



**UNIVERSAL RULES
FOR THE PUBLIC APPROVAL
OF
WIND ENERGY PROJECTS**

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A. Preamble

The object of these **Rules** is essentially twofold:

- to protect the property, amenity and health and safety of residents occupying land on or near which developers and governments may wish to establish wind turbine projects;
- to protect landscapes, wildlife and waterways from adverse effects of such projects.

The **Rules** will remain operative for so long as is necessary to allow:

- a thorough and independent assessment of the available medical, acoustic and engineering data;
- the initiation and completion of any necessary or desirable short-term studies to provide information required to amend these **Rules**, for the better regulation of noise and health.

Rural residents plagued by turbines, yet currently forced to live with them, consider that they have suffered a ***government-mandated theft by the developer of the value and amenity of their property, the health and wellbeing of their family and even the workability and profitability of their land. This situation simply cannot continue.***

These Rules have therefore been drawn to establish a better balance and proper equity between landholders and wind project developers. The acceptance of these Rules by governments and developers will herald a more sophisticated and humane approach to the location and acceptance of wind projects in the communities in which they are proposed to be placed.

These **Rules** have been prepared by a group of individuals with some ten years of observation, research and personal experience of the inappropriate and varying rules applied by governments worldwide for the siting of wind projects.



B. Basis of the Rules

1. Australian data collected in the second half of 2010 establishing that individuals living up to 10km from turbines are suffering unacceptable health problems not experienced prior to start up of an adjacent wind project.
2. Evidence of reversal of the health condition when sufferers move away and reinstatement when they return to the area.
3. Evidence that the health condition worsens over time; and that symptoms, partially at least, lose their reversibility; i.e., permanent damage is an ultimate outcome.
4. Continuing claims by the industry that:
 - their projects' forecast audible noise levels have always met the applicable standards;
 - therefore there could be no noise or health problems as the projects met the standards;
 - infrasound was not a problem.

These claims are:

- ***inadequate*** in only considering audible noise;
 - ***based on a false premise*** in presuming the existing standards are adequate;
 - ***deceptive*** in not factoring in the effects of infrasound; and are therefore self serving.
5. Existing guidelines and standards used for the approval processes have proven to be hopelessly inadequate and, in many jurisdictions, were designed to promote the industry rather than place proper and humane controls upon it.
 6. The lack of adherence by the industry to recommended practice in layout (placement) of turbines; thereby creating wake interference, enhanced

turbulence and noise, and placing unsafe loads on rotating parts.

7. The irresponsible behaviour of developers and some favoured consultants in denying noise and health evidence, refusing to act in accordance with the precautionary principle in the design and building of these projects, and to react in a civilized way to complaints of suffering neighbours.
8. The technical inability of virtually all governments to challenge industry statements and claims, plus a basic reluctance to weaken the public perception that the government was committed to deal with the global warming crisis.
9. The need therefore for victims and potential victims to use their own experience and research to create *minimum acceptable rules* for the deployment of wind projects.

Other imperatives requiring critical examination of the present rush to wind include numerous independent technical and economic analyses demonstrating that wind power:

- is driving up the cost of power, a major commodity incontestably vital to a modern economy and to higher standards of living;
- makes no *net* savings in greenhouse gases;
- has not, and never will, allow the closure of a single fossil fuelled electricity generator;
- poses risks and large costs to power grids.

In the formulation of these *Rules* the facts demonstrating wind energy's basic incompetence, as outlined in the last preceding paragraph, are *not* taken into consideration: those are matters to be considered by the governments elected to manage our economies and our environment.

The Rules established herein are designed to make the physical intrusion of wind projects in rural areas acceptable to the rural population.



C. *Definitions*

Audible Sound: sound audible to the average human ear generally above a frequency of 20 Hz and extending to 20,000 Hz.

Fire Prone Areas: areas defined as high risk by the ***Relevant Fire Authority.***

Infrasound: sound not audible to the human ear and with a frequency below 20 Hz down to 0.001.Hz.

Landlord: a property owner hosting one wind turbine or more.

Noise Control System: an automatic noise-measuring and turbine control system.

Non-participating Residents: residents of rural areas living within 10 km of a proposed wind turbine that are not hosting turbines and do not live in townships within 10 km of a proposed wind turbine.

PADD: Planning application and disclosure documents for a WEP.

Period: a period initially set at **2 years**, at the end of which the ***Rules*** may be reviewed if sufficient research and field experience indicate that to be appropriate.

Project Layouts: the location of wind turbines on a map or maps of the project area.

Proponent: the person, corporation or other entity that has made or is proposing to make an application to a ***Responsible Authority*** for Planning Permission to build a WEP.

Public Building: a building used from time to time for public or private meetings.

Relevant District: the area including the wind project and for 10 km around that area.

Residence: a dwelling occupied as a principal, weekend, or holiday

residence or by seasonal farm or other workers.

Responsible Authority: a statutory body, panel, court, council or a government officer or Minister responsible for making a decision, or enforcing conditions, on a wind project planning application.

