

This submission is on the behalf of C & D Hill Partnership trading as PA & D Hill, whose business operations are located at the head of Chaffey Dam and adjacent to Bowling Alley Point village which is approximately 10 kilometres downstream from Nundle on the Peel River. Our farming family has operated a business at this location since 1925. We are directly impacted by the proposed wind farm although not within the range allowed for consideration. We thank you for your time and trust the commissioners will carefully consider the issues which concern us.

Up until the mid-1970's Bowling Alley Point, a former gold rush hub was a thriving little village. It still attracts numerous visitors seeking beauty, tranquillity, water sports, fossicking, wildlife, eco and agritourism and dark sky views. We enjoy an abundance of birdlife and give sanctuary to endangered species. In conjunction with our proximity to Nundle and Hanging Rock, the wildlife and natural amenity value of the area increase our tourism appeal. These factors saved our business allowing us to diversify our income stream. In 2017 the Chaffey Dam Upgrade caused the cessation of our cattle and dairy enterprises, we now lease some of our land and depend on tourism and accommodation income. We employ and house staff and their family. We are supporters of renewables and have large banks of solar panels that supply sheds, a former dairy, and a homestead.

Five generations of our family have been connected to this farm. We have accumulated considerable on-ground knowledge of the local environment. We understand how the local tributaries impact the water quality of Tamworth's primary water source, Chaffey Dam. We have concerns that the wind farm project will reduce water quality in the catchment, put threaten species at further risk, negatively impact enterprises, reduce property values, and pose a bio-security hazard that will drain us and others emotionally and economically.

The wind farm project threatens our business viability and generational connection to this unique area. Several points of concern for our tourism enterprise are:

- Our guests will encounter extremely oversized and over mass vehicles and increased traffic on the Lindsay's Gap Road. This would potentially lessen our repeat visitors and endanger people who are not generally used to the road.
- Lights from the turbines will impact our dark sky tourism (the view of the Milky Way from our property is breathtaking). This is a truly undervalued natural resource yet to be tapped by the local tourism industry.
- We have been building our agribusiness and tourism enterprises to include more accommodation, event venue, and retreat options on our property. This has been halted as we wait to for a decision on the project and the possible downturn of tourism during the construction phase and beyond.
- We rely very heavily on the events held in Nundle to attract visitors. As a former member of the Nundle Development Committee, Go for Gold Festival, and the Nundle Art Exhibition Committee (following its reformation), I appreciate that these events are reliant on a cooperative community. The disharmony this

proposal has created will be beyond repair if the development goes ahead. Nundle risks losing some of its charm and goodwill. If the project is rejected the community will be better positioned to reunite in the shared goal of wanting the best for all. Successful relationships and appealing natural and built landscapes are fragile and deserve to be protected.

- Local businesses tirelessly promote and support our community. Many business owners have said they will leave if the project is successful, because of negative impacts on the character of the town. It's difficult to fill such a void, particularly their decades of experience in highly successful businesses and their professional contacts. The loss to the community would be devastating if they were to move on. These social impacts are wide ranging and have not been properly considered.
- The suggestion that the project will attract new residents is countered by the number of long-term and potential new residents who will be expelled or repulsed when their businesses, the beauty of the area and property prices are negatively impacted; particularly in the longer term when construction workers income is no longer coming into the township of Nundle. During the 1970's initial construction of Chaffey Dam which is adjacent to the village of Bowling Alley Point did not result in retention of population numbers that had been massively boosted during the construction phase. Bowling Alley Point was decimated and is no longer the vibrant township it was prior to the dam's construction.
- The natural beauty of this area and the famous charm of the Nundle streetscape will be irreversibly damaged. The character of Nundle and Hanging Rock will be spoilt. The townships of Aberdeen, Wallabadah, Willow Tree and Murrurundi which also have an existential interest in tourism will be adversely affected by over-mass and oversize vehicles during the construction phase.
- The Peel River and in particular Bowling Alley Point provide habitat for the critically endangered Booroolong Frog and the iconic Platypus. Water NSW are the registered land holders of Chaffey Dam and have a responsibility to protect this natural resource and habitat for aquatic life and the health of the Murray Darling and its tributaries. Their advice on water management has been ignored.
- With additional high stream flow due to soil impaction and ground cover removal, and soil movement the dispersal of weeds is of great concern. The project acknowledges weeds will be an issue. Land managers closer to the project site were offered weed control support, those of us downstream were not. We are the recipients of most flood debris and sediment that is washed down onto the foreshores of Chaffey Dam, and we bare much of the financial burden of weed control in the area. We have already spent very many tens of thousands of dollars trying to control weeds that have been sent downstream to our property. Due to our proximity to a water supply weed removal here is

