

I object to the approval of the Hills of Gold Wind Farm (SSD 9679) for reasons outlined below.

We have a small beef cattle farm at Timor about 20 km south of the proposed wind farm. Our eastern boundary is the Isis River. We also have areas of steep (over 18 degrees slope) and vulnerable land. The Isis River can rise a metre or more in a short period of time following rain in the upper catchment, even when there's been no rain at our place.

I have to disagree with John Sylvester and his friends. The Isis Valley has some of the most beautiful views in the country. We look north to the Liverpool Range skyline and Ben Halls Gap. The wind turbines on this Range would be visible at our place. We have travelled extensively in Europe and have observed wind towers from distances such as ours. They are quite visible.

Landholders in the Isis Valley are acutely aware of how vulnerable the soils are to erosion. In the 1970s the NSW Soil Conservation Service implemented the Isis River Valley Soil Conservation Project, in response to the widespread erosion occurring on the fragile soils. They constructed contour banks and silt traps on most properties to reduce water velocity and erosion. These structures are very effective and are quite visible on satellite imagery. The Commissioners would have noticed the signs when they did their site visit.

In principle, I support wind farms and the need to replace greenhouse gas intensive coal generation. It is important for the credibility of the industry that they be done well. The Hills of Gold Wild Farm proposal is not done well as outlined below. Has any consideration been given to siting the wind turbine towers in the valley floor? There are strong anabatic and katabatic winds in this area.

I have a B Sc (Hons) which focussed on soils, ecology, human geography and land management. This gives me a solid foundation to make informed comments on the proposal.

My main objections relate to

- the consultation process which was not how Engie portrayed it
- the huge potential for damage to the Isis and other Rivers through increased sediment load
- financial issues and decommissioning.

These are explained in detail below.

#### Consultation process:

The area south of Liverpool Range was initially left out of the consultation and information distribution process. Engie organised a belated meeting for the Timor community at Timor RFS Station in April 2021.

Engie had intended the Timor meeting to be a general gathering, sitting around a fire and chatting with individuals. The community made them move into the fire shed and talk to us as a group. The meeting ended prematurely because the Engie staff had booked a plane and had to get to the airport which was further away than they expected. This is bad planning and disrespectful to community members who came out on a cold night to hear their story.

A question was raised at this meeting about the biased description of community support: Antcliff A et al (2020) Table 4-5, claims Support from community members "The Project has

received community support from members of the Hanging Rock and Nundle community demonstrated with the formation of the Friends of the Wind Farm Group” (page 77). Engie’s representative answered that “We did not acknowledge or give the same focus to those things because we were trying to present the positives.” (from Timor Community Member’s minutes of the meeting at Timor RFS Station (17 April 2021). Engie’s Actions (April 17 2021) include “To provide a more transparent view of community sentiment relating to the proposed wind farm our response will include acknowledgement of the opposition to the project from landholders and community groups, such as Hills of Gold Preservation Group, along with the commentary around support of the project” presumably in their Response to Submissions. The intent of an environmental impact assessment is an objective assessment: it is not a marketing exercise. What other things have a positive slant rather than an objective assessment?

At the public meeting at Timor, residents raised their concerns about the huge amount of soil destabilisation and spoil, and risk of landslips and sediment flowing into the catchment. Engie have not adequately addressed this in their EIS or follow-up documents.

At the Public Meeting at Nundle on Friday 2nd February Jackie (surname unknown), from Engie, stated that she was not going to jeopardise her team by holding public meetings.

I've presented to many meetings, sometimes hostile, over a 40 year career. I understand the need for a workplace free of harassment and intimidation. I found Jackie’s final presentation very insulting. It is a cop-out to avoid difficult situations. In her business that is par for the course. If they’re concerned for their physical safety, they should have a risk management plan, liaise with the local Police, or arrange private security as football clubs do. They should train their staff to deal with confronting situations, or employ sub-contractors with the necessary skills. They should also anticipate what issues to expect: talk to the locals. Their staff should have answers for all the expected questions. If they don’t have answers, supply proper answers afterwards.

The meeting at Timor was robust, frank and forthright, but no different to our regular Annual General Meetings of the Tennis Club and Rural Fire brigade. I do not consider that Engie’s staff safety was endangered.

Meetings are also about building relationships with the community, especially those opposing your project. Consultation is more than providing information.

#### Soil and Water:

My concerns specifically relate to erosion in the proposed project area and consequent sedimentation in the river systems.

Engie’s original EIS (Antcliff A *et al* 2020) did not address High erosion risk and associated sedimentation. This has still not been satisfactorily addressed in subsequent documents. Their initial assessment was that the majority of the project area presented a low-moderate risk of soil erosion (page xiv). They suggested that this could be addressed by implementing a standard suite of control measures, following preparation of Progressive Erosion and Sediment Control Plans (PESCPs). This is unsound assessment followed up by inadequate control measures, including what has been provided in follow-up submissions.

