Australian Speleological Federation Inc.
Incorporated in the ACT

PO Box 388 BROADWAY NSW 2007
www.caves.org.au
ABN:15 169 919 964

Promoting conservation, education and sustainable management of Australia's cave and karst landscapes

Reply to: Dr Clare Buswell,
Chair, ASF Conservation Commission.
Clare.buswell@flinders.edu.au

20.1.24.

Dear Madam/Sir,

RE: Hills of Gold Windfarm Hunter Valley NSW.

Who the Australian Speleological Federation (ASF) represents.

The ASF is Australia's peak national body of speleologists with 23 member societies representing slightly more than 1,000 individuals. It is a volunteer-based organisation with no commercial interests, whose membership is self-funded. Its aims and objectives are to explore, document, conserve, and educate members of the public about, the caves and karst of Australia.

Due to the multi-disciplinary nature of speleology, our members often collaborate with a wide section of the community: Aboriginal Elders, academics, local historians, to name but a few. These collaborations foster stronger community links, increase understandings of cave values, and examine, via karst environments, links with the past and into the present.

The Conservation Commission of the ASF is further tasked with advocating for better management and protection of caves and karst on both public and private land. The Commission provides information to its members, land managers and others about karst conservation matters and provides advice on courses of action on cave conservation issues.

Karst landscapes and the Hills of Gold Windfarm.

This development will impact the bat populations found in the caves of the Timor, Crawney Pass, Glenrock, and Barry karst areas. These discrete limestone areas provide homes for twelve species of microbat, including the Eastern Bent-wing Bat (*Miniopterus schreibersii oceanensis*) and the Eastern Horseshoe Bat (*Rhinolophus megaphyllus*).[1] Although the impacts of wind turbines on bat populations is recognised in the Hills of Gold Windfarm Environmental Impact Statement, this document fails to recognise the complexity of bat behaviour.[2] Bats have been recorded flying forty or more kilometres a night to find food.[3] Further, bats foraging patterns are cyclic, in that they may leave and return to roosting sites a number of times during the course of the night.[4] Importantly different species of bats feed at different times.[5]

[1] Hoye G. 'Bats at Timor'. In Rutledge J., Smith G.K., Brainwood M., Baker A.C., *Timor Cave, Hunter Valley, New South Wales*. Newcastle & Hunter Valley Speleological Society. 2008. p.73- 74.

[2] Hills of Gold Windfarm Development. *Environmental Impact Statement.* Project No: 0550690 Nov. 2020. p.159.

[3] Bourne S. Bats at Naracoorte. *Journal of the Australian Cave and Karst Management Association.* No. 78. 2010. See also Buswell C., 'Why do Bentwings go Missing?' *FUSSI,* Newsletter of the Flinders University Speleological Society. Vol. 24. No. 2. 2012. p. 8-11.

[4] Buswell C. 'Noisy Bats in the Flinders'. *FUSSI. Newsletter of the Flinders University Speleological Society*. Vol. 19. No. 3. 2007. pp 4-6.

[5] Buswell C. 'Bats are Back.' *FUSSI. Newsletter of the Flinders University Speleological Society*. Vol 21. No. 3. 2009. pp. 3-5.

Recently it has been argued that by reducing the speed of wind turbine blades, or by turning turbines off over certain months of the year, bat fatalities will be reduced.[6]

Whilst this research is welcomed, it is limited in scope, with few longitudinal studies relevant to Australian species.[7] What it does tell us is that wind turbines add another layer to bat species survival problems. We know that bats in Australia are highly vulnerable to heatwaves,[8] loss of habitat, bushfires, urban expansion, links with disease such as equine-morbillivirus and public ignorance. Are we wanting to add turbine kill and batotrauma into this already destructive mix?

The Recommended Conditions of Consent (RCC) outlines a Bird and Bat Adaptive Management Scheme (BBAMS). This specifies, 'at least 12 months' worth of baseline data on threatened and 'at risk' bird and bat species and populations in the locality that could be affected by the development'. What is not specified is how this data is going to be collected. The EIS undertook only acoustic monitoring and for a short period of time[9]. What is needed, if the BBAMS is to be in anyway effective, is a combination of methods: acoustic, netting and catching, and importantly 3D imaging[10]. This should occur at every proposed wind turbine site given the distances that bats fly to forage. The data collected will then inform Engie how best to mitigate bat and bird deaths. Further, this collected comprehensive baseline data is the only way Engie will be an effective environmental citizen, setting standards to which others in this industry could aspire.

