Department of Planning, Housing & Infrastructure

Our ref: SSD-10461

Mr Stephen Barry
Planning Director
Independent Planning Commission NSW
Via email

01/05/2025

Subject: Valley of the Winds Wind Farm – Request for Further Information

Dear Mr Barry

I refer to your letter dated 17 April 2025, seeking additional information on the proposed Valley of the Winds Wind Farm (Project) for consideration by the NSW Independent Planning Commission (Commission). The Department's response to the Commission questions are set out below.

Question 1: The Commission heard from several community members who raised concerns with potential impacts on aerial firefighting capabilities within the locality. Noting that the Commission has separately asked the Applicant for more detail on this matter (copied to you under separate cover), can the Department please confirm there will be no operational impacts on aerial firefighting arising?

The potential for operational impacts on aerial firefighting has been considered in the assessment process.

The community raised concerns around the safety and practicality of aerial firefighting being carried out in proximity to the Project during the exhibition of the EIS.

The NSW Rural Fire Service did not raise any concerns about the project however recommended that blade rotation cease, and aviation lights be lit when aerial firefighting is occurring in the locality which would be included as part of the recommended Emergency Response Plan.

The relevant findings of the aviation assessment undertaken as part of the EIS, include:

- Aerial firefighting operations (firebombing in particular) are conducted under day Visual Flight Rules, sometimes lower than 500 feet (152.4 metres) above ground level with certain conditions such as smoke and haze reducing visibility.
- Most aerial firefighting organisations have formal risk management programs to assess the risks associated with their operations and implement applicable treatments to ensure an acceptable level of safety can be maintained. For example, pilots require specific training and approvals, additional equipment is installed in the aircraft, and special procedures are developed.

- The Australasian Fire and Emergency Services Council (AFAC) developed a national position on wind turbines: Wind Farms and Bush Fires Operations, version 3.0, dated 25 October 2018.

In response to the AFAC Wind Farms and Bush Fires Operations, version 3.0, ACEN noted an additional bushfire management measure that requires wind turbines to be shut down immediately during emergency operations, and where possible and if appropriate turbine blades should be stopped in the 'Y' or 'rabbit ear' position to provide the maximum airspace for aircraft to manoeuvre underneath the blades and removes one of the blades as a potential obstacle (Management measure ID BF14).

To minimise risks to aviation and maximise both on the ground and aerial firefighting capability both within and in the vicinity of the wind farm site, ACEN committed to the implementation of mitigation measures. The Department has reflected the mitigation in the recommended conditions of consent (Condition B39, B40, B41, B42, B43, B54, B55).

These commitments include:

- carrying out the development in accordance with the National Airports Safeguarding Framework Guideline D: Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind Farms)/Wind Monitoring Towers;
- developing an Aviation Management Plan in consultation with the operators of Tongy and Turee aerodromes;
- prior to the construction and after installation of any wind turbine or wind monitoring mast notifying CASA, Airservices Australia, Department of Defence and the RAAF of key information such as location and height;
- implementing a range of fire risk mitigation during the development of the accommodation camp; and
- developing an Emergency Plan including operational procedures in the event of bushfires, such as shutting down turbines and the positioning of turbine blades (such as 'Y' or 'rabbit ear' position) to minimise interference with aerial firefighting operations and turning on aviation hazard lighting.

With the recommended conditions, the Department is satisfied that the project is unlikely to result in any significant aviation hazards or impacts to aerial activities.

Question 2: The Commission heard from Mr Marshall Baillieu at the public meeting who stated he provided the Department with a peer review of the Applicant's Environmental Impact Statement (EIS) he commissioned, specifically in relation to noise impacts. Can the Department please provide the Commission with a copy of that peer review

Please see attached.

Question 3: Can the Department please provide the Commission with proposed timing for the release of cumulative impact assessments/studies for the Central-West Orana Renewable Energy Zone (CWO REZ)?

The Department is responsible for the Workforce, Housing, Accommodation and Population Study as well as the Waste Study in the CWO REZ. The Department is continuing its work to finalise these studies after which it will submit these to the Electricity Infrastructure Roadmap Steering Committee in the coming months for its consideration and endorsement.