costly having specific controls and limitations on methods. The additional cost of further weed burdens on our land could be beyond our financial capacity. Invasive species and increased fixed overheads will significantly devalue our property push costs towards a point that is unsustainable.

- Increased bushfire risk from the turbines may result in higher fixed costs for insurance. This in combination with a greater weed control burden means we could lose our 100-year-old home and business which helps support not only our family members but several others who are all active members of the Nundle, Hanging Rock and Woolomin communities.
- The impact of nutrient loads, erosion and bio security were not discussed with us. Our neighbour Water NSW will also suffer the ill effects of this project but their role as protectors of our water resources and the Murray Darling Basin tributaries has apparently been ignored. The increased weed burden will also impact those up and downstream from us and carries with it a huge economic and psychological burden which consequently effects the region's economy even further.

It is obviously unwise to build turbines in high lightning strike area such as that of this area. A paper presented by Select Committee on Wind Turbines Submission 99 - Attachment 2 states, as follows (direct extracts from their paper):

'Parts of Japan have experienced severe lightning losses: a technical paper by Lightning Eliminators and Consultants (LEC), A Study of Lightning Protection Requirements for Large Wind Turbine Systems,...cites: 'Data collected ...in Japan... In just one season, and just one area of Honshu, at least 55 machines had blades destroyed by lightning. ...as turbine size increases, so does vulnerability to lightning.'[1]

Constructing a wind farm in a high lightning strike area creates a real danger to:

- us, our employees, our lessees, and our guests,
- the rare sub-alpine environment that many guests come to enjoy. This is a diverse ecological site that provides shelter for multiple species of endangered fauna and flora. A study published by the Australian Botanical Society found that,

"...with warmer and drier conditions becoming more common, and repeat fires in some areas, the distribution, structure and composition of this and other communities in the Australian Alps will change." [2]

- a previously cooperative and cohesive community. Please note that The Bushfire Project from Griffith and Australian National University found during its post 2019 bushfire study [3] that resilient communities are those that can work cohesively and are best positioned when infrastructure and ecology is quickly

and fully restored. This wind farm project has already actively eroded resilience within our local community through deliberately divisive practices and disregard for residents. Small communities such as ours rely on cohesion in the event of an emergency.

- wildlife and stock. The suggestion that animal corridors will ensure species survival is absurd, the sub-alpine and cast environments need to be protected from uncontrolled fire; animals and plants are not protected from fire by corridors which are prone to burning themselves.
- a fragile ecosystem yet to be explored, evidenced by the recent discovery of additional new cave networks and new species in the Timor area. The introduction of turbines and heavy earth works in such a delicate site is highly questionable; even more so when contemplating the effects that vibration and air disturbance may have to species and caves. The extent and potential value for ecology and heritage in the Timor Caves area is yet to be discovered, and disturbance of this area seems nothing short of risking ecological destruction and at best vandalism. The tourism potential and heritage value of these caves is yet to be fully appreciated or explored.

Little import has been given to the matter of increased algal bloom in Chaffey Dam being caused by sediment high in potassium from disturbed soil and greater erosion entering our waterways. The increase of nutrient being directed to Chaffey Dam is a known cause of Blue Green Algae blooms [3]. The Australian government fact sheet on Blue Green Algae states:

“...Exposure to harmful levels of blue-green algae toxins during an algal bloom can occur through:

- *Direct contact of skin, eyes, mouth or nose with affected water during waterbased recreational activities such as swimming, diving, water-skiing, windsurfing, canoeing, rowing or other boating activities.*
- *Breathing in fine water spray or droplets created when the surface of affected water is broken during water-based recreational activities.*
- *Accidental swallowing of affected water.*
- *Consumption of fish or other seafood from affected waterways.*

What are the possible health effects of blue green algae toxins? The possible health effects of blue green algae vary with the type of toxin and the route of exposure:

- *Direct skin contact with blue green algae toxins can cause skin and eye allergic reactions or irritation.*
- *Accidental swallowing of affected water or consumption of food from affected water can cause symptoms of gastroenteritis, including nausea, vomiting, diarrhoea, fever*

and abdominal pain. In extreme cases, damage to liver cells and nerve cells can also occur.

