Alberta Utilities Commission: Rule 007 Facility Application Feedback

Wind Concerns and this document represents more than 50 Rural Resident Families in Northeastern Alberta. We are providing feedback on Rule 007: Facility Applications as amended and approved by the Alberta Utilities Commission (AUC) in March, 2025. The primary focus is on Industrial Wind Power Plant applications: Section 4.3 and Appendix A, A1. Feedback is provided as the Sections appear in the Rule 007: Blackline Document.

General Observations and Feedback

The Rule 007 Application Process requests extensive, comprehensive data collection and submission by the power plant applicant. What is unclear are guiding principles and desired outcomes of the data collection process. For example, statements such as "Siting Industrial Power Plants in densely populated residential areas is to be avoided as much as possible." and "Conserving Prime Agricultural land by siting Industrial Power Plants on marginal Class 4-7 land and brownfield sites is preferred" would provide guidance to stakeholders and alleviate uncertainty as to the desired outcome. Guiding principles and desired outcome statements would assure the general public that *a conscious effort is being made by power plant applicants to minimize the adverse effects of the proposed project*.

Providing links to relevant legislation and regulations in the document is needed to assist stakeholders in preparing for a community information session or submitting a statement of concern with crucial answers. Links to legislative and regulatory sites such as the Environmental Protection and Enhancement Act and the Wildlife Directive for Alberta wind energy projects would also be beneficial.

Industrial Wind Power Application Feedback

4.3 Wind Power Plant Applications It would be helpful to clarify that 4.3 Wind Power Plant Applications section refers to power plants 10MW or greater.

Regulatory Request: Industrial Wind Turbines will be sited a minimum of 5kms from an occupied rural residence or business.

Rationale: The AUC acknowledges that wind turbine technology continues to advance rapidly, in often less time than it takes a project to progress through the development, permitting and pre-construction cycle. Power Plant Applicants enjoy generous accommodation and flexibility by the AUC. There is no acknowledgement that the advancement in technology can pose *increased risks to the area residents and the environment.* For example, offshore-sized turbines are now being implemented in rural settings with known adverse affects.[1]

[1] The high courts in Ireland, Australia, and France have acknowledged harms to individuals living in close proximity to industrial turbines. A Finish study detected harms from infrasound only decrease after 15km while a German expert says infrasound is a "huge threat to the entire biodiversity."

As such, we ask the AUC to mitigate harms through a reasonable and responsible rural residential setback from Industrial Wind Turbines (IWT). There is ample global research that supports a minimum **5km residential setback** from an industrial wind turbine. The 5km setback is simply a mitigation, as new studies show adverse impacts on humans and animals up to 15km.[2] Research findings indicate that residential proximity to wind turbines is correlated with annoyance and health related quality of life measures.[3] Reported annoyance is reduced by approximately 20% for every kilometre a person lives further away from a wind turbine (Barry et al 2018). Please refer to the Round One Consultation submission by *Wind Concerns* for additional information that supports this regulatory request.

WP6) ii Bullet 2. Please include the consultation *radii* number which is in Appendix A1 and Table A1-1 and is currently 1500 meters (3200 meters requested) measured from the edge of the proposed plant project boundary.

Distance Amendment Request: Increase notification/consultation radii to 3200 meters or 2 miles measured from the edge of the proposed plant project boundary.

Rationale: Industrial Wind Turbines are massive in size, currently reaching over 200 meters in height. Wind Turbines can be seen easily as far away as 58 km.[4] Wind Turbine noise can be heard up to several kilometres away from the turbine.[5] Infrasound from turbines has been detected as far as 90 km from a turbine in nighttime atmospheric conditions.[6] Industrial Wind Turbines pose a significant risk to human[7] and domestic animal health and wellbeing.[8] Thus, people living in an area where turbines can be easily seen, heard, or felt must be informed of any proposed wind power plant.

WP8) Describe any public benefits that will be generated by the proposed project.

Information Amendment Request: Please add - "Describe any public costs that will be generated by the proposed project."

Rationale: Every project has both benefits and costs. Requesting data that identifies both the public costs and benefits of the proposed power plant allows for an informed critical cost-benefit analysis of the project. Industrial wind turbines produce a publicly subsidized, intermittent, unreliable source of power. No power is produced when the wind doesn't blow and when the turbines are shut down because of

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[2] Finish Study; "The pilot study does not show any significant reduction in damage caused by infrasound *until over 15 kilometers from wind farms.*"

[3] Wind Turbines and Health: The Studies

[4] "The facilities were found to be visible to the unaided eye at >58 km (36 mi) under optimal viewing conditions, with turbine blade movement often visible at 39 km (24 mi)" from "Wind Turbine Visibility and Visual Impact Threshold Distances in Western Landscapes ", Sullivan et. al

[5] Audible wind noise has been detected almost 9km away. Other studies show night-time noise increases within several kilometres.