If the Independent Planning Commission (IPC) approves this development, The Commission calls on the Recommended Conditions of Consent, (RCC) to be strengthened as:

- Both the EIS and the RCC documents fail the southern slopes of this development. The EIS notes the steepness of these slopes and their erosive soils. However, the RCC, needs to outline how the company is going to protect the catchments and control the inevitable erosion that will occur during the construction phase and for the life of the project in this area.

- The costs involved need to be the sole responsibility of the company, not the public purse. This needs to be stated clearly in the RCC.

- Engie sees the issues of decommissioning in a dismissive fashion. There is no explanation of who is responsible for clean-up costs, turbine disposal and recycling, and foundation removal. The latter involving the removal of only the first ½ metre of the 3-5-metre-deep footings. Here the RCC is giving Engie a get out of jail card, by invoking the ideology of "out of sight out mind".

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[6] Frick W.F., Kingston T., Flanders. J., 'A review of the major threats and challenges to global bat conservation.' *Annals Of The New York Academy of Science*s. Special Issue: The Year in Ecology and Conservation Biology. 1469 (2020). pp. 5-25.

[7] Bennett. Emma M., Florent. S. N., Venosta. M., Gibson. M., Jackson. A. & Stark. E., 'Curtailment as a successful method for reducing bat mortality at a southern Australian wind farm.' *Austral Ecology* (2022) 47, 1329-1339. This study showed a 54% reduction in bat deaths. However, that means a fatality rate of 46%. Is this an acceptable death rate?

[8] Welbergen J.A., Klose. S.M., Markus. N., et al. Climate change and the effects of temperature extremes on Australian flying-foxes. *Proc. Biol. Sci*. (2008). 275: 419-425. This study found that between 1994 and 2002, over 30,000 flying-foxes were killed due to heatwaves that occurred over that period. p. 422.

[9] Hills of Gold Windfarm Development. *Environmental Impact Statement.* Project No: 0550690 Nov. 2020. p.159.

[10] Aghababian. Seta Carol. *Bat Behaviour at Commercial Wind Turbines as Revealed By 3-D Thermal Videography*. Master's Thesis. University of Colorado. 2020.

The Conservation Commission recognises that windfarm developments, present trade-offs to communities, local councils, farmers, the wildlife, the soils, and the catchments. The Commission also recognises the power of money and political determination that claims a moral high ground above all others: that of doing good by preventing further environmental doom.
In this context the Independent Planning Commission, needs to decide:

- Does the construction of 47 wind turbines, kilometres of roads and laydown envelopes, transmission lines, substations as per page 24 of the SSD 9679 that borders a largely intact, highly significant, section of the Great Dividing Range meet our environmental standards?

- Does such a plan merit approval when it knowingly destroys the habitat of the endangered Koala, with a further habitat loss of 46ha?

- Does such a plan merit approval when it will result in both significant bat and bird deaths via what can only be termed turbine kill?

- Does such a plan merit approval when it knowingly disrupts the foraging habits of Large-eared Pied Bat, Eastern Bent-wing Bat, the Eastern Horseshoe Bat and the Southern Myotis.

- Does such a plan merit approval given the significant impacts of road widening, laydown envelopes, transmission lines and turbine pads within the Great Dividing Range. These impacts include significant vegetation loss of 477 hectares, sediment runoff due to the steepness of the slopes involved, as recognised in both the EIS and the RCC, weed infestation, and maintenance.

- Does such a plan merit approval given the resultant increased Local Council responsibilities to maintain such roads and control weed infestation? In short will the returns to Councils really cover those costs?

- Are National Parks going to be given extra funding to control the impacts that will cross over into its land units? If so, is Engie going to provide this funding for *the life of the project*, 30-32 years or will this become the responsibility of the Australian taxpayer?

These issues need to be resolved *before* this company industrialises an important section of the Great Dividing Range for its profit, placing the forever costs of habitat loss, species loss and financial costs onto, not only those who live within this community, but to all of us.

The Conservation Commission of the Australian Speleological Federation calls on the Independent Planning Commission not to approve this development.
Sincerely,

Dr Clare Buswell
Chair, Australian Speleological Federation, Conservation Commission.

Email: Clare.buswell@flinders.edu.au