operations.

Wind farms are an infrastructure development that must be considered in the preparation of Incident Action Plans for the suppression of bushfires in their vicinity. These considerations are routine and wind farms are not expected to present elevated risks to operations compared to other electrical infrastructure.

Aerial fire fighting operations will treat the turbine towers similar to other tall obstacles. Pilots and Air Operations Managers will assess these risks as part of routine procedures. Risks due to wake turbulence and the moving blades should also be considered. Wind turbines are not expected to pose unacceptable risks.

Wind farms are not expected to adversely affect fire behaviour in their vicinity. Local wind speeds and direction are already highly variable across landscapes affected by turbulence from ridge lines, tall trees and buildings.

Turbine towers are not expected to start fires by attracting lightning.

Turbines can malfunction and start fires within the unit. Automatic shutdown and isolation procedures are installed within the system. Although such fires may start a grass fire within the wind farm, planning for access and fire breaks can reduce the likelihood of the fire leaving the property. This risk from such fires is less than that of many other activities expected in these rural environments.

Wind farms may operate on days of Total Fire Ban subject to relevant national, state and territory legislation.

Liaison with wind farm operators and energy industry representatives during and after bushfires should aim to ensure minimal disruption to generation capacity and rapid resumption of essential services to the community.

## **5 Supporting Documentation**

There's power in the wind: national snapshot.  
Clean Energy Council, April 2012

There's power in the wind: fact sheet.  
Clean Energy Council, June 2011

Both sourced from  
<http://www.cleanenergycouncil.org.au/resourcecentre/factsheets.html>  
on 29 August 2013

Emergency Management Guidelines for Wind Farms  
Country Fire Authority, April 2007

Fact Sheet 10. Wind Farming, Electromagnetic Radiation & Interference.  
Australian Wind Energy Association.  
Sourced from  
<http://www.synergy-wind.com/documents/10Electromagnetic.pdf>  
9 September 2013