Responsible Fire Authority: A local, regional, or state authority responsible for fire fighting, fire prevention and the administration of rules and regulations concerning fire.

School: a licensed place of education at any level, or a day care centre or kindergarten.

Setback Distance: distance from the nearest turbine from a residence, workplace, school or public building.

Substation: a fenced building or area where power gathering lines merge, where the voltage component of the transmitted power may be transformed to another (generally higher) voltage and then transferred to a power grid or to a consumer.

Township: an urban aggregation of more than 25 households.

Turbine Capacity: the rated or maximum output in megawatts (MW) of a wind turbine.

WEP: wind energy project.

Workplace: an area which is frequently used by a property owner, or the family, employees and contractors of a property owner, to carry out paid or unpaid work, including (on a farm) workshops, dairy and shearing sheds, livestock housing, cattle or sheep yards.

D. Design Constraints

1. Turbine Capacity

Individual turbine capacity is to be limited to 3MW for the **Period**.



2. Project Layouts

- Shall conform to turbine and blade manufacturers' recommendations, including minimum recommended spacing between adjacent and in line turbines, and the siting of turbines on slopes.
- Any layout is to be assessed against the project area's topography and the effect of that topography on noise emissions.
- All new power lines within the project area are to be placed underground.
- Power connections to the grid are to be placed underground.
- ☐ Substations: whether inside or outside the project area, are to be treated as if they represented a wind turbine for the purpose of these **Rules**.

3. Placement Restrictions

Wind turbines not to be placed within:

- 10 km of a residence, workplace, school or public building for the **Period**;
- 1 km of a property boundary of a landholder who has not accepted turbines on his or her property;
- 1 km from a watercourse, spring, or aquifer recharge area;
- 2 km of a lake of more than 5 hectares;
- 1 km of a road or highway.

4. Fire Protection

- No projects are to be constructed in fire prone areas as defined by the **Responsible Fire Authority**.
- Projects with less than 10 turbines shall provide a fire fighting

vehicle of size and type as advised by the **Responsible Fire Authority** with sufficient full time staff trained in the use and maintenance of that vehicle and the associated equipment, to be available at all times and on call, to operate that equipment.

- Projects with more than ten turbines shall provide one fire fighting vehicle for each 25 turbines of size and type as advised by the **Responsible Fire Authority** with sufficient full time staff trained in the use and maintenance of that vehicle and the associated equipment, to be available at all times and on call, to operate that equipment.
- Arrangements for sufficient accessible water points shall be made on a strictly commercial basis by the proponent without reverting to any coercive behavior utilising local regional or state rules, regulations or laws. These arrangements are to be reviewed and accepted by the local and regional officers of the **Responsible Fire Authority** and water authorities.
- As a condition of receiving an authorisation to proceed with the construction of a WEP, **The Proponent** shall be required to assume liability to any party suffering damage caused directly or indirectly by a turbine initiated fire.

5. Landscape

The PADD must include an independent expert assessment of the likely effect of the proposed WEP on the landscape both within and around the **Relevant District**. Montages of all likely critical views must be prepared, including those from dwellings within the **Relevant District**.

The expert's assessment must address (at least) the prospective effect of the proposed WEP by way of loss or reduction of:

- established landscape character, both natural and cultural;
- scenic integrity - i.e., degree of modification to landscape character and scenic quality), sense of place/quality of life/landscape heritage values;



- tourism image and property values;
- the views on the landscape of those that actually live in that landscape.

The report must offer an opinion as to whether any such prospective loss or reduction should or should not be acceptable to those persons who live in the landscape. If the opinion is that the project will have an effect that should not be acceptable to those persons, then the project may not proceed as proposed.

Since the assessment of landscape damage is the most subjective of matters to be considered by a **Responsible Authority** the **Proponent** is required to fund a review of the independent expert assessment by a second independent expert, chosen by a Relevant Responsible Authority who, in the course of reviewing the assessment, shall consult with a selection of *Non-participating Residents*.

6. Flora and Fauna

The PADD must include at least one independent expert report on the likely effect of the proposed WEP on all the flora and fauna (including avifauna) in the **Relevant District**, considering at least the following matters:

- the presence of all species in the area;
- whether these species are common, rare, or protected by local or national rules, or legislation, or international treaties;
- the identification of any areas used by respective species for a specific purpose, e.g., for flocking, breeding, nesting or feeding;
- migratory and local movement patterns;
- adequacy of available data to inform a proper decision on the likely effect of the proposed WEP on relevant flora and fauna;
- whether radar should be an integral part of the project to protect avifauna by the temporarily switching off of turbines within

established flight paths.

A report must offer an opinion as to whether:

- there is sufficient high quality data available on which to make a decision;
- the estimated impact of the project on flora and fauna is considered acceptable or not;
- if the project is considered acceptable then conditions that should apply.

Should the opinion be that the effect on Flora and Fauna is unacceptable, then the project may not proceed in the form proposed.

7. Metering

Metering equipment shall be fitted to measure and record the consumption by the project of power from the grid. The record shall be published and such power paid for, either by direct billing at the prevailing rate or netted off against power produced.

