

26 February 2021

Engage Victoria and Department of Environment, Land, Water & Planning

Submitted online at [<https://engage.vic.gov.au/changes-regulation-wind-farm-noise>]

Dear Sir / Madam,

Submission on Victoria's Wind Farm Noise Regulation proposal

Pacific Hydro welcomes the opportunity to provide feedback on the Exposure Draft of proposed regulations and associated Regulatory Impact Statement (**RIS**) governing wind farm noise in Victoria, which has been released by the Department of Environment, Land, Water and Planning (**DELWP**) for consultation.

Founded in Victoria in 1992, Pacific Hydro is a leading owner, operator and developer of world class renewable energy assets. With a stated purpose of 'leading Australia to an affordable, clean energy future because good planets are hard to find', Pacific Hydro has a team of highly skilled in-house experts, and operates a high quality, diversified portfolio of wind, solar and hydro assets with an installed capacity of 665MW. Within Victoria, Pacific Hydro operates eight wind farms and three small hydro power plants. Pacific Hydro is one of the State's most well established and experienced wind farm operators.

Part A: Overview of this submission

Pacific Hydro supports the implementation of regulatory reform that can provide a clear framework for the operators of Victorian wind farms and the communities which host these assets. An urgent need for reform has emerged in the context of the existing regulatory framework which has allowed, inter alia, findings of nuisance under the *Public Health and Wellbeing Act 2008* even where compliance with the New Zealand Standard and planning permit conditions have been demonstrated, as well as a range of vexatious complaints being made to local councils who do not have the capacity or expertise to address them. A clear and consistent framework which eliminates this regulatory confusion will provide clarity of operators' obligations for all stakeholders.

Pacific Hydro recognises that the development of an explicit framework for wind farms is particularly important in the context of the upcoming amendment to the *Environment Protection Act 2017*, which requires that businesses meet their General Environmental Duty (**GED**) to '*reduce the risk of harm from [its] activities to human health and the environment and from pollution or waste, as far as reasonably practicable*'. Without the additional direction that this reform package proposes, it is likely that significant uncertainty will exist with regards to how wind farm operators fulfil their GED. Such a situation is of no benefit to operators, regulators or host communities.

Whilst supportive of the need for reform, it must be acknowledged that the underlying rationale for this reform is the need for clarity for operators, regulators and

communities. This review should not be seen as driven by the need for more onerous noise monitoring of the wind industry. Data compiled by the National Wind Farm Commissioner's office demonstrates that complaint numbers regarding operational wind farms are very low.

Nevertheless, where concerns do arise in relation to noise, they have been historically referred to local councils or the Minister for Planning's office, which are widely acknowledged to be inappropriate agencies to perform this regulatory function. The wind sector has been campaigning the Victorian Government for over five years to re-assign the responsibilities for the compliance regime of wind farms to the Environment Protection Authority (EPA), which is better equipped to perform this role given their technical expertise. Pacific Hydro is concerned that – instead of streamlining wind farm regulation and empowering the EPA to make decisions as to when further noise testing may be warranted – the proposed regulations will increase regulatory complexity, interfere with the proper operation of wind farm assets, and impose excessive compliance costs.

It is important that all regulations retain the fundamental principle of risk-based management practices. To assist businesses with interpreting their obligations under the GED to '*reduce the risk of harm*', the EPA released an industry guidance note in October 2020¹ which explained that "*reasonably practicable*" means *putting in controls that are proportionate to the risk*'.

On this basis, Pacific Hydro supports the following elements of the Exposure Draft as they are considered a proportionate regulatory response:

- Direct regulation
- Role of the EPA
- Post-construction Noise Assessments
- Annual Statements
- Noise Management Plans

However, some elements proposed in the reform package are considered arbitrary, unnecessary and unable to deliver on the outcomes that are intended. The regulatory framework must ensure that operators appropriately manage their risks and obligations to their host communities, yet remain risk-based and proportionate. Pacific Hydro does not consider that the following elements of the reform proposed achieve that aim:

- Mandatory Periodic Testing (i.e. every five years)
- Testing Regime

These two elements of the Exposure Draft threaten to undermine the intent of the reform itself and do not improve the existing regulatory settings and outcomes. It must also be recognised that the periodic testing and the testing regime proposed is likely to cause a significant inconvenience and intrusion to people living near wind

¹ Publication 1741.1 October 2020

farms. It is also likely that access will be denied to a reasonable percentage of dwellings, particularly over time.

