NEOEN

Bushfire Prevention

Neoen takes fire safety and mitigation very seriously on all its projects.

As a long-term owner and operator of renewable energy projects, we work with the rural fire service authority from the early stages of development to construction and operation.

Our projects involve building new infrastructure and we are committed to ensuring that in doing so, we do not put unnecessary additional pressure on valuable local resources (such as fire fighting) or bring unmitigated risk to the natural environment and communities surrounding our project sites.

How wind farms can be beneficial:

- Construction of additional high-quality roads/ access tracks that can be used in a bushfire emergency
- Asset Protection Zones around turbines and maintained roads act as additional fire breaks, helping slow fires down in an emergency
- Protection systems inside wind turbines draw lightning safely to the ground, reducing their impact on people, property and trees
- Water tanks are installed on site to guarantee reserves for fire fighting purposes only
- Additional eyes on the ground to detect and raise alarms during an emergency
- The local fire authority can access additional funds from the project's benefit-sharing program.

Over the last decade, Neoen has partnered with the following agencies to successfully develop more than 22 assets across six Australian states and territories:

BUSH FIRE SERVICE W.A. · CFA · CFS · NSW RURAL FIRE SERVICE · RURAL FIRE SERVICE QUEENSLAND

What to expect

Development

We meet with the rural fire service authority (the fire authority) and community volunteers for feedback on our project designs and plans.

We value their input on:

- Access track locations and easement widths
- Site entry/exit points including fencing and gates
- High-risk areas across the site (i.e. Can the fire trucks get up steep terrain?)
- Vehicle access limitations for construction traffic management
- On site water requirements and compatibility of fire truck hose fittings
- Bushfire history in the region
- Capabilities of the personnel and equipment needed on site vs at the fire authority
- Fire emergency plan/map location
- Low fire risk plant species for vegetation management
- Works that can occur on total fire ban days vs hot days
- Drills and channels for communicating during emergencies.

Construction

We design infrastructure on site in accordance with requirements from the local and state fire fighting authorities.

We construct high-quality access tracks in addition to the ones already in and across our project site. This means that the fire authority gains access to new fire trails in the event of an emergency.

Our contractors are equipped with appropriate personnel protective equipment (PPE) and basic fire-fighting equipment.

Anyone working on site is trained to follow the *Emergency Response Plan* and contact the fire authority during a fire emergency.

We host the fire authority on site multiple times to ensure they are familiar with the layout and our latest maps.

We conduct emergency response drills **quarterly** with role playing scenarios like tower rescue or a nacelle fire.

Following a rigorous risk assessment process, we develop and implement a *Bushfire Management Plan* and/or *Emergency Response Plan* which typically provides advice on:

Bushfire prevention and mitigation strategies

Training, resources and remote monitoring

Operations

A wind farm allows for additional eyes in an otherwise remote area. Neoen has a skilled and well-equipped service team on site throughout the week that can alert and assist the work of the fire authority.

We also have CCTVs installed at our substations and each wind turbine has built-in smoke detectors that can alert our 24/7 on call operator in the event of a fault or if the smoke alarm trips due to heat or fire.

We have requirements to keep vegetation below certain levels to manage fuel loads.

We also establish *Asset Protection Zones* around turbines and associated infrastructure like our substation, which act as a fire break in both directions and help slow down fires during an emergency.

We host the fire authority on site **annually** to assess any new risks or opportunities, and revisit topics like:

- Expectations from Neoen and the host landowner during a bush fire emergency
- Fire break assessments and management
- High-angle rescue procedure and equipment
- Addressing any equipment shortcomings on site or with the fire authority
- Location of water tank(s) on site and its adequacy
- Access maps and master key to entry and exit gates
- Typical response times, including out-of-hours protocol.

Fire detection and notification systems

Fire response and suppression procedures

Benefit-Sharing

We also encourage the fire authority to build their capability by accessing new funds in the region under our projects' Community Benefit-Sharing Program.

Bulgana Green Power Hub, Victoria

We provided funds to the Joel Joel Fire Brigade, helping them replace their old tanker with a new one.

Numurkah Solar Farm, Victoria

We awarded a grant to the Dramanure Fire Brigade to help them upgrade their ageing equipment.

They used the newly available funds to replace their 20-year old refrigerator with a new, energy efficient one as well as to buy a new hose washer to clean out hazardous materials getting collected in fire hoses after any emergencies.

These upgrades enable the Brigade to better respond to emergencies & focus on saving lives and property.

Frequently asked questions

Are wind turbines a fire risk and how will this be mitigated?

All electrical infrastructure comes with a level of fire risk, but the risk from wind turbines is extremely low. If in the rare event that a wind turbine catches fire, the damage is contained to the turbine itself, which generally burns out with the fire services managing spot fires from falling debris.