Question 4: Please provide a response to the cumulative impact assessment matters raised by Warrumbungle Shire Council (Council) in its submission to the Commission. A copy of Council's submission can be found here.

Project CIA

The Valley of the Winds Wind Farm EIS included a cumulative impact assessment which was undertaken in accordance with the Department's Cumulative Impact Assessment Guidelines for State Significant Projects (DPIE, 2022).

The Department has consulted with agencies and council on the potential cumulative impacts of the project. Traffic impacts and the availability of worker accommodation were the two key areas considered. The assessment identified that the Golden Highway has ample capacity to accommodate the proposed projects (Liverpool Range Wind Farm, Uungula Wind Farm, Wollar Solar Farm, Stubbo Solar Farm and Dunedoo Solar Farm) in the area. In addition, it is noted that although those were included in the cumulative traffic numbers, Wollar and Stubbo Solar Farms and Uunugla Wind Farm have already commenced construction.

Further, an accommodation camp is proposed to facilitate the project and would therefore not compete with surrounding projects for accommodation.

The potential cumulative impacts of the project would be managed through the proposed conditions of consent (B38(c)(vi) and B59(b).

The Department has led the whole-of-government assessment process for the project in accordance with the Memorandum of Understanding between the Independent Planning Commission and the Department (2 March 2023). The Department continues to work through this process, with the referral to the Independent Planning Commission of this project being the latest step in this process.

Cumulative Impact considerations

In response to the independent Electricity Supply and Reliability Check Up (the Check Up) in 2023, the NSW Government established a Whole of Government Implementation Plan for the Electricity Infrastructure Roadmap (the Implementation Plan). In this Implementation Plan the Government has committed to undertake cumulative impact studies in the CWO, New England and South West REZs. The governance structure of the Implementation Plan is headed by the Whole-of-Government Steering Committee and is supported by a range of subcommittees that are issue and regionally

focused. A key subcommittee is the CWO REZ Steering Committee of which CWO REZ councils are members and where the outcomes of cumulative impact studies and other REZ-specific matters are discussed and acted on.

Relevant agencies, including EnergyCo have been engaging with REZ communities to understand local priorities and inform whole-of-REZ planning that seeks to balance generation, social, environmental, and other land use considerations. This engagement has helped identify and shape a range of technical studies to investigate the cumulative impacts and demands of projects, and identify strategic opportunities to value stack investments, minimise disruption and optimise outcomes for local communities. These include:

- Population changes and workforce accommodation;
- Training and skills development;
- Roads and traffic management;
- Telecommunication improvements; and
- Water and wastewater management;
- Waste management.

These studies will identify areas for the whole-of-Government to support host communities and inform actions and plans that can be implemented to alleviate the potential pressures of cumulative impacts on local and regional infrastructure and services.

For the CWO REZ, the Department is responsible for the delivery of the Workforce, Housing Accommodation and Population Study, a Housing and Accommodation Strategy and Waste Study for the CWO REZ. DCCEEW Water is responsible for the Water and Wastewater Management Study for the REZ.

These studies build off the work EnergyCo completed in its studies in 2022 and 2023.

The Department has engaged with councils and partner agencies in the preparation of the studies it is responsible for and will finalise these studies and submit them to the Electricity Infrastructure Roadmap Steering Committee in the coming months.

The Steering Committee and its issue and regional focused subcommittees will then be in an informed position to focus whole of government efforts on issues highlighted by these studies and work to resolve these where relevant and possible. These will particularly focus on coordinating efforts to address community and workforce infrastructure needs and investments in the construction phase of the CWO REZ.

Other programs for the CWO REZ

On 20 October 2023, the Minister for Energy announced that an initial $128 million would be made available for community and employment benefits in the Central-West Orana REZ over the next four years. Funds have been brought forward so that communities can benefit from the renewable energy transition even before construction begins.