It is not apparent that anyone has done site visits to the area, including the most vulnerable, steep locations. It appears to be totally a desktop evaluation.

If you assess the entire project area, including full property lots where nothing is being done on most of the block, then yes, the majority of the project area may have a low-moderate risk of soil erosion. However, if the assessment is made of the areas where infrastructure construction is planned it's a very different story. There is a high proportion of high, very high and extreme erosion risk.

Soil erosion is a function of rainfall intensity, infiltration capacity of the soil and slope. They have based their conclusions on soil characteristics alone, and not taken into account the high and intense rainfall that often occurs in these sub-alpine areas. They have not included rainfall in site descriptions. The closest Bureau of Meteorology rain gauge is at Malonga, on Morrisons Gap Road at Hanging Rock. Average rainfall is 983mm, with the wettest month receiving 274mm (December 2010). In January 1971 ~ 11 inches fell in one day – 297 mm resulting in extensive flooding throughout north-west NSW.

Winters are very cold at these high altitudes (1100 – 1400m) and soils become saturated and take a long time to dry out. The proponent has not considered likely rainfall and intensity in their work to date.

Greg Chapman in his address at the Public Meeting at Nundle on 2<sup>nd</sup> February 2024 explained the risks of erosion and mass movement very clearly so I shall not duplicate here.

The biggest risk of erosion is during construction when bare soil is exposed, and spoil from scalping, cutting and filling is loose and unvegetated. Therefore conditions need to specify methods of preventing erosion, and catching runoff, prior to work commencing.

The soil on the range acts as a sponge releasing water that keeps the rivers flowing. Springs open up in response to high soil moisture. I hope Engie were monitoring during the recent very wet years 2020-2022. There are places on the tracks and possibly the hardstands that are regularly boggy and unstable, but this may not be obvious in drier times. Detailed pavement design will be required at these locations.

Table 1-1 SEARs, page 10, required the proponent to “describe the measures to minimise surface and groundwater impacts, including how works on steep gradient land or erodible soil types would be managed and any contingency requirements to address residual impacts.” The proponent has not addressed this in more than a cursory lip-service fashion despite a number of resubmissions. They have proposed a list of text-book answers without explaining how they would work in reality in the very challenging conditions. They rely on the promise of detailed design closer to the time of construction.

The proponent hasn't supplied some of the critical information, or more relevant figures. For perspective, 150m hub height is the height of a 45 storey building.

A 25m diameter hole for the foundations (which is likely to be closer to 30m to provide access), 3-5m deep, is bigger than the average Australian house, 2,500 – 3,500m<sup>3</sup> of fill will be excavated. The excavated material has to be stored somewhere and actively protected from entering the river system – for 47 holes. The hole will act as a small dam and collect water which will need to be drained from the site. Some type of sediment basin and settling pond will be needed. Suitable sites will be difficult to find on narrow ridgelines and steep slopes. These need to be identified and constructed prior to other works commencing.

The PSM report requested by the Department to assist in assessing soil and water impact provides some more specific information. Layout plans are provided for WTGs 12 and 42 at 1:1000 scale. A 25m contour interval is used which is meaningless on a diagram of this

scale. 1:25,000 maps in this area typically use 10m contour intervals. One or five metre contour intervals would be useful and are readily available. Why weren't they used?

Details are provided for Track Pavements, but not hardstands. The hardstands will need to be substantially constructed to maintain stability of a 100 tonne crane (Liebherr LG1750 crane (PSM, p36 of 37)) lifting very heavy loads to 150m hub height: Hub (45 tonnes), Drivetrain (67 tonnes), Nacelle (71 tonnes) as well as the rotors (Antcliff A *et al* (2020) Appendix A of Appendix G). A massive volume of crushed rock will need to be brought in to construct suitable hardstands. This has not been quantified in any of Engie's documents.

The Construction phase provided to PSM indicates that site specific designs will be developed where required. Does this mean that some or many sites will not require design? Site specific designs should be required for all works on High or higher erosivity sites.

Engie's Description of design and construction process provided to PSM (Section 8.2.1) includes:

“b. Collaboration with the project team to implement appropriate conditions for a changing work front, construction methodology or environmental conditions” and

“c. Disturbance monitoring and collaboration with the engineering team to facilitate appropriate controls within the project's planned allowable disturbance boundary.”

My interpretation of this is that the people doing the construction will talk to the engineers as they progress. This is unsatisfactory. Plans have to be made in advance of construction.

