

## Part 2: Increased Fire Risk from Turbines for Country Residents

### Table of Contents

Part 2: Increased Fire Risk from Turbines for Country Residents.....	1
Table of Contents.....	1
Introduction.....	2
Wind turbines represent an extra fire danger for the country.....	3
A) Extra powerlines from turbines to the grid pose a greater fire threat.....	3
B) Impossible to fight turbine fires due to the height of the tower.....	4
C) The same scenario is seen elsewhere in the world:.....	5
D) The Wind Industry’s attitude – leave it to the CFA.....	6
E) Difficulty of terrain near a windfarm.....	7
F) The reality of fire threats to country lives.....	7
G) Fire-fighting aircraft can’t be deployed near turbines.....	8
Conclusion.....	8

## **Introduction**

Wind turbines pose an increased and unacceptable fire risk to a rural community. The hub of a turbine can burst into flame at any time, and fires at that height cannot be controlled, yet the burning debris from blades can be hurled for miles in a strong wind.

They add an extra burden to the Country Fire Authority, of whom so much is already expected. The CFA is manned by local volunteers, who spend a lot of time maintaining and checking fire trucks, taking part in training sessions, and educating country residents.

In a letter sent to the Victorian Householder, from the then Premier of Victoria, John Brumby (10 October, 2010), it was stated:

**‘We are lucky enough to enjoy one of the most liveable states in the world, surrounded by magnificent natural landscapes, but unfortunately Victoria is also one of the most fire-prone areas in the world.’<sup>1</sup>**

You cannot have better reasons than the ones stated above, for doing more in-depth – and objective – studies into the whole question of wind farms, their viability, their productivity, and their efficiency, or otherwise, given the enormous impact they are having on the environment and country residents, and given that they can burst into flame without any prior warning. Up till now, the wind industry itself has been calling all the shots, and their own self-assessments in all areas – of efficiency, of their contribution to the question of energy needs, and their environmental effects, have been taken for gospel truths.

It is ironic, given the above statement, that the previous Planning Minister, Justin Madden, fast-tracked many wind farms prior the last Victorian election of 2010.

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<sup>1</sup> Letter to the Householder by the ‘John Brumby, Premier of Victoria’ 10 October, 2011

## **Wind turbines represent an extra fire danger for the country**

### **A) Extra powerlines from turbines to the grid pose a greater fire threat**

Australia has had horrific bush fires every year. The inferno of February 7, 2009, will never be forgotten. It has emerged since then that many of the fires started that day were caused by fallen power lines.

Newspaper headings during the Royal Commission into the causes of the Black Saturday fires on February 7, 2009 tell the story:

‘Powerline was rusted, weak, photos show’<sup>2</sup>

‘70% of deaths from power line failure: lawyer’<sup>3</sup>

‘Beechworth fire “began near sagging power line”’<sup>4</sup>

‘Power company says line started Horsham fire’<sup>5</sup>

‘Line likely cause of fire’<sup>6</sup>

‘Questions for the linesman on “pole 38”’<sup>7</sup>

Wind farms cover a large area of land and require a network of more and more power lines to join up to the electricity grid. The higher number of powerlines used to join wind farms to the grid will increase the risk of bush fires, as they pose a threat on hot days.

<sup>2</sup> The Age, Michael Bachelard, August 23, 2009

<sup>3</sup> The Age, Darren Gray, September 10, 2009

<sup>4</sup> The Age, Daniella Miletic, September 15, 2009

<sup>5</sup> The Age, Daniella Miletic, September 18, 2009

<sup>6</sup> The Age, Daniella Miletic, September 19, 2009

<sup>7</sup> The Age, Dewi Cooke, November 19, 2009

Tobias Geiger, the general manager of Westwind (a German company), said that it can compulsorily acquire land for powerlines to connect Mt Mercer wind farm to the grid. Landowners in the area found that contractors were surveying their paddocks without permission. ““They’ve been surveying, pegging and painting markings in my paddock; it’s like, bad luck, we’re going through,”” [Paul Mullane] said.<sup>8</sup>

Not only will the power lines devalue the land, but the power lines will greatly increase the risk of serious fires on hot, windy days. The wires would be mounted on normal power poles, not pylons.

Not even a planning permit is required for the power poles.

The landowner is not only dispossessed of his right to decide who, or what, comes onto his farm, but if he is a member of the local fire brigade, and very likely he is, he will be expected to face extra risks from fires on his property from power poles that he didn’t want in the first place, that he could not object to, that devalue his property, and the profits from which will go to overseas companies. And for that he’s supposed to fight voluntarily, and put his life on the line.

And in the Mt Mercer case, ‘The proposed route for the 132kV powerline will stretch from Elaine to Warrenheip and will run through the properties of 52 landholders.’<sup>9</sup>

## **B) Impossible to fight turbine fires due to the height of the tower**

John Brumby’s ‘letter to the householder’ also states:

‘...it is crucial that individual Victorians take action to plan for their own safety in the upcoming fire season.’<sup>10</sup>

That plan is an impossibility if you’re anywhere within 10 kilometres of a windfarm. There is no control at all over a fire that starts in the hub of a wind turbine.