EnergyCo has stated that hundreds of millions of dollars has, and will be made available for community and employment benefits in the Central-West Orana REZ over the next 33 years. The Community and Employment Benefits Program (CEBP) will be funded from access fees, paid by generation and storage projects with an access right to connect to the network infrastructure. This will be in addition to the $118 million the Department has forecasted will be generated for local communities within the CWO REZ via its recently released Benefit Sharing Guidelines.

EnergyCo worked with communities within the Central-West Orana region to ensure the CEBP reflects regional priorities.

Stage one of the CEBP will provide up to $70 million in funding through four grant streams.

The four grant streams are:

- Local Community Fund: $15 million for community and First Nations projects that improve local amenity and foster community connections;
- Local Community Small Grants: $500,000 to support small-scale events, initiatives or projects that deliver tangible benefits for local and First Nations communities;
- First Nations Fund: $10 million for projects that empower local Aboriginal organisations, create job opportunities and enhance outcomes for Aboriginal people (fact sheet); and
- Legacy Infrastructure Fund: $45 million for eligible councils to work with communities to deliver infrastructure projects that boost liveability and drive regional economic development.

On 11 April 2025, the first $60 million of this funding was announced which provides grants for 54 local projects to deliver upgrades to key worker housing, critical water infrastructure, training programs, preschools, health services, boost sport and cultural events and tourism, and upgrade halls and sports grounds.

Warrumbungle Shire Council have been the recipient of a number of these grants as noted here and these will include critical water infrastructure upgrades.

Question 5: Please provide an assessment of any potential groundwater and aquifer interference impacts which may arise in relation to the proposed development's quarrying activities.

Three on-site quarries, located within each turbine cluster (Mount Hope, Girragulang, and Leadville) are proposed for the extraction of construction material for access tracks and hardstands. The maximum pit depth of the quarries is 20 metres, based on the conservative assumption that all material required to construct each cluster would be sourced from the on-site quarries.

In response to the NSW Department of Climate Change, Energy, the Environment, and Water (DCCEEW) Water Group's advice on the EIS, ACEN committed to undertaking an assessment to determine if the construction of any section of the project would constitute an aquifer interference prior to commencing construction (refer to management and mitigation measure SW14). If interaction with groundwater is expected to occur, ACEN would submit a hydrogeological assessment under the NSW Aquifer Interference Policy to Water Group. If the project is found to be an aquifer interference activity, aquifer interference approvals would be obtained by ACEN.

ACEN would need to obtain the necessary water licenses, including any aquifer interference approvals, before commencing any works which intercept or extract groundwater.

Water Group reviewed additional information provided by ACEN during the Department's assessment of the project and the Department's recommended conditions of consent. Water Group confirmed that the recommended conditions addressed water requirements.

Conclusion

This additional information has been provided to the Panel for consideration in assessing and determining the Project.

Thank you for the opportunity to provide this additional information regarding the Project.

If you wish to discuss the matter further, please contact Nicole Brewer on [redacted] or [redacted].

Yours sincerely,

[redacted]

Nicole Brewer
Director
Energy Assessments

Octave Acoustics
ABN 60 615 372 873
[redacted]

Peer Review

11 October 2022

Client: [redacted]
Email: [redacted]

Valley of the Winds

Peer Review - EIS Noise Assessment

Octave Acoustics was engaged to carry out a peer review of the EIS Noise Assessment report (Rp 003 r01 20191254, dated 23 February 2022) prepared by Marshall Day Acoustics (MDA Report). The MDA Report relates to predictions of noise and vibration impacts associated with the construction and operation of the proposed Valley of the Winds wind farm (Wind Farm). The Wind Farm is to include 148 Wind Turbine Generators (WTG), associated infrastructure and an accommodation facility for construction workers.

The wind farm site is within the Warrumbungle Local Government Area in New South Wales. Assessment of construction and operational noise and vibration impacts is required to address the Secretary's Environmental Assessment Requirements described in SSD-10461 (SEARs).