[6] Marcillo et al.

[7] Wind Turbines and Health: The Studies

[8] Dumbrille et al.

strong wind or cold temperatures. These costs are borne by the public.[9] Accurate data reflecting both the pos and the cons of a proposed power plant allows for an informed critical force field analysis of the project.

Shadow Flicker Assessment.

WP15) Distance Amendment request: Amend the shadow flicker assessment from 1.5 km to a distance of 10 times the rotor diameter.

Rationale: The current trend in the rapidly evolving industrial wind turbine industry is for increasingly larger rotator diameters to maximize energy capture — essentially "offshore" sized turbines being placed onshore among people's homes and farms. Shadow flicker is generally considered to be noticeable within a distance of 10 rotor diameters.[10]

Environmental Information

WP21) Identify the specific ecosystem components within the local study area that may be adversely affected by the project.

Amendment Request: Add domestic water supplies/water wells to the list, as Ontario's experience has sadly demonstrated.[11]

Rationale: Industrial wind turbines can impact domestic water supplies, including vibration-induced aquifer liquefaction, sediment contamination, clogging and cloudiness (Krogh et al 2024). According to Carolyn Camilleri (2023) wind turbines can produce sediment containing heavy metals like arsenic, barium, cadmium, chromium, lead and mercury which potentially contaminate ground water. Rural residents depend on groundwater streams and aquifers for daily water supply. Damage and destruction of the domestic water supply would be catastrophic.

Amendment Request: Identify endangered and threatened wildlife (animals, birds, bats) that inhabit or migrate through the proposed project area.

Rationale: As of January 2024, 6 species of birds are listed as endangered and 2 species are listed as threatened under the Alberta Wildlife Act. In 2025, the Alberta Community Bat Program formally assessed 5 of the 9 Alberta bat species as endangered. Alarming numbers are being killed by wind turbines, as bats are known to be *drawn* toward turbines.[12] We are at risk of losing these species given the exponential growth occurring in the wind energy industry. A 2022 poll conducted by the Canadian Parks and Wilderness Society found that 95% of Albertans are concerned about the loss of species and the global biodiversity crisis.

Visual Impact Assessment.

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[9] https://www.windconcerns.com/an-icy-reality-turbines-taxing-the-grid/

[10] https://scartmountainplanning.ie/wp-content/uploads/2024/12/Chapter-10-Shadow-Flicker.pdf

[11] Here and here

[12] https://www.scientificamerican.com/article/wind-turbines-kill-bats/ and https://cosmosmagazine.com/nature/bats-wind-turbines/

WP28) Amendment Request: If the Project is located within the visual impact zone of a provincial or federal park, or a historical, cultural, heritage site where the power plant will have a significant visual impact, a visual impact assessment should be required.

Rationale: Wind turbines located within 3km of a cultural heritage site have the highest potential to impact the integrity of the landscape and should be excluded from the current and future planning of wind turbines. Visual links of wind turbines between 2-10 km can have a disturbing influence on heritage elements (Wieduwilt & Wirth 2018, p 667). Federal and Provincial Parks are protected sites in Alberta for tourism and the enjoyment of nature. The quiet natural beauty of the parks is a place for personal emotional regeneration and spiritual connection. According to a 2022 polling by Canadian Parks and Wilderness Society Northern Alberta Chapter, 67% of Albertans visited a provincial park. It is in the public interest of Albertans to preserve the current natural beauty of these sites.

Concluding Statements.

The Industrial Wind Turbine industry along with other renewable energy sources are new and rapidly evolving technologies. Proper study has not kept up with the technology leaving many unknowns as to the impact on human and animal health and wellness as turbines increase in size and height. The benefits may be immediate, but the harmful effects can take years to become evident as infrasound is a cumulative impact. There is mounting evidence of the harmful effects of industrial wind turbines to humans, animals and the environment. Many rural residents consider it an unethical scientific experiment without their consent.

According to the Alberta Land Institute (2021), 93% of Albertans agree or strongly agree it is important to preserve land in agricultural uses for future generations. Therefore, careful and thoughtful siting of wind turbines and other renewable power plants is critical.

It is prudent for the Alberta Utilities Commission to consider all the evidence, scientific and anecdotal,[13] in making a decision to approve a power plant application. This will serve the interests of both the industrial corporations and the rural communities. It is the desired outcome and in the public interest. Above all, do no harm.

Respectfully submitted by,

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References

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[13] eg. Ontarians Turbine Nightmare Continues

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