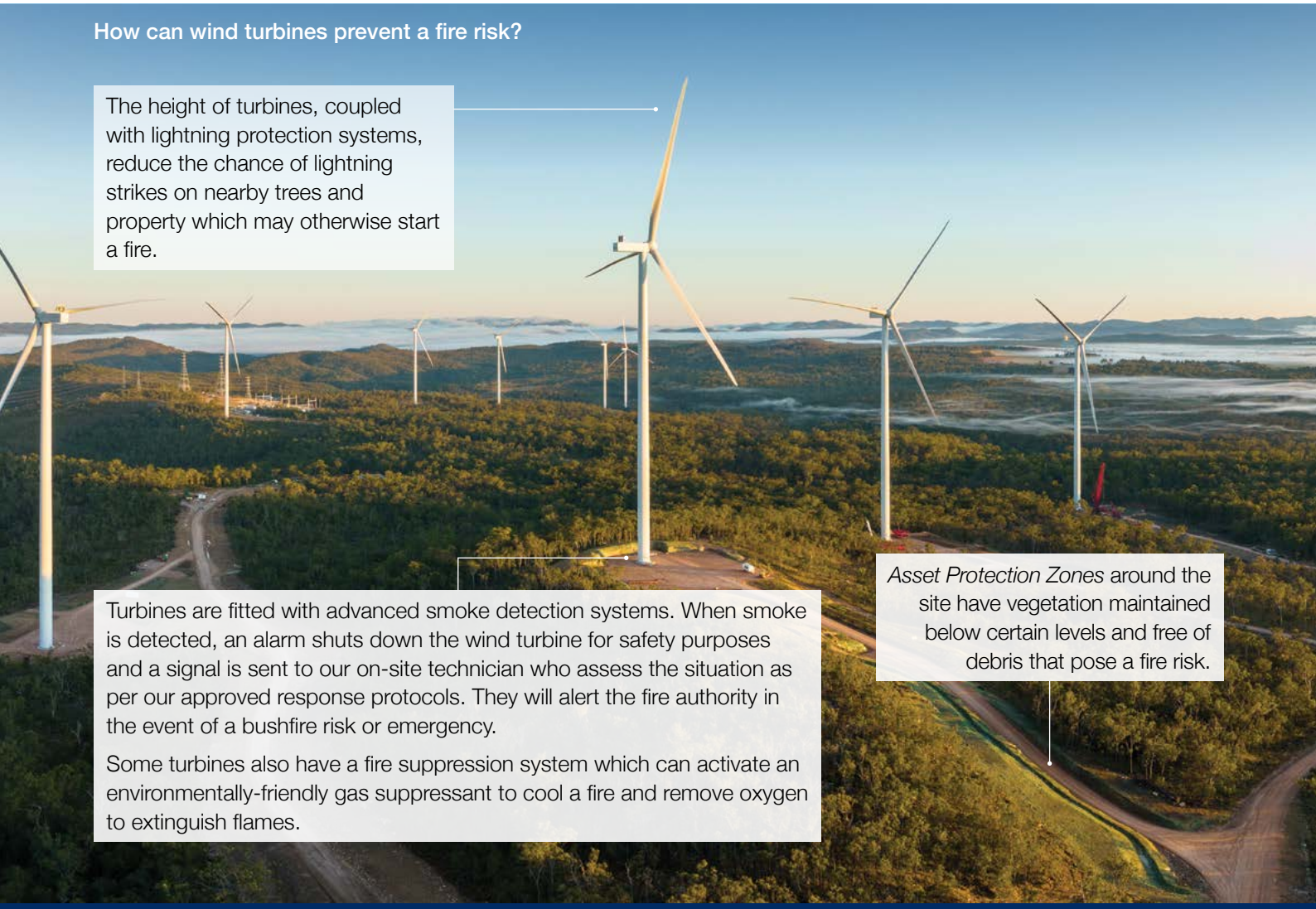
Wind farms have requirements around keeping vegetation below certain levels to manage fuel loads, and offer benefits such as additional fire breaks, water reserves, fire trails and monitoring in otherwise remote areas of a region. Neoen ensures that our wind farms comply with all relevant requirements from the local and state government fire authorities.

How would the ability to fight fires in the area, using light aircraft and heavy water bombers, be affected by turbines?

If there is a fire emergency, Neoen would stop all wind turbines and park the rotor blades to facilitate operation of fire fighting aircraft. We would electrically isolate the turbines and comply with any requests from the fire service to facilitate their access. Sometimes, a turbine may be locked in a "Y" position to make them safe to fly around. However, this is subject to the gravity of the situation (bushfire vs grass fire) and avoided in the interest of prioritising human safety.

Aircraft would need to avoid the wind turbines and follow relevant visual flight rules. Pilots view turbines as no different from tall structures and hazards such as power lines, transmission towers, mountains and valleys. Any requirements associated with aerial fire fighting are included in the Bushfire Emergency Management Plan developed in consultation with the fire authorities and in accordance with the state government's planning requirements for wind farms.

How can wind turbines prevent a fire risk?



The height of turbines, coupled with lightning protection systems, reduce the chance of lightning strikes on nearby trees and property which may otherwise start a fire.

Turbines are fitted with advanced smoke detection systems. When smoke is detected, an alarm shuts down the wind turbine for safety purposes and a signal is sent to our on-site technician who assess the situation as per our approved response protocols. They will alert the fire authority in the event of a bushfire risk or emergency.

Some turbines also have a fire suppression system which can activate an environmentally-friendly gas suppressant to cool a fire and remove oxygen to extinguish flames.

Asset Protection Zones around the site have vegetation maintained below certain levels and free of debris that pose a fire risk.