Details and commentary of this review are presented in the following table.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
-	Executive Summary The Executive Summary provides an overview of the terms of reference, methods and findings of the assessment.	The Executive Summary contains sufficient detail and is generally appropriate. However, it is noted that the summary refers to an earlier and superseded version of MDA's 'Background Noise Assessment' dated 8 February 2022. The 'Background Noise Assessment' provided for review was dated 23 February 2022.
1.0	Introduction	The Introduction fails to reference the assessment framework for noise and vibration associated with construction works. However, this inconsistency is effectively immaterial.
1.1	Project Overview Provides details of the components making up the wind farm including; WTGs, electrical infrastructure, met masts, maintenance and operation facilities, access tracks and temporary facilities for construction.	The Project Overview is considered to be sufficient.
1.2	Site Context Describes the area proximate the Wind Farm.	Sufficient detail has been provided.
1.3	Purpose of this Report Describes the terms of reference for the assessment.	Sufficient detail has been provided.
2.0	New South Wales Policy & Guidelines Identifies the publications to be referred to in addressing the SEARs.	The relevant publications have been correctly identified.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
2.1	NSW Noise Assessment Bulletin (NSW Bulletin) Describes the criteria applying under the bulletin, treatment of special audible characteristics, the bulletin's reference to the South Australian EPA Wind Farms Environmental Noise Guidelines (SA Guideline) and particular provisions applying in NSW. The commentary notes that the NSW Bulletin requires assessment of WTG noise in accordance with the SA Guideline.	The descriptions provided are satisfactory.
2.2	Noise Policy for Industry (NPfI) Provides a summary of the assessment frameworks under the NPfI.	The summary is sufficient.
2.3	Interim Construction Nose Guideline (ICNG) Provides a summary of the assessment frameworks under the ICNG.	The summary fails to address criteria applying at non-residential locations such as active and passive recreation areas and community, commercial and industrial uses.
2.4	Road Noise Policy (RNP) Provides a summary of the assessment frameworks under the RNP.	The summary fails to address criteria applying at non-residential locations such as active and passive use open spaces and community, commercial and industrial uses.
2.5	Assessing Vibration: A Technical Guideline (Vibration Guideline) Provides a summary of the assessment frameworks under the Vibration Guideline.	The summary fails to address criteria applying at non-residential locations such as at community, commercial and industrial uses.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
3.1	Noise Prediction Method – Operational Noise Summarises the noise modelling procedures applied to the prediction of operational noise impacts.	The prediction software and prediction method employed are appropriate. MDA uses G = 0.5 to represent ground absorption conditions, justifying this approach in Appendix F. However, the SA Guideline states that "*A conservative approach should be used for predicting wind farm noise by calculating noise levels in octave bands… …using the following inputs… …hard ground (zero ground factor)*". That is, the NSW Bulletin by way of the SA Guideline calls for G = 0. If applied to the MDA assessment, G = 0 is expected to result in significantly higher predicted noise levels, likely exceeding criteria at multiple locations. Note that the SA Guideline does advise that noise modelling parameters contained in Section 4.3 of the Institute of Acoustics *A Good Practice Guide to the Application of ETSU-R97 for the Assessment and Rating of Wind Turbine Noise* (May 2013) may be utilised as an alternative. These parameters include a recommendation for G = 0.5. However, this is no reason not to consider outcomes with G = 0. It should be noted that the Noise Impact Assessment for the adjacent Liverpool Range Windfarm (12 March 2014) was prepared (by SLR Consulting) on the basis of G = 0. It is recommended that MDA revise its assessment to include consideration of outcomes associated with G = 0. As stated in the SA Guideline, the results should then be discussed with the Department of Planning, Industry and Environment.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
		The MDA assessment states that effects of noise propagation over valleys has been considered per the Institute of Acoustics *A Good Practice Guide to the Application of ETSU-R97 for the Assessment and Rating of Wind Turbine Noise* (May 2013). The MDA Report states that such effects require the addition of up to + 3dB to the calculated WTG noise levels at affected receivers. This may potentially result in non-compliant outcomes at locations currently assessed to be compliant. MDA's presentation of predicted noise impacts does not indicate where this correction has been applied, if anywhere. Given that the implications of this correction may be significant, it is recommended that MDA update its presentation of results to show locations at which a + 3dB correction has been added to allow for propagation over valleys.