This and stream monitoring (d) is essential but in practice identifies problems rather than preventing them from occurring in the first place.

I am less confident than the Department and PSM that the implementation of best practice control measures can adequately manage the risks.

The Department noted that polluting waters is a strict liability offence under the PoEO Act 1997 (page 99). That does nothing to fix any damage caused by increased sediment load to creeks and rivers.

Barrington Tops Forest Road on the eastern side of Barrington Tops was closed to traffic in March 2021 after heavy rain caused “major structural damage. The road was eventually reopened in December 2022, twenty one months later. Much of this delay was caused by consistent wet weather.

The road failure resulted from serious tension cracks in the road, which indicate a future landslide is likely and probable. The project was a major engineering feat with over 12,500 tonnes of material, or 2,100 truckloads, removed and replaced to make the road structurally sound. It was initially costed at \$2 million (Forestry Corporation, 2021).

This occurred on soils similar to those in the proposed project area. This shows the scale of potential works on the Transverse Track and some of the hardstands.

Under the Strategic Regional Land Use Policy (SLURP) the Isis River catchment is designated Strategic Agricultural Land – Equine. Further down the Hunter River is more Strategic Agricultural Land – Equine as well as a large area of Strategic Agricultural Land – Viticulture. It is important that this land and associated water is kept in top condition.

### Employment:

The Department has recommended that an Accommodation and Employment Strategy be developed in consultation with the Councils, with consideration given to prioritising employment of local workers (page 82). There are few if any surplus skilled tradesmen in the wider Upper Hunter/North West/New England district. Employment of local workers must include training local school leavers – this project has an almost forty year timeframe from construction, operation and decommissioning. It is possible that people could spend their whole working life on the project. The Accommodation and Employment Strategy should also include training and giving experience to unemployed and underemployed people in the district. This is feasible, and very easy to avoid by describing things that are difficult as unfeasible. Training should also focus on the building trades: there is nowhere near enough surplus housing for the stated number of employees, especially in the construction phase. Accommodation for construction employees could be transportable, but preferably not standard mine camp donga type accommodation. Accommodation should contribute to reducing the overall housing shortage in the area.

### Financial:

A wind farm of 47 turbines can be viable, however I am concerned that the cost of civil engineering to support the infrastructure will make Hills of Gold Wind Farm unviable. The site is on very steep land with highly erodible soils. Access roads and associated drainage, hardstands and associated drainage, and footings for each turbine will all be considerably more expensive than if it was constructed on flatter or more undulating land.

NSW has relics of many historic industries which are now the responsibility of the taxpayer to fund the cleanup, such as Woodsreef Asbestos Mine. There are also many “mothballed” mines which may well end up in the same circumstance.

I do not want Hills of Gold Wind Farm to end up in a similar position. The cost of decommissioning will be very similar to the cost of commissioning, albeit with CPI changes. It is important that the developer start contributing to a protected fund from the start of the project, solely for the purpose of decommissioning and rehabilitation, so that if the project becomes unviable, funds are available.

I support Upper Hunter Shire Council’s suggestion of bonds for decommissioning and I note that the Department does not consider these are required. It does not provide any reason for this.

### Planning agreements:

Upper Hunter Shire Council has agreed to enter into a Voluntary Planning Agreement (VPA) with Engie from the start of construction and for the life of operation (32 years). If the Wind Farm operates for longer than 32 years (35 years is mentioned elsewhere), Engie should continue making payments on a *pro rata* basis. Payments should also continue for the decommissioning period. The amount should be based on the **actual** CIV, not the amount stated in the EIS. My interest is in Upper Hunter Shire Council, but this should apply for Tamworth Regional Council and Liverpool Plains Shire Council also. I recommend modifying the Conditions of Consent to this effect.

Other issues:

Engie's original proposal for 64 turbines was said to replace 654,500 tonnes/yr of GHG emissions. DPE's assessment says that with a reduced number of 47 turbines, 800,000 tonnes/yr of GHG emissions will be saved. This inconsistency is not explained.

Conclusion:

I request that the IPC rejects the application for the Hills of Gold Wind Farm as it does not adequately address the issue of soil erosion and water quality. Engie has a track record of poor public consultation.

If the IPC approves the Hills of Gold Wind Farm the following changed or additional conditions of consent should be applied. For the reasons outlined above, I consider that it is justified to be more prescriptive in the Conditions of Consent than may often be the case.

Conditions of Consent:

A10. Micro-siting conditions.

Add (g) no wind turbine is moved to a site on land steeper than currently proposed.

**Upgrading of Wind Turbines and Ancillary Infrastructure.**

Prior to carrying out any such upgrades, the Applicant must provide revised layout plans and project details of the development to the Planning Secretary incorporating the proposed upgrades.

