

NSW.GOV MAJOR PROJECTS / PLANNING

Hills of Gold Submission

Against the proposal

First of all I will state I support clean energy. My husband and I travelled around Australia for 9 years, obtaining most of our energy in our caravan from solar. We had 850 watts of solar on our roof, lithium batteries and produced enough power to run a large 12v 2 door fridge freezer and also run a 240v bread maker. Our cooking was LP Gas.

Our home in Nundle has 12 solar panels and our current car and van also has solar for our power for a 12v fridge in the car and a 3 way in the van, plus TV, computers etc. We rarely go to caravan parks, but bush camp most of the time.

- 1. How much power will this wind farm use** – for instance, power required to keep the blades turning when there is no wind to help stop the shafts warping due to the massive size of the blades?

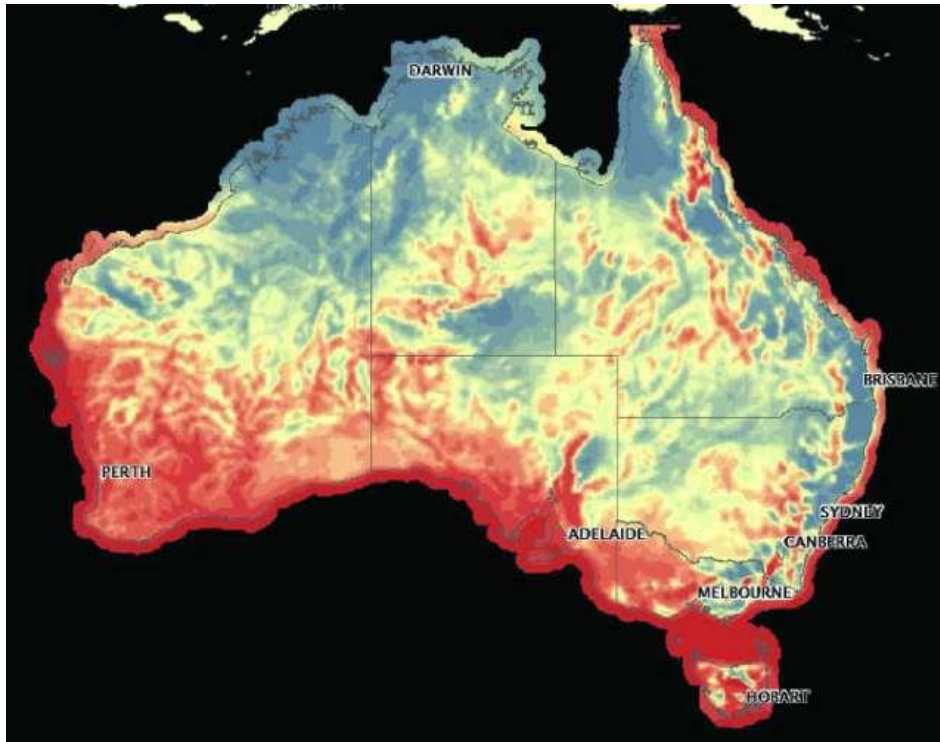
How much power to turn the entire generating structure towards the wind?

How much power to heat the gearbox oil and blades in winter to keep the blades ice / snow free?

How much power turn the blades to maximise or minimise blade pitch to the various wind conditions?

How much power to run the aircraft warning lights?

I have read wind tower engineers reports that this can add up to some 30% of the designed turbine capacity power??? Is this why I am told you are installing a small lithium battery plant up there? Some of the pro people have pushed that it is to stop blackouts in Nundle when the wind doesn't blow. What is it's real role? Just how efficient will this proposed wind farm be? Is this why I believe it is designated a "Class C" wind farm? Surely this investment would be far better located on the eastern side of the Great Dividing Range, where the sea breeze is far more constant. See wind map of Australia:



2. Wind turbines in mountains accelerate fatigue damage and premature failure and can shorten life to as low as just 10 years.