3.2	Noise Prediction Method – Construction Noise Describes that construction noise predictions have been carried out in accordance with AS 2436.2010 and notes the limitations of the method including the application of caution in its use for distances greater than 100m.	The information provided is limited (including consideration of Appendices L and M). As such, it is not possible to examine the extent to which various construction activities and sources have been considered (e.g. vehicles using access tracks, application of penalties for special audible characteristics etc.) Given the limitations of the simplified AS2436 noise prediction method and MDA's access to a working SoundPLAN noise model of the site (utilising ISO 9613), it is surprising that MDA did not employ the latter over the former. It is recommended that the MDA Report be revised to provide more detail on the methods and outcomes of construction noise modelling. This should include commentary and justification as to why AS2436 was used instead of ISO9613. It should be noted that the risk profile associated with potential construction noise impacts is considered to be materially less than that for operational noise impacts.
4.1	Existing Noise Environment – Policy Describes how ambient background noise levels are relevant to assessments under the NSW Bulletin, NPfI and ICNG.	Descriptions are appropriate.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
4.2	Background Noise Levels Refers to results of MDA's previous noise monitoring. Notes that base RBLs are adopted for assessment under the ICNG and NPfI.	For commentary regarding MDA's previous noise monitoring refer to Octave Acoustics Report AB904SE-01E02 Valley of the Winds - Peer Review Background Noise (r0). MDA's approach in adopting base RBLs is conservative and appropriate.
5.1	Noise Limits Refers to the applicable WTG noise limits for both non-associated and associated receivers.	Generally appropriate. For further information refer to Octave Acoustics Report AB904SE-01E02 Valley of the Winds - Peer Review Background Noise (r0).
5.2	Wind Turbine Model Notes that a final selection has not been made for the WTG to be used for the Wind Farm. Proceeds with assessment based on three potential 'candidate' WTG models. Notes that a sensitivity assessment was carried out for potential hub heights of the possible range of hub heights 119m – 166m. Notes that 119m is worst case and states that assessment was carried out on this basis.	The approach described to deal with a yet to be defined WTG selection is considered reasonable. MDA should confirm that the hub height sensitivity analysis included consideration of situations where hub heights greater than 119m may result in reduced topographic or general noise screening (which may result in increased noise impacts to some receivers). This should include discussion confirming or otherwise potential for noise impacts associated with WTGs greater than 119m in height being exacerbated due to effects associated with noise propagation over valleys.
5.3	Wind Turbine Noise Emissions Provides a description of sound power levels for the three candidate WTG models including commentary on potential for tonality and low frequency noise.	The description of WTG sound power levels is appropriate and acceptable. The consideration of potential tonality including the statement that this will be subject to further review and controls, is appropriate and acceptable. In consideration of the 60dB(C) low frequency noise criterion, the MDA Report (including Appendix I) states that there is no established or verified engineering method for the prediction of C-weighted noise levels associated with the operation of WTG.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
		The MDA Report then describes details and results of a simplified C-weighted noise assessment. The results (Appendix I) indicate that C-weighted noise levels at 16 non associated receivers will be within 3dB(C) of the 60dB(C) limit and two of these are within 1.5dB(C) of the limit. On this basis the MDA Report concludes that the risk of low-frequency noise exceeding the criteria is low and therefore a penalty adjustment is not applied to account for low-frequency noise. MDA's conclusion of a low risk of low-frequency exceedance is not supported by its prediction results being very close to exceeding the criteria at many non-associated properties, particularly given the stated limitations of C-weighted prediction. It is recommended that either, a low frequency penalty be applied to the noise impact assessment (as a suitably conservative measure) or that further work is carried out to substantiate the claim that a low-frequency penalty is not required. If the latter approach is adopted, results of the low-frequency noise assessment should be discussed with the Department of Planning, Industry and Environment.