Add a suitable timeframe prior to works for this information to be provided. This information should be uploaded to the public website.

**Applicability of guidelines.**

Change "may" to "should" to read [bolding not necessary]

However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary **should**, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.

**Operating Conditions.**

B19. Add to (b)

Detailed design plans must be prepared for all construction on High to Extreme erosivity soils.

## **Soil and Water Management Plan.**

B21 (a) I recommend including NSW Soil Conservation Service (part of Department of Regional NSW) in agencies to be consulted.

Change to (a) be prepared in consultation with the Water Group, WaterNSW, NSW Soil Conservation Service and NSW DPI;

include a statement in the Conditions to the effect that if there is restructuring/realignment/business enhancement or any other terminology for changing reporting lines within government (highly likely over 35 years) that the relevant agency is to be consulted regardless of the name.

### B21 (b) (iv) avoid impacts on the quality of water flowing into the Chaffey and Glenbawn catchments;

The Department has not provided any justification for treating the Hunter catchment downstream of Glenbawn Dam differently to the Chaffey and Glenbawn catchments.

A very small percentage of the Glenbawn catchment is included in the proposal: the upper reaches of Pages Creek. Most of the southern drainage is into the Hunter River catchment downstream of Glenbawn Dam. This condition should be amended to also avoid impacts on the quality of water flowing into the Isis River.

The Isis is used for stock and domestic water supply, as well as irrigation. It flows into the Pages then Hunter Rivers which are also used for stock and domestic, irrigation, and coal mining. Sediment from erosion in the catchment is deposited in Newcastle Harbour. The dredge vessel David Allan operates 7 days a week maintaining Newcastle Harbour at considerable expense to keep it navigable to heavy marine vessels.

Change to

(iv) avoid impacts on the quality of water flowing into the Chaffey and Glenbawn catchments and Isis River.

## **Traffic Management Plan.**

B35. (c)

Add OSOM vehicles should avoid passing Blandford, Murrurundi and Nundle schools during school drop-off and collections times.

## **Accommodation and employment strategy.**

B48 (c) investigate options for prioritising the employment of local workers for the construction and operation of the development, where feasible;

Change to

(c) investigate options for prioritising the employment of local workers for the construction, operation and decommissioning of the development, where feasible;

(d) include a program to monitor and review the effectiveness of the strategy over the life of the development, including regular monitoring and review during construction.

Reports on this program should be publicised in an easy to access location.

**Decommissioning and rehabilitation.**

B49.

The “within 18 month timeframe” must stand firm as the beginning of decommissioning with a finished rehabilitation timeframe of no more than 3 years from the rehabilitation commencement date; all rehabilitation objectives should remain firm and not be able to be waived by the Planning Secretary.

Add a finished decommissioning and rehabilitation timeframe

Table 2 recommends underground cabling To be decommissioned and removed. Cabling is likely to be 500mm underground. Removing it would create further soil disturbance which is unnecessary.

Change Objective for Underground cabling to

To remove the rising sections from the cable to surface equipment.

This would minimise ground disturbance, and would remove parts most likely to cause problems with future use. I base this on experience – we have a lot of buried water pipe which surfaces occasionally.

Further to this, if the sheathing of the cables, or the cable themselves is found to be deleterious to the environment between now and then, then the original condition should stand – ie remove the underground cabling. For example, asbestos, arsenic, were all considered safe when they were used. It may well be the case that these substances are harmful but we don't know that yet.

C3. Page 21 (c)

Change to [bold not required]

update any strategy, plan or program required **by** this consent ...

I support that a range of documents are to be placed on the Major Projects Portal. I assume this means that they are available to the public to review as well as departmental staff. If not, I recommend that they should be available to the public.

Add a Condition of Consent

A secure trust fund (or similar) is to be established and an appropriate bond deposited which starts at the commencement of construction and is contributed to annually throughout the operation and decommissioning of the project.

Note: Independent Planning Commission website submission form asks for my major issues, only giving three options: Visual, Traffic and Transport, and Biodiversity. All of these are important, but they are not my main reasons for objecting, which are outlined above. I have ticked all these boxes.



References:

Antcliff A *et al* (2020) *Hills of Gold Wind Farm Environmental Impact Statement*. For Wind Energy Partners Pty Ltd

Engie (April 17 2021) *Hills of Gold Community BBQ – Meeting Minutes*.

[Forestry Corporation \(2021\) - Major structural damage forces ongoing closure of Barrington Tops Forest Road](#)

PSM (December 2023) *Hills of Gold Wind Farm – Independent Expert Advice on Constructability, Soil and Water, Appendix L/M to Assessment Report*.