In light of that background, in this submission we provide our comments regarding the key elements of the proposed regulatory package and outline opportunities for significant improvement. An amended package of regulations can provide an optimal risk-based noise management framework to ensure that wind energy facilities appropriately manage their operations and safeguard the wellbeing of their host communities.

Part B: Specific Comments

1. Direct Regulation

Following consideration of the options set out within the RIS, Pacific Hydro agrees that obligations for reducing the risks of noise emissions should be prescribed in new regulations (rather than through the permissions regime). We consider that new regulations will enhance the clarity and consistency of obligations placed on wind farm proponents and operators to demonstrate the responsible management of noise emissions from wind farms.

2. Role of the EPA

Pacific Hydro, alongside the Clean Energy Council (**CEC**), has long supported a formal role for the EPA in compliance monitoring for Victorian wind farms. It is Pacific Hydro's view that the EPA should be better equipped than local Councils or the Minister for Planning's office to procure and analyse wind farm noise assessments, which are highly technical in nature. It is also hoped that the EPA's role will assist in providing Victorian communities with confidence that wind farm noise compliance is enforced by an independent statutory authority with relevant technical expertise. We recognise the EPA will require additional resourcing in order to service this new role and stress the importance of this resourcing being provided if the reform is to be implemented successfully.

The amended *Environment Protection Act 2017* strengthens the EPA's compliance and enforcement powers. The amendments will allow authorised officers to issue notices to investigate, improvements notices and prohibition notices (i.e. Section 273 as amended by the *Environment Protection Amendment Act 2018*). These underlying powers must be recognised as the primary means by which noise impacts can be assessed and controlled, and are central to Pacific Hydro's view that mandatory periodic testing is not warranted (see below for further discussion).

3. Post Construction Noise Assessments

Wind farm planning and design, including specialised noise modelling, typically takes place early in the planning and preliminary design phase to ensure that the proposed wind farm will be able to operate in accordance with the relevant noise standard. In Victoria, this is currently NZS6808: 2010 (the **NZ Standard**), which requires noise impact assessments to take account of the local context and topography. Noise emissions are considered at length when planning applications are assessed, and the

operator's ability to comply with the NZ Standard is a condition of the planning permit for projects that are approved. Wind farm operators must then demonstrate that the wind farm is operating in accordance with the relevant NZ Standard following commissioning (through a comprehensive **Post-Construction Noise Assessment**). For most recent projects, the results of this Post-Construction Noise Assessment have typically been subject to a further peer review by a third party or an EPA-accredited acoustician.

Pacific Hydro regards this as established practice that is appropriate in the context of wind farm construction, and therefore supports the proposed regulation associated with Post Construction Noise Assessments.

However, we wish to point out that the proposed drafting of Regulation 131C (1) may unintentionally trigger the Post-Construction Noise Assessment too soon. This regulation proposes that the assessment occur within 12 months of "the commencement of operation of the facility" (or the relevant stage). However, given the lengthy construction process for large-scale wind farms, it is often many months between the first turbine spinning and the last turbine being commissioned. A requirement to carry out the Post-Construction Noise Assessment within 12 months of first operations may result in an assessment which does not and cannot assess the wind farm in its entirety. Instead, we suggest that the assessment should be triggered within 12 months after the *last* turbine in a facility or stage has achieved commissioning.

4. Annual Statements

Pacific Hydro supports the requirement for an Annual Statement by wind farm operators to report on their on-going maintenance practices and management of any risks over the course of the preceding year. It is expected that the Annual Statement will require operators to provide information regarding complaints management, overview of maintenance activities (including details of any atypical or major maintenance) and whether they have operated their wind farm in accordance with the required operating modes. Pacific Hydro submits that the level of detail required by proposed Regulation 131E(3)(c) regarding maintenance activities must be reasonable. For example, it should be recognised that if full maintenance and SCADA records for a 100MW wind farm were required for a single year, the volume of content would be several thousand pages long.

The CEC recommends deletion of proposed Regulation 131E(3)(e) as it is likely to be interpreted by some third parties as necessitating annual noise monitoring campaigns. This is clearly not the intent of the reform proposed, however Pacific Hydro agrees that it risks being interpreted (or utilised) to seek annual monitoring.

We submit that the components of Regulation 131E(3)(a) – (d), alongside the facility's previous Post Construction Noise Assessment report, are all that an operator should be reasonably expected to provide on an annual basis. The inclusion of paragraph (e) may encourage vexatious litigants to seek annual noise monitoring testing and could frequently necessitate operators to respond to speculative legal actions.

