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Hills of Gold Wind Farm SSD9679
Submission to the Independent Planning Commission

Independent Expert Advisory Panel for Energy Transition

The analysis by IEAPET give a clear indication of the viability of the Hills of Gold Wind Farm project.

Although the Department of Planning, Housing and Infrastructure has raised the number of turbines from 47 back to 62 the economic viability of the project is at a level of risk sufficient to reject the Development Application.

The IEAPET has accepted that a Levelised Cost of Energy of $114MWh for the Hills of Gold project as necessary to enable an assessment that the project is viable at 62 turbines. However, a true benchmark LCOE would be lower than $114MWh.

The proponent has calculated a LCOE for 62 turbines $108MWh with a benchmark LCOE based on AEMO parameters, but not reported by AEMO at $110MWh. IEAPET advice is that a benchmark LCOE at $112MWh is more realistic.

Based on these figures IEAPET found that the only number of turbines that might be viable is 62 while 55 would be marginal.

IEAPET developed a model using average inputs from the draft Integrated System Plan which indicated an LOCE of $97MHw at which more realistic level of cost the project is not viable at any number of turbines.

The build costs projection by the proponent for 2025-2026 is approximately $2,630 $/kW. This figure for 62 turbines is higher than the $2,564 estimated for wind projects in 2025-2026 in the CSIRO GenCost Report and referenced by AEMO.

The current going rate for Purchasing Power Agreement is $85-$90 20 to 25 % lower than would be required for a LCOE of $114MWh. At this rate the proponent would require a sales strategy which would realise revenue considerably above the prevailing PPA. Considering that Government policy is for retail electricity prices to fall the prospect of the Proponent significantly higher revenue than that would be achieved with a PPA at the going rate.

The $110MWh LOCE calculated by Engie is based on their own estimates of establishment costs. Through the six-year process of this Development Application the information and data supplied by the proponent has been either inadequate, unreliable or inaccurate. The risk profile of this project based on the proponents information is too high to enable approval of the Hills of Gold Wind Farm. If the LOCE falls below the proponents estimate of $110MWh or the establishment costs are greater than currently calculated by the proponent the project will not be viable.

At this stage of the assessment process, it is not possible to develop a reliable estimate of the establishment costs. The location, nature of the terrain difficult access and engineering challenges of such a development on an unstable basalt escarpment means that the generic establishment cost for a NSW wind farm of

$2,564/kW would be considerably lower than that which it will be possible to achieve for the Hills of Gold Wind Farm.

An assessment of the information provided in the IEAPET report clearly demonstrates that if the establishment costs rise and/or the cost of electricity falls the project is not viable at any level.

In any scenario, the risk profile of the proposal requires the Development to be rejected. The only level of risk using the International Panel on Climate Change Likelihood Scale is "Exceptionally Unlikely" which is 0-1% probability of an adverse outcome.

Table 1. Likelihood Scale

Term*	Likelihood of the Outcome
Virtually certain	99-100% probability
Very likely	90-100% probability
Likely	66-100% probability
About as likely as not	33 to 66% probability
Unlikely	0-33% probability
Very unlikely	0-10% probability
Exceptionally unlikely	0-1% probability

* Additional terms that were used in limited circumstances in the AR4 (*extremely likely* – 95-100% probability, *more likely than not* – >50-100% probability, and *extremely unlikely* – 0-5% probability) may also be used in the AR5 when appropriate.

Source:
International Panel on Climate Change: "Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties" (6-7 July 2010).

Other issues

The IEAPET report provides sufficient evidence to support the rejection of the Hills of Gold Wind Farm Development Application besides the other numerous issues raised in previous submissions. The lack of assessment of the geotechnical structure of a basalt mountain prone to mass movement does not provide any confidence in the as yet to be designed civil engineering and structural requirements for the project to be at a level of risk that is acceptable.

At this stage neither the proponent or the Department of Planning, Housing and Infrastructure have provided any information on the hydrology of the mountain and the potential to downstream flows other than to comment on possible erosion risks and superficial control measures that are clearly inadequate for the terrain.

The location of the project on the watershed of a high ridge of the Liverpool Range poses a significant threat to inflows into the Murray Darling Basin. There is a chronic lack of knowledge of the structure and hydrology of the upper catchments in the Murray Darling Basin which needs to be urgently addressed before projects such as the Hill of Gold Wind Farm can be considered to pose anything but an unacceptable risk. Professor Martin Thoms has found that 80% of inflows in the Murray Darling Basin originate in the upper catchments. Any development which poses a risk to these inflows should not be approved at this stage of knowledge development.

The Department notes that the reinstatement of Turbine 28 would require the clearing of 1.5 hectares of endangered ecological community which is in good condition. However, the Department considered the clearing could be offset. In view

of the location, terrain, climate and nature of the endangered community which is totally reliant for its existence by the current location it is not possible to offset or establish a similar endangered community in another location. If such a community is to be cleared, and this applies to the entire project, the project should not proceed until an ecological community of equal ecological value is established in another location.

It should be noted that the Department acknowledges that unlawful clearing has occurred in the project area. The unlawful clearing appears to have been an attempt to pre-empt the rigors of a biodiversity assessment under the requirements for a State Significant Development. The removal of this vegetation has prevented an assessment of the biodiversity value of the project location. A rejection of the Development Application should also require rehabilitation of the areas unlawfully cleared.

The response by the Department of Planning, Housing and Infrastructure to the questions submitted by the Independent Planning Commission regarding the Hills of Gold Wind Farm provide considerable evidence to support the rejection of the Development Application.