In the middle of a heat wave in South Australia in 2006, when turbines had to be shut down, and when wind farm energy output plummeted at a time when it was most needed, a fire broke out in a turbine.

‘In South Australia a ‘\$3 million wind farm turbine [Lake Bonney] caught fire while dozens shut down at the time South Australia most needed them, when a heatwave left 63,000 South Australian homes without power last month.’<sup>11</sup>

‘...40 CFS firefighters, and six trucks rushed to extinguish the blaze, but fire hose water couldn’t reach the steel towers at the top of the tower...instead, the firefighters watched

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<sup>8</sup> *The Courier*, July 11, 2009, ‘Land can be taken for grid’

<sup>9</sup> *The Courier*, July 11, 2009, ‘Land can be taken for grid’

<sup>10</sup> Letter to the Householder by the ‘John Brumby, Premier of Victoria’ 10 October, 2011

<sup>11</sup> Sunday Mail, David Nankervis, February 12, 2006

as fire destroyed the \$3 million turbine...and extinguished spot fires ignited by ashes from the turbine blaze.’<sup>12</sup>

On October 30, 2010, there was another fire in South Australia. At the Starfish Hill Wind Farm, near Cape Jervis, a turbine caught alight, causing \$3,000,000 damage. The situation was deemed too dangerous to get close to the turbine, and:

‘There were tips of the blades flying some distance...You could go no closer than a kilometre away.’ said Mr Crawford.... CFS officers kept watch for spot fires, but were unable to extinguish those close to the turbine.’<sup>13</sup>

That fact has serious repercussions for people living close to turbines. At the site at Leonards Hill, near Daylesford, some houses are as close as 450 metres away from the proposed turbines there. In the event of a turbine fire, they would be ‘thrown to the wolves.’ Firefighters would be advised not to come that close to the turbine, and be unable to put out spot fires around those homes.

‘The Starfish hill wind turbine fire is the third in South Australia since 2006, with a blaze at the Lake Bonney Wind Farm in January 2006, and another at Cathedral Rocks Wind Farm, Port Lincoln on February 2, 2009.’<sup>14</sup>

At the Cathedral Rocks wind farm ‘A \$6 Million wind turbine has caught fire near Port Lincoln, starting blazes on the ground as embers fall.

‘The fire, at the Cathedral Rocks wind farm about 30 km southwest of the town, was first noticed by a boat about 1am...The turbine is alight halfway up its 60m structure, making it difficult for the 14 Country Fire Service firefighters trying to deal with it to extinguish the blaze.’<sup>15</sup>

### **C) The same scenario is seen elsewhere in the world:**

In France, reported September 19, 2010: ‘Two wind turbines went out of control and caught on fire on Sunday morning in the south of the Department of Drome (in Provence, in the south of France), and one of them “exploded,” causing fire to spread through the surrounding vegetation, according to firemen who attended the scene.’<sup>16</sup>

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<sup>12</sup> *ibid.*

<sup>13</sup> Victor Harbor Times, Elizabeth Sweetman, November 4, 2010

<sup>14</sup> Victor Harbor Times, Elizabeth Sweetman, November 4, 2010

<sup>15</sup> The Advertiser, February 03, 2009, ‘Cathedral Rocks Wind Farm turbine fire’

<sup>16</sup> Agence France Presse, 19.09.2010, ‘Deux éoliennes s’emballent et prennent feu dans la Drôme’ = ‘Two turbines go out of control and catch on fire in the Drôme’

“Debris was thrown all around. It could have started a fire. There’s wood everywhere and a strong south wind [the Mistral from northern Africa],” [Jean-Marie Villard] added, recalling that “this is the second time it has happened – a similar incident occurred on this same windfarm in 2004.”<sup>17</sup> And in August 2008 another turbine at a height of more than 100 metres, caught fire at Vauvillers, in northern France.

In Germany, ‘Two wind turbines caught fire near Osnabrück and in the Havelland region in January [2007]. The firefighters could only watch: Their ladders were not tall enough to reach the burning casings.’<sup>18</sup>

#### **D ) The Wind Industry’s attitude – leave it to the CFA**

I went to an inspection of the Challicum wind farm in Victoria, in 2007. We stood under the towers and listened to Peter Marriot from Wind Power Pty Ltd explain how CFA fire fighters were told to stay and watch a fire in the hub of a turbine burn away. (With his permission, I have a tape of that day.) The hub of a turbine is 100 metres high, or more, and no fire fighting equipment in the world is going to reach that.

Usually, turbines are shut down during extreme temperatures to avoid generator meltdown. The fire mentioned at the Lake Bonney wind farm ‘...had been caused by an electrical fault while maintenance crews were working on it after it had shut down.’<sup>19</sup>

That day was not a windy day. But on Black Saturday, February 7, 2009, in Victoria, it blew a gale. Fires fuelled by burning debris from a wind turbine would have covered untold miles.

Above a certain temperature, turbines are supposed to be shut down.

But a disturbing trend is seen in wind companies, who put profit above the lives of country people, and do not shut down turbines in extreme heat.