David Heidenreich /Chief Engineer (Ret.) / AeroTorque Corporation

Wind turbines see a broad range of dynamic loads that most large, ground-based rotating machines do not. They experience variation from the grid and generators (in the form of curtailments, grid loss, and voltage changes) and also see frequent wind changes that are occasionally extreme. Storms, gusty conditions, and even a sudden wind loss can cause significant variability in drivetrain loads and a reduction in the expected life of drivetrain components.

Wind turbines see other challenging wind conditions as well. Extreme wind events have been defined for a long time. However, their ability to cause torque reversals of a magnitude that can damage a turbine has only recently been recognized and measured. The ultimate wind-load cases during normal running were defined. The blades can be loaded non-linearly, sending varying loads going through the drivetrain. Shear winds are most often experienced by turbines on ridge tops and those located near the front edge of a plateau. Winds striking the face of these mountains deflect vertically, resulting in shearing winds.

This is precisely the issue with extreme wind shear, and gusty and turbulent winds. A sudden change in direction can result in momentary torque reversals that can cause damage to the turbine drive system. Blade-control systems cannot always react fast enough to mitigate these fractional-second loads, especially during rapid stops during high wind speeds. The only way to try and mitigate this damage is to reduce efficiency by as much as 30%. This being the case, how does your investor feel about this very marginal wind farm?

In Germany, this had been recognised as a major factor in shortening the service life of a wind turbines in mountainous conditions. – shortening the life to as little as 10 years. I would assume your have informed Engie of this possibility?

3. Damage to roads:

We have seen the massive damage to our roads from the 4 or 5 timber jinkers carrying logs to Quirindi. This proposed Wind Farm construction will be 50 times more damaging to our roads should this project goes ahead. We have already seen the fiasco at Glenn Innes / Glenco with the massive damage to secondary roads in the building of their wind farm. The developer has now gone, the investor claims they are not making enough money out of the generated power to fix the roads and the council stated they cant afford to fix the roads. So what guarantee can you give that some \$60 million will be set aside to repair our road damage? It costs some \$700,000 to \$1 million to repair roads per kilometre. .

4. **Bushfires ...** We had several serious bushfires up at Hanging Rock last summer. The main bushfire needed the services of the huge 737 water bomber to attack a large fire which was in an inaccessible part of HR. This bombed fire retardant and was the main attack to kill this fire, We also had several other fires, one on the location of the proposed wind farm, that required water bombing from helicopters for 2 months, as the 737 was required for use in the massive bushfires down south. A wind farm in this bushfire area will seriously hinder effective water bombing, especially by the 737. Look how low the 737 must operate from to be effective.



Aerial Agricultural Association of Australia **Windfarm Policy**



March 2011

Introduction

Windfarms and their pre-construction wind monitoring towers are a direct threat to aviation safety – and especially aerial application. They also pose an economic threat to the industry where the costs of windfarm development—including those of compensation for loss of income—are externalized onto other sectors such as aerial application.

AAAA has developed this policy so as to inform regulators, asset developers and operators alike of the need for action on their part to fulfill their duty of care to Australia's aerial applicators.

AAAA Windfarm Policy

As a result of the overwhelming safety and economic impact of windfarms and supporting infrastructure on the sector, AAAA opposes all windfarm developments in areas of agricultural production or elevated bushfire risk.

In other areas, AAAA is also opposed to windfarm developments unless the developer is able to clearly demonstrate they have:

longest) binding compensation arrangements for affected aerial application companies.

While it is not AAAA policy to provide specific comment on particular development proposals due to resource limitations, AAAA notes that windfarms can have far-reaching footprints that can remove significant amounts of land from treatment for a considerable distance from the windfarm boundary.