5.4	Predicted Noise Levels Provides a summary of predicted noise levels with respect to the base WTG noise limit of 35dB(A) for receivers where WTG noise is expected to exceed 30dB(A).	Table 10 of the MDA Report indicates predicted WTG noise levels will be within 5dB(A) of the noise limit at 40 non-associated receivers. As discussed above, the noise assessment may need to be revised to include consideration of: - Hard ground, G = 0; & / or, - A penalty of +3dB(A) for low frequency noise & / or, - Corrections added for the propagation of noise over valleys. The application of these adjustments where applicable is expected to result in exceedances of the WTG noise limits at multiple non-associated receivers. The application of all the above adjustments where not already applied would result in even greater and more widespread exceedance of the WTG noise limits at non-associated properties.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
		The implications of any such revision may be obviated to some extent where additional noise monitoring demonstrates that base noise limits do not apply at some non-associated receivers. The MDA assessment would need to be revised to take into account the implications of any changes to ground absorption, consideration of low frequency noise and consideration of noise propagation over valleys.
5.5	Cumulative Assessment Describes the methods and results of the assessment of potential cumulative noise impacts for the Valley of the Winds and Liverpool Range wind farms operating contemporaneously.	The assessment is considered to be appropriate and acceptable.
6.0	Related Infrastructure Operational Noise Assessment This section sets out infrastructure criteria, sources and predicted noise levels.	The established criteria are appropriate and acceptable. The assessment identifies relevant 'related infrastructure' as three substations and battery storage systems associated with each of the three Wind Farm WTG clusters. It is noted that equipment selections are not yet available and so assessment is provided on the basis of representative equipment and associated sound power levels. Assessment of predicted noise levels indicates resultant noise impacts will be more than 20dB(A) below the more onerous night period limit at non-associated receivers. At associated receivers, assessment indicates noise impacts will be more than 13dB(A) below the night period limit. This assessment is considered sufficient to demonstrate the noise from 'related infrastructure' is unlikely to result in adverse amenity impacts at surrounding receivers.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
7.0	Recommended Operational Noise Management Measures This section sets out recommendations for ongoing planning, procurement, management and operation of the Wind Farm.	The recommendations are considered appropriate. However, they should not be adopted to address the items / issues identified in this peer review. Instead, the recommendations should be implemented to mange risks associated with the Wind Farm after approval / acceptance of the EIS Noise Assessment.
8.1 -8.3	Construction Noise Assessment Provides a preliminary assessment of potential construction noise and vibration impacts.	Notwithstanding commentary provided above in relation to Section 3.2, the assessment of construction noise impacts otherwise appears reasonable. Exceedances of 'Noise Affected' and 'Highly Noise Affected' noise trigger levels should not be considered as an issue requiring significant reconsideration of the proposal. Instead, this information should be considered further and more thoroughly in the Construction Noise and Vibration Management Plan (CNVMP) (which is to be furnished at a later date). As described in the MDA Report and the ICNG, exceedance of trigger thresholds should serve as points beyond which opportunities to reduce potential noise impacts should be formally considered and documented.
8.4	Construction Vibration Assessment Provides a preliminary assessment of potential construction vibration impacts.	The MDA Report provides limited commentary on potential vibration impacts associated with construction and decommissioning activities. However, this is normal for this relatively early stage of the project. The MDA Report correctly points out that further, more detailed assessment of potential vibration impacts should be carried out as part of the CNVMP for the project. This is an acceptable approach. MDA summarises with an expectation that noise associated with the construction of the Wind Farm can be acceptably managed. Octave Acoustics agrees with this conclusion.

Report Section	Marshall Day Acoustics Commentary	Octave Acoustics Commentary
9.0	Traffic Noise Assessment Provides an assessment of noise impacts associated with road traffic induced by both construction and operational phases of the Wind Farm.	MDA concludes the traffic noise levels associated with the operational phase will be insignificant. Octave Acoustics agrees with this finding. MDA carries out a more detailed assessment of traffic noise associated with construction. The results of this assessment indicate marginal compliance with the relevant RNP criteria. However, MDA notes that the traffic noise assessment is likely to be overly conservative. Overall, MDA's assessment of road traffic noise is considered to be acceptable.
10.0	Summary	Further investigations are required before the MDA Report can be considered to adequately address the relevant requirement of the SEARs.

Revision	Date	Comment	Author	Reviewer
0	11.10.2022	Issued to Client	RB	TE

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