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Submission opposed to the Hills of Gold Wind Farm - (EXH-50789958)

This submission opposes the construction of the proposed 'Hills of Gold Wind Farm', along the ridgeline between Hanging Rock and Crawney Pass in the Northern Tablelands region of NSW.

With regard to the Hills of Gold Wind Farm - Amendment Report No.2, dated 7th Nov 2022.

1. The newly proposed amendments to the Hills of Gold Wind Farm, do not address the concerns outlined in all my previous submissions. In fact there are many contradictory statements which skirt around the issues and make for flowery reading with little substance.
2. The new proposed access roads have just as much if not more impact and destruction of "critically endangered" and "vulnerable" species habitat and corridors.
3. The newly proposed access road to the HOG Wind Farm, in the amended DA, has been moved from the Devils Elbow, to the South on Crawney Road. These three new options would mean that construction contractors and maintenance personnel coming from the south through Muswellbrook or Scone would travel the road through Timor and up over Crawney Pass. This road is narrow and windy and a fair amount is unsealed gravel. This route is a much shorter distance than travelling via Willow Tree and Wallabadah, so contractors would use this route to save time and fuel. However, the Crawney Pass road traverses through prime farmland where cattle and dairy farmers often have to heard their cattle down the road to access different feed paddocks. This is a totally unacceptable situation to have a considerable number of vehicles using this narrow road through prime farmland. I also believe that there has been no consultation with property owners to the south of Crawney Pass.
4. The study of bat species and their movements is very cursorily and the issue of bat habitat is barely mentioned. Overall the bat study is severely lacking and was not undertaken over a full year nor in enough locations to fully cover the study site. Many bat species are listed as endangered or vulnerable and any loss to their numbers through turbine strikes, or destruction of rousting sites, habitat or feeding and migration corridors can be devastating to a population already under stress. Bats are highly susceptible to being struck by moving turbine blades and any proposed mitigation proposed by the proponents, such as occasionally slowing down blade speeds when bats are thought to be active is extremely problematic. In fact studies from overseas have found that more bat strikes/kills occur after the installation of wind farms, than are predicted during pre installation studies.

One only has to read through the two overseas published papers as listed at the end of this submission. However it should be noted that insufficient studies have been undertaken to study the impact of turbine on Australian bats, however it must be assumed that the overseas studies would mirror the impact on Australian bats. Just a sample of the overseas findings is summarised here.

- In the UK study (Richardson et al. 2021) found that wind farms negatively affected over 30 bat species and have potential consequences for bats population viability, particularly species which already have low numbers.
- Richardson et al.(2021), determined that even if bats were foraging closer to the ground, they would still be at risk of collision with the blade tips as they neared the ground. The turbine blade minimum sweep height above the ground at many sites where bat kills occurred, was 30

m above the ground and the bats were also being killed with blades with a clearance of 40 m above the ground.

- The UK based study by Richardson et al. (2021) found that. “Given that more than 50% of bat fatalities in Europe are *P. pipistrellus*, these findings help explain why Environmental Impact Assessments conducted before the installation of turbines are poor predictors of actual fatality rates”.
- Despite over a decade of research on bat fatalities at wind farms around the world, relatively little is known about why wind turbines kill bats (Richardson et al. 2021). Lintott et al. (2016) surveyed 46 windfarms across the UK and found that pre-construction acoustic surveys, which form part of Environmental Impact Assessments, are poor predictors of bat casualties at windfarms. Their study determined that “bat activity recording during pre-construction surveys may not accurately reflect activity levels post construction”. The study also mentioned that bats may be changing their behavior around turbines and even attracted to windfarm sites because of ultrasound emission from turbines and increased prey availability. There may also be other yet to be identified reasons for the increased bat activity around windfarms.

  It would be logical to assume that the Project’s EIS was lacking, as at least 4 additional microbat species have been found 5 km away at Timor. It would appear that the EIS bat surveys undertaken are inadequate as they were carried out at just a few selected locations. As determined by extensive studies overseas, “a pre-wind farm assessment is a poor predictor of likely bat fatalities”.

5. The **Commonwealth Department of Agriculture, Water and the Environment assessment requirements,** compiled a document laying out the **Guidelines for preparing assessment documentation**……**Hills of Gold Wind Farm (EPBC 2019/8535) (SSD 9679)**

• **Appendix A** of this document, highlights an extensive list of **“critically endangered”, “endangered” and “vulnerable”** species which will be affected by habitat destruction or being impacted by spinning turbine blades.

The current aments of the proposed Hills of Gold Windfarm are only window dressing the situation. There is still substantial clearing of vulnerable and endangered species habitat and movement corridors along all the proposed access roads and construction sites. In addition the repositioning of turbine pads by a hundred or even several hundred metres, with the provision to move them back one hundred metres after being approved, does not addressing the issue that humans can not replace destroyed animal habitat and vegetation, nor bring back species when they are pushed to extinction.

6. Worn-out turbine blades a recycling nightmare

An issue rarely raised is, what happens to the wind turbine components such as the blades when they reach their use by date and have to be replaced? Turbine blades are constructed of a composite of fibreglass and resin to withstand hurricane-force winds. They have a life span of 20 to 25 years in which time they become fatigued and their strength is compromised. The problem of disposal, then becomes an issue at the end of their useful life. At present there is no feasible way of recycling the material, nor disposing of them. As Tom Leonard (2022) reveals there is a graveyard where 4000 worn-out giant turbine blades cover a 25 acre field in Sweetwater Texas, USA. Each blade can be 300ft (100m) long and weigh 8 tons. The scale of the immense mountain of discarded turbine blades is hard to visualise.

Given the situation in the USA and no doubt other countries around the world, it is reasonable to expect that Australia is heading down the same path of what to do with damaged or worn out turbine blades in the future.

The ‘Hills of Gold Windfarm’ EIS, states there are currently 114 operating wind farms in Australia, another 26 in construction and 70 in the pipeline. So unless a way of recycling or an environmentally friendly method of disposal is found, there will be huge mountains of waste turbine blades in the future. The Hills of Gold Windfarm will be using turbine blades of 83.5 metres in length and when installed the overall tip height will be 230 metres AGL.

Conclusion

This whole exhibition period of the HOG amendments, is designed by the proponents to coincide with the build up to Christmas when people have less time to respond. Also there is only a very small window to submit comment and examine the copious quantity of literature which has just recently become available on the internet.

From all the literature provided by the proponents and those doing various investigations, it is quite clear that this HOG Wind Farm should not be constructed on the proposed ridgelines between Nundle and Timor, but should be located in another location in NSW, where there is no clearing of native vegetation, nor destruction of endangered species habitat.

References

Leonard T. (2022), Graveyard of the green giants: It's the hidden cost of our dash for windpower - thousands of decommissioned blades that are so difficult to recycle, they are just dumped as landfill, writes Tom Leonard. *Daily Mail Australia*, 28th Feb 2022

Lintott P.R., Richardson S.M., Hosken D.J., Fensome S.A. & Mathews, F. (2016) Ecological impact assessments fail to reduce risk of bat casualties at wind farms. *Curr*. *Biol*. **26**, R1135–R1136.

Richardson S.M., Lintott P.R., Hosken D.J. *et al*. (2021). Peaks in bat activity at turbines and the implications for mitigating the impact of wind energy developments on bats. *Scientific Reports*. 11, 3636 www.nature.com/scientificreports/