Operational limitations of each development

<p>In other areas, AAAA is also opposed to wind-farm developments unless the developer is able to clearly demonstrate they have:</p>	<p>treatm windfi</p>
<p>1. consulted honestly and in detail with local aerial application operators</p>	<p>Opera will v positio fected</p>
<p>2. sought and received an independent aerial application expert opinion on the safety and economic impacts of the proposed development</p>	<p>of aeri used, t condit airstri other</p>
<p>3. clearly and fairly identified that there will be no short or long term impact on the aerial application industry from either safety or economic perspectives and</p>	<p>Howe dustry another nity.</p>
<p>4. if there is an identified impact on local aerial application operators, provided a legally binding agreement for compensation over a fair period of years for loss of income to the aerial operators affected.</p>	<p>AAA/ •</p>
<p>5. Adequately marked any wind infrastructure and advised pilots of its presence .</p>	<p>•</p>

5. EXTRA JOBS FOR LOCALS:

The Proponents keep telling Nundle and HR people that this will generate some 350 jobs during construction and 30 full time jobs when finished? What type of job specifications will be allocated to the 30 full time jobs – what qualifications will they need?

Experience from other wind farms demonstrate that local jobs are almost zero. Mostly employ backpackers for menial tasks. The developers appear to bending the truth with the number of jobs locally.

I find this hard to believe that you will have 250+ workers up there for 2 years. Will you be doing this in stages, such as site preparation, then tower building, then blades / generator installed, then wiring etc.? Maybe about 40-50 workers at a time?

Also I understand they will be accommodated and feed on site?


The cost to employ these 30 permanent workers after the construction would be very high. Apart from wages, there is payroll tax, superannuation, holidays, long service leave, workers compensation insurance etc etc. For an average worker you are looking at total cost about \$108,750 per annum. For 30 workers, that is \$3.3 million per annum. We are told by the pro people these jobs will last for 30+ years. With inflation at just 1%, this would amount to \$127 million dollars.


After the project is finished, surely you will be employing wifi / electronic monitoring, feeding all the information on each generator status to a head office, such as Sydney, who will then dispatch a FIFO crew based in Sydney – or Brisbane, to fix problems. There are a host of

monitoring systems on the market that does away with having local service staff on site and their massive cost:

About | Our Brands | Home | Language: English 

Q Search




Products Services Industries Education & Information 




Condition Monitoring for Wind Turbines

A smarter way to operate your wind farm

[Bently Nevada Wind Brochure](#)[Wind Infographic](#)

PRODUCT ABOUTCONTACTRESOURCES BOOK A DEMO



Keep a pulse and don't miss a beat

Stay ahead of the game and detect anomalies early—both existing and impending—with advanced performance monitoring and AI-based predictive analytics.

Centralize

Detect

Analyze

Perform

SolutionsIndustriesProductCompanyPricing | Log InGET STARTED

RENEWABLE ENERGY

FLUIX SUCCESS STORY

How Siemens Gamesa powers global deployment of installation, commissioning and service of wind turbines



6. The Community Funds.

Won't this be distributed amongst 3 Councils. Nundle / HANGING Rock will receive a % each council – what is the break up of that split? . Of course, each split will be less the usual Council handling fees and admin costs.

Also what guarantees are there that an overseas based investor will continue to pay the money? If they renege, it would be cost prohibitive for us to sue an overseas company. More so if this company is located in China. We have recently discovered, that a contract with Chinese based company isn't worth the paper it's written on. The last time this was attempted, the Australian Government spent over \$10 million dollars suing an Australian resident to get compensation for missing funds, who fled overseas. The government's \$10 million was wasted and achieved nothing.

7. Promoting Power Fear:

Promoters of the wind farm are telling people that if we don't have the wind farm, Nundle won't have any electricity after 2022 and will have to go back to hurricane lamps, washing clothes on washboards and no more phones or TV, because [REDACTED] is in the 'know; about these matters.

We are much aware that the Government has decreed that Liddle will go on and will most likely switch to gas operation. What is your taken on this? Do you approve of false information being bandied about to promote fear in residents to support the wind farm?