8. Noise Control

- No project shall be built without a **Noise Control System** embodying real time measurement of both audible sound and infrasound; the ability to compare the measured noise to a previously determined acceptable standard for the specific location, and automatic adjustment (including shutdown if necessary) of selected wind turbines until the predetermined noise limit is met.
- Projects already built shall be retrofitted by the owner of the project at its expense with a **noise control system** within twelve months of the commencement of operation of these **Rules**. These systems shall be installed in all residences within 1 km of the setback distance of 10km.
- No project whether approved or awaiting approval, or for which approval will be sought within the **Period**, shall proceed to



construction without being re-engineered to comply with these **Rules**.

- Designs, once re-engineered, or designs which have not yet been submitted for approval, must be signed off by the proponent's senior responsible manager, the senior responsible officer of the planning authority, and by an **independent** consulting engineer before being submitted to the responsible authority.

E. Public Review

1. Documents

Proponents of a WEP are required in most jurisdictions by a Responsible Authority to prepare and file planning application documents.

These **Rules** require that all such planning application documents be prepared and submitted as **Planning Application and Disclosure Documents (PADD)**. The contents of the **PADD** must include the matters listed below as well as all other information, expert reports, etc., as required by the **Responsible Authority**. Directors of the proponent shall personally warrant the correctness of the information supplied in the **PADD** and be personally liable for the consequences of incorrect claims and omissions as if the **PADD** were a financial document being filed with securities authorities in that jurisdiction.

In order to allow opportunity for comment or objection a **PADD** shall be made available for public viewing and analysis for a period of **six months** prior to the formal consideration of the application by a relevant **Responsible Authority**. During that period the proponent shall answer, within 30 days in writing, in good faith and truthfully, any question raised in writing by or on behalf of the residents of the **Relevant District** with respect to a matter comprehended by these **Rules**.

If not required by any relevant statutory requirement, a **PADD** shall include the following information:

- the wind data used;

- type and size of turbine;
- expected annual power output of the project;
- power transmission arrangements and costs to be borne by the project and details of costs to the public of the power produced;
- any grid power to be consumed by the project;
- cost of that power to the project;
- gross and net (i.e., after backup), greenhouse gas savings;
- details of the power backup required in the grid being supplied;
- capital and operating costs, whether allocated or specific, of that backup;
- any other costs incurred by the grid manager in managing the variability of power produced;
- greenhouse gas emissions by backup generator(s);
- all matters, studies, and expert reports required by local, state, provincial and national authorities.

2. Public Meeting and Poll

Immediately following the review period, the local government authority [a relevant ***Responsible Authority***], shall call and give reasonable notice of a public meeting at which senior and responsible officers of the proponent shall be available to present their case and respond to questions and comments by the members of the public attending. Proceedings at the meeting shall be recorded and the record made available to the public, the proponent and any relevant ***Responsible Authority***.

Within 30 days after the holding of the public meeting the Authority that called the meeting shall conduct a referendum among ***Non-participating Residents*** on the question of whether they wish the



project to proceed. To qualify to proceed there must be a 65% vote in favour of proceeding in both the rural area in the *Relevant District* and in any town within the same area.

F. Operation

A project capable of operating more than five turbines shall provide at least one technician to be located at all times in a control room within the project area. Such a technician shall be trained in managing all operations including those of the automatic noise control system detailed above, breakdowns, mechanical failure of turbines, fires and complaints, including but not limited to incidents of noise and response to residents claiming illness resulting from the project. Procedures and protocols are to be put in place to ensure technical competence and attention.

G. Complaints Receipt and Management

The Environment Protection Authority (“EPA”) or an equivalent independent organisation in each jurisdiction, shall be responsible for receiving and responding to telephone (or other forms of) complaint at any time of day or night with the complaint and the response being recorded; and a copy of that record sent, within 24 hours of the complaint, to the complainant and a designated complaints officer employed by the project operator.

Immediately after receiving the complaint, regardless of the time of day or night, the EPA officer will contact the operator’s designated complaints officer and, until an automatic noise control system is retrofitted to projects constructed before these rules were adopted, the officer will require specific turbines (those closest to the complainant’s residence) to be closed down while the complaint is investigated by the EPA.

Officers of the EPA will be responsible for testing noise levels at the complainant’s property over the full frequency range including infrasound and over differing times and weather/wind conditions and must issue a determination within 30 days whether those turbines may be restarted on a permanent basis and under what conditions, if any.



No appeal of these findings is to be allowed by the turbine operator or landlord on whose property the offending turbines are located, although a review may be requested by the operator once an automatic noise control system is put in place.

Once a control system is in place and has acted as designed to shut turbines, then the operator shall have the right to inform the EPA and request a review if the automatic system has not restarted the turbines within 24hours. The EPA and the operator may perform such tests as they agree, but only after informing the occupant of the residence where the detected noise exceeded the preset limit. At no time may the set limit be changed. If the turbines causing the problem continue to cause noise above the set limit, then the EPA may order those turbines to be permanently shut down and require them to be removed by the operator at its expense.