5. Noise Management Plans

The conditions of most wind farm planning permits (and all permits more recently approved) require the preparation, endorsement (i.e. by the Minister for Planning or local Council) and implementation of a Noise Complaints Test Plan (**NCTP**) and a Complaints Management Plan (**CMP**). Typically, these documents would satisfy the requirements and intent of the Noise Management Plan as described in the Exposure Draft. A typical NCTP and CMP would also ordinarily contain obligations associated with investigating noise complaints and implementing any associated noise remediation or mitigation measures.

Pacific Hydro supports the concept of Noise Management Plans. However, it must be recognised that existing endorsed NCTP and CMPs are in place at almost all Victorian wind farms. Where these endorsed documents are in place, it should be clear that the Noise Management Plan can simply refer to the previously endorsed document. This approach will avoid duplication and the risk of inconsistency and uncertainty associated with having to comply with multiple documents covering the same subject matter.

The basis and underlying principle of the NZ Standard is that it prevents human health impacts. On this basis, the Pacific Hydro opposes proposed Regulation 131D(2)(a) which puts the onus on wind farm operators to identify and assess the risks of harm to human health from wind turbines at each asset within their Noise Management Plan. The Australian Medical Association released a position statement in 2014 stating categorically that *‘the available Australian and international evidence does not support the view that the infrasound or low frequency sound generated by wind farms, as they are currently regulated in Australia, causes adverse health effects on populations residing in their vicinity.’*² It is inappropriate to ask individual wind farm operators to opine on these matters when the starting premise of the regulation is that a wind farm must comply with the NZ Standard. There has been extensive peer-reviewed literature and scientific evidence over more than the last decade that support this conclusion. There is no evidence that wind farms that are compliant with their required noise standards cause health impacts. Paragraph 2(a) at regulation 131D should be removed in its entirety.

Finally, whilst we appreciate that the EPA should be empowered to provide feedback on a Noise Management Plan (as per Regulation 131C (5)), the operator should only be required to make amendments which are reasonable and practical.

6. Periodic Testing

Pacific Hydro considers that the proposal for mandatory five-yearly testing of wind farms in Victoria is excessive, arbitrary and inordinately expensive. Rather than increasing community confidence, this measure may ultimately imply a greater problem than actually exists and over time, serve to undermine relationships between wind farm operators and the surrounding community. With a robust framework and very low levels of community concern relating to wind farm noise, periodic testing is a disproportionate proposal that will also cause an unnecessary intrusion on the residents of dwellings where testing is required. Evidence of risk-based noise

² <https://ama.com.au/position-statement/wind-farms-and-health-2014>

management by the wind farm operator can instead be rigorously managed through the other requirements for a Noise Management Plan and the Annual Statement reporting on management, maintenance and community responsiveness. These controls are further supported by the ability of the EPA to require further follow-up action by the operator (including monitoring/compliance testing), should it have concerns about the performance of a wind farm (i.e. Section 173 of the *Environment Protection Act 2017*).

7. Testing Regime

The RIS states that background noise levels are “unlikely” to change over the 25 years post-construction, allowing the wind farm to run a simpler, less costly two-week test every five years (p35) and avoid the need for turning turbines off to re-test background noise levels (i.e. “on/off” testing). The assumption that background noise levels will rarely increase is unsubstantiated and is not borne out by Pacific Hydro’s experience as an operator of wind farms globally for over 20 years. It is not uncommon for background noise levels at dwellings/sensitive receivers to change, and in fact they often increase over a period of years. If the proposed reform is implemented, operators will be frequently required to conduct “on/off” testing at dwellings in order to confirm that increased noise readings recorded at those locations are occurring at the receiver location in contrast to the wind energy facility. “On/off” testing will require either:

- Wind farm shut down and measurement for a minimum of two weeks, but typically between 4-6 weeks to ensure background noise levels at receivers across a full range of wind speeds and directions are established; or
- An ‘attended on/off test’ regime which involves turning wind turbines on and off repeatedly over several weeks to re-establish background noise levels at receivers.

Either approach is very costly and will be an order of magnitude more expensive than the costs of \$87,100 per wind energy facility per decade estimated in the RIS document (p46). In addition, revenue losses are also likely to be significant. If a 100MW wind farm was required to turn off for a full six weeks, we estimate that it could cost the wind farm in the order of \$2 million in lost electricity generation revenue³. If attended on-off tests are undertaken to reduce revenue losses, this is still very labour intensive and costly. Furthermore, attended testing will typically necessitate additional inconvenience and intrusion for the residents of dwellings where testing is undertaken at all hours of the day/night.