‘While farmers must be cautious operating equipment outdoors on total fire ban days, wind farms are free to operate.’<sup>20</sup>

Waubra wind farm operator Acciona has confirmed a policy of allowing fires in turbines to burn out, calling such episodes “extremely rare”.<sup>21</sup>

Yet as was mentioned earlier, in South Australia there have already been three turbine fires that fire-fighters were unable to do anything about.

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17 *ibid.*,

18 *Bloomberg Businessweek*, Simone Kaiser and Michael Fröhlingsdorf, August 24, 2007, ‘The Dangers of Wind Power’

19 *Sunday Mail*, David Nankervis, February 12, 2006

20 *The Courier*, December 9, 2010, Brendan Gullifer, ‘The spin during fire bans’

21 *ibid.*

Recently Pacific Hydro, which operates the Clements Gap wind farm near Port Pirie, said ‘...its turbines had not shut down in the past but admitted there was a risk. “Like all machinery, it has a preferred operating temperature,” [a spokeswoman] said. “They could shut down but it depends how hot it is within the machinery, not the outside temperature.”’<sup>22</sup>

Not all ‘machinery’ operates 80-metre blades 100 metres above ground at a speed that reaches 300 km at the blade tip.

The above statement from Pacific Hydro shows a profound contempt for the lives of the surrounding country residents of a windfarm, given that it is that very community that

will be fighting any fires in a *voluntary* capacity on hot summer days, with the increased risk from turbine fires that it can neither reach nor control.

#### **E) Difficulty of terrain near a windfarm**

Windfarms are often built on rocky hilltops and hillsides. The rock-strewn uneven ground makes it difficult, even impossible, to reach spot fires started by debris from burning turbines.

Fire trucks cannot get around fast enough to put out spot fires caused by debris flung far and wide. Thick bush and rocky outcrops spread over large areas do not allow for easy access by trucks, and a broken axle in a fire truck can leave firefighters stranded in the middle of a bushfire. Turbines can throw broken and burning debris for miles on windy days.

““They (wind turbines) are normally located in areas that are not easily accessible (to emergency crews),” said Mr Webb.’<sup>23</sup>

#### **F) The reality of fire threats to country lives**

The country fire brigades are manned by local volunteer fire fighters that give up their time to practise fire drills, and who are prepared to risk their lives to fight fires that threaten country homes and country residents. Every time the siren goes, they man the trucks, not knowing if they’ll return; but they go.

Many have lost their lives doing just that, including in the vicinity of Chepstowe, where Future Energy wants to erect three turbines, knowing that fires in turbine hubs can not be controlled.

Close to Chepstowe, in the Linton wildfire in December 1998, five firefighters lost their lives. In March 2006, homes were lost in the Snake Valley fires.

In my area there have been three major fires that covered a large area, destroyed homes and killed many farm animals – the Glengower to Mt Franklin fire in 1969, the Clunes to Creswick fire in 1977, and the fire from Mt Cameron to Clunes. In all cases, local

<sup>22</sup> The Advertiser, December 31, 2010, Cara Jenkin, ‘Wind power heat warning’

<sup>23</sup> Victor Harbor Times, Elizabeth Sweetman, November 4, 2010

volunteers were called on to fight the fires and risk their lives. I watched the fire from Clunes to Creswick, and the wind that day was scary.

But even then fire fighters did not experience burning debris flung from 100 metres above the ground, over many kilometres away. Fires often generate their own excessive wind, and turbines are an unacceptable risk in country areas.

### **G) Fire-fighting aircraft can't be deployed near turbines**

Added to the risk of burning debris flung from a turbine, there is the extra problem of a 'no-fly' area around turbines.

For example, in the fires at Linton (1998) and Snake Valley (2006), water-bombing aircraft were deployed extensively for aerial fire-fighting. Future Energy's proposed turbines for the Chepstowe area would restrict, and endanger the use of such fire-fighting measures in that area, and impose greater danger from bushfires.

### **Conclusion**

Turbines can burst into flame with no prior warning, and winds can take burning debris over many kilometres.

There is no way in which fire in a turbine can be reached, or put out by firefighters.

Country fire fighters are told to stay and watch the turbine burn out, and stop spot fires from spreading.

The surrounding countryside of a windfarm is often rugged and inaccessible, and firefighters can not get to spot fires in those conditions.

Wind farm operators leave it up to volunteer fire fighters in the country to look after turbine fires.

Wind farms require miles of extra power lines to take power to the grid. Power lines have been responsible for many outbreaks of fire, and more power lines increase this risk.

A landowner is unable to stop powerlines going through his property. Lines have been mapped out on people's land without any permission from the landowners, and country residents are disempowered to act, even if they do not want the extra risk of fires starting from power lines on their own property.

Turbines would restrict, or preclude, the use of aircraft used for water-bombing fires, a



Re: Senate Community Affairs Committee 9 of 8

Senate Inquiry into: The Social and Economic Impact of Rural Wind Farms

Part 2: Turbines pose an added Fire Risk to country residents

method that had to be used in the Linton and Snake Valley fires of 1998 and 2006.

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