• Breathing in fine water spray or droplets from affected water during recreational water activities can cause asthma or hay fever-like symptoms... “[4]

Our business partnership will potentially benefit financially in the short-term during the construction phase of this project as accommodation options are limited in the area and we are a popular choice for many teams working locally due to our proximity to Nundle, Chaffey Dam and Hanging Rock. This short-lived benefit does not sway us, as we see the bigger picture and the long-term negative consequences of the proposed project. The instant gratification and misguided good intentions will poison waterways, destroy habitat, and scar the ridgeline and the roadsides of Nundle and Morrisons Gap.

We have funded regeneration and weed control activities in the township of Nundle along the Peel River and on the foreshores of Chaffey Dam through provision of labour to remove noxious weeds, fence tree lots and plant banking stabilising species of flora. We are truly invested in the local area. An energy harvesting site should be built in the spirit of benefit to the community at large and not impact negatively on existing businesses, or potentially cause catastrophic damage in a complex and fragile area. This environment should be protected in perpetuity rather than destroyed for short term gain and profit. Destroying this unique environment to ‘save the environment’ with turbines which will too soon be obsolete is a foolish endeavour. There are more modern, efficient turbines available and an abundance of already cleared land where they can be installed.

I would like to commend the people on both sides of this debate who have been community minded enough to voice their concerns, and at the same time address some of the points raised in support of Engie’s project:

- the claim that people are intimidated by others in the community demonstrates how divisive and toxic this project has been to a community that previously thrived on goodwill and community spirit,
- assertions that a construction worker will spend approximately \$22000 per year does not consider that the construction phase is supposed to take less than a year; the small numbers of workers will be walk in walk out specialist in their field with no need to remain post construction; and the massive economic losses to our tourist industry due to the industrialisation of the town even on a temporary basis,
- the argument of cheaper energy for locals is misguided about energy pricing, and whilst cleaner energy is appealing the cost to this community and this

environment is extremely high, particularly in consideration of risks to physical safety and health from: algal blooms, heavy vehicles, and increased difficulty in controlling bushfires.

- this project will irreversibly damage the environs of Nundle, Bowling Alley Point and Hanging Rock; as well as many of the existing and potential business which subsequently means less jobs, less services, a less cohesive community, and a less liveable environment for us all.
- we cannot ignore the risks posed by Engie's project. The promise of helping reduce the energy crisis and retaining services in our villages, will destroy potential employment opportunities, including Dark Skies tourism, heritage conservation, tourist accommodation and catering, Agribusiness, Eco tourism, and revenue raising cultural events.

The wind farms design is yet to be finalised and requires that huge amounts of hard materials must be anchored along the site to withstand elemental forces without succumbing to concrete cancer or causing hydrological and erosion issues below it. Engie cannot guarantee this project will not harm our environment as it has already harmed our community's interest. There must be sites that offer far less economic risk, environmental destruction and negative social impacts.

The lack of social licence for this project has already killed and/or stunted the progress of multiple projects that provide income/employment and are already in bud or existing. Imagine what the townships of Nundle and Hanging Rock could have achieved in the last 6 years if they had not had to spend such a huge amount of energy on this debate. The concerned citizens and neighbours have effectively completed the project's community feasibility study and it is clearly a resounding 'no' from the majority. Put simply, this is an inappropriate site, much too costly ecologically, financially, and socially! There are better ways of creating usable energy and battling climate change that don't require cutting down forests.

References:

[1] Wind and fire; Reducing the risk of fire in wind turbines. <https://www.aph.gov.au>

[2] <https://www.publish.csiro.au/bt/BT19020>

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[3]https://opal.latrobe.edu.au/articles/report/The_Chaffey_Dam_Story/22240456

[4]<https://health.act.gov.au/sites/default/files/2019-05/Blue%20Green%20Algae%20Fact%20Sheet.pdf>