Notwithstanding that Pacific Hydro considers a mandatory five-yearly testing regime to be heavy-handed regulation, it is recommended that the Victorian Government should articulate through regulation (and/or supporting regulatory instruments) that in the event that the EPA requires additional noise monitoring following completion of the post construction noise monitoring (e.g. under Section 173 of the amended *Environment Protection Act 2017*), that the use of monitoring at intermediate locations

³ Assumes the wind farm operates at 35 per cent capacity and earns \$55/MWh of electricity. The revenue losses would be significantly higher were the wind farm exposed to higher electricity market prices.

is an acceptable methodology of re-testing. This is the approach taken in NSW where the South Australian Standard which is applied to pre- and post-construction assessment is varied by the NSW Government for subsequent testing by the Wind Energy: Noise Assessment Bulletin⁴, to specifically allow for intermediate testing. We also note that the EPA Victoria Noise Protocol⁵ supports the use of intermediate test locations.

8. Transitional Arrangements

At present, there is no information available regarding any complementary reform to the *Planning & Environment Act 1987* in order to clarify which Act or regulations should take primacy with regards to the assessment, reporting and enforcement requirements that will apply under the two separate regulatory regimes. As of 1 July 2021, when the proposed new regulations are expected to take effect, unless the complementary planning reform has occurred, operators will have to continue to comply with existing planning permit conditions and endorsed documents including (among other things):

- Complaints Management Plans (which typically comply with very specific permit condition requirements and address not just noise complaints, but complaints related to any matters);
- Noise Compliance Test Plans; and
- Reporting and testing timeframes that will be inconsistent with the reporting timeframes required by the proposed regulations.

Transitional arrangements, particularly as they relate to reform of Victoria's planning system, require urgent attention to avoid overlap and inconsistencies which will only result in operator and community uncertainty.

Part C: Conclusion

Pacific Hydro supports reform of wind farm noise regulation in Victoria and the EPA's role as the primary regulatory authority with respect to wind farm noise.

The Exposure Draft provides four key pillars underpinning a thorough package of regulations:

- A wind farm designed to comply with the NZ Standard;
- A Post-Construction Noise Assessment which confirms that the wind farm operates in compliance with the NZ Standard
- Provision and implementation of Noise and Complaints Management Plans; and
- Provision of an Annual Statement.

⁴ <https://www.planning.nsw.gov.au/-/media/Files/DPE/Bulletins-and-Community-Updates/wind-energy-noise-assessment-bulletin-2016-12.pdf>

⁵ <https://www.epa.vic.gov.au/-/media/epa/files/publications/1826-2.pdf>, see Part B, page 16

These measures will place the onus on the operator to demonstrate that it is actively managing its noise emissions, regularly reporting on their performance and in doing so provide communities with the confidence that regulation is effective. Furthermore, these pillars are backed up by powers for the EPA to investigate complaints or request further follow-up action by the operator at any time under Section 173 of the *Environment Protection Act 2017*.

However, we strongly submit that the proposal for mandatory periodic testing every 5 years is not warranted and is contradictory to the risk-based and proportionate principles that existing EPA policy statements and the GED are based upon. Many other states in Australia have a GED in place, but none of them has a requirement for mandatory periodic noise testing. At a time when the State Government has committed more resources than ever to decarbonise the State and “Make Victoria a Renewable Energy Powerhouse”⁶, a heavy-handed approach to wind farm noise regulation will make Victoria one of the most difficult – and unattractive – jurisdictions within which to invest.

Again, we thank you for the opportunity to comment on this important and necessary reform. We support the majority of the reform measures proposed but we implore the Government to:

- abandon plans for mandatory periodic noise testing; and
- explicitly allow the use of intermediate testing locations in the event that the EPA requires further noise monitoring of a facility during the course of its operational life.

Please do not hesitate to contact me if you have any queries or would like to discuss further.

Yours sincerely,



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Pacific Hydro

⁶ Refer to recent Press Releases from Daniel Andrews including at:

<https://www.premier.vic.gov.au/more-renewables-help-drive-victorias-economic-recovery>

<https://www.premier.vic.gov.au/making-victoria-renewable-energy-powerhouse>