

Blue Highlands Citizens Coalition

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BY FAX: (416) 314-8452 & BY REGULAR MAIL

Ministry of the Environment
Environmental Assessment and Approvals Branch
2 St. Clair West, Suite 12A
Toronto, Ontario, M4V 1L5

Attention: Marie LeGrow, Senior Program Support Coordinator

Dear Sirs/Mesdames:

Re: EBR Registry Number: RA03E0020

The Blue Highlands Citizens Coalition (the “Coalition”) wishes to make the following submissions in response to the Government’s proposed changes to environmental assessment requirements for electricity projects.

By way of background, the Coalition is a group of residents of The Town of the Blue Mountains and The Municipality of Grey Highlands who have concerns regarding the current proposal by Superior Wind Energy Inc. to build a 100 MW wind farm atop the Niagara Escarpment running in a south-easterly direction from just south of the Loree Forest to about the village of Singhampton.

The Coalition supports responsible wind power development, but is very concerned by the adverse environmental effects which a large scale wind power development may have, depending on where the development is sited.

The Coalition opposes the Government’s proposal to increase the environmental assessment requirement threshold to the extent that doing so would result in wind farms above the 2 MW installed capacity level being exempt from the Environmental Assessment Act.

As we understand the Government’s regulatory regime in respect of environmental assessment requirements for electricity projects, it is only “environmentally benign” electricity

projects which should fall into a “Category A” classification and be exempt from the EAA. The basis for the Coalition’s opposition to an increase in the threshold for wind farms from the existing 2 MW threshold level to 100 MW is that although wind power-generated electricity can properly be considered to be “clean” from an emissions perspective, a wind farm of a 100 MW capacity cannot be properly considered to be environmentally benign. Our analysis in reaching that conclusion follows.

The Government’s “Guide to Environmental Assessment Requirements for Electricity Projects” dated March 2001 (the “Guide”) defines the “Environment” as follows:

- (i) air, land or water;
- (ii) plant and animal life, including man;
- (iii) the social, economic and cultural conditions that influence the life of man or a community;
- (iv) any building, structure, machine or other device or thing made by man;
- (v) any solid, liquid, gas, odour, heat, vibration or radiation resulting directly or indirectly from the activities of man; or
- (vi) any part or combination of the foregoing and the interrelationships between any two or more of them.

With that definition of the term “Environment” in mind, it is useful to consider the basic features of recent wind farm designs and installations in North America. In particular, a modern wind farm of even modest installed megawatt capacity requires significant infrastructure installations, including access roads, transmission lines and substations. For example, based on our review of American Wind Energy Association public materials, we understand that Shell Wind Energy’s Cabazon project in the San Geronimo Pass in California (installed in December, 2002) consists of 62 Vestas V-47 tower/turbine structures and has a rated capacity of 41 MW. The Vansycle Ridge (Helix) project by FPL Energy in Oregon (installed in October 1998) consists of 38 Vestas V-47 tower/turbine structures and has a rated capacity of 25 MW. CHI Energy’s Ruthton Wind Farm in Minnesota (installed in January of 2001) consists of 24 Vestas V-47 tower/turbine structures and has a rated capacity of 16 MW. Edison Capital’s Shaokatan Hills wind farm in Minnesota (installed in June of 1999) consists of 18 Vestas V-47 tower/turbine structures and has a rated capacity of 12 MW¹. Some appreciation for the height of a Vestas V-47 turbine and the landscape effect of the installation of a configuration of approximately 20 of these structures is provided by way of the photograph appearing as Exhibit A hereto.

¹ Source: American Wind Energy Association – Wind Project Database.

It is not reasonable to assert that projects involving such significant tower/turbine and related infrastructure installations should in all cases up to an installed capacity level of 100 MW be categorized as “environmentally benign”. From an emissions perspective, and relative to other non-renewable resource generated electricity (particularly from a coal-fired generating station), a wind farm of any size can offer emissions-related benefits. However, a commercial wind farm of even modest size presents the potential for significant adverse environmental effects. While the specific site for any particular project will determine whether and to what degree adverse environmental effects will be triggered, the adverse environmental effects of a wind farm development could include many of the criteria listed in Appendix C to the Guide, including the following (each criterion being based on a question which is prefaced with the phrase: Will the project...):

Criterion	Nature of Adverse Environmental Effects
1. Surface and Ground Water	
1.1 have negative effects on surface water quality, quantities or flow? 1.2 have negative effects on ground water quality, quantity or movement?	Access road installation, extensive excavation and blasting for tower footings, transmission line installations. Installation of significant tower reinforced concrete footings.
2. Land	
2.1 have negative effects on residential, commercial or institutional land uses within 500 metres of the site?	Noise, viewscape disruption.
3. Air and Noise	
3.4 cause negative effects from the emission of noise?	Noise from rotating blades and turbines.
4. Natural Environment	
4.2 cause negative effects on protected natural areas such as ANSIs, ESAs or other significant natural areas?	Extensive construction activity and installation of project infrastructure (towers, substations, transmission lines (above or below grade)), access roads.

Criterion	Nature of Adverse Environmental Effects
4.3 cause negative effects on wetlands?	Disruption of wetland use through installation of project infrastructure (e.g., by birds, wildlife).
4.4 have negative effects on wildlife habitat, populations, corridors or movement?	Disruption of habitat or staging areas due to project infrastructure (access road, above or below grade transmission lines, towers, etc.).
4.6 have negative effects on migratory birds, including effects on their habitat or staging areas?	Disruption of habitat or of staging areas due to project infrastructure installation and proximity of towers.
4.7 have negative effects on locally important or valued ecosystems or vegetation?	Tree clearing for access road, tower sites.
6. Socio-economic	
6.1 have negative effects on neighbourhood or community character?	Transformation of natural or relatively undeveloped areas to industrial landscapes due to prevalence of significant numbers and height of tower structures.
6.2 have negative effects on local businesses, institutions or public facilities?	Disruption of eco-tourism businesses due to impairment of natural surroundings, impairment of natural state of public hiking/biking/skiing trails, and surrounding areas.
6.3 have negative effects on recreation, cottaging or tourism?	Disruption in attractiveness of area for recreational activity due to transformation away from natural scenic beauty.
6.5 have negative effects on the economic base of a municipality or community?	Eco-tourism-based economy may be impaired by transformation of former prime recreational/tourism landscape.

Criterion	Nature of Adverse Environmental Effects
6.6 have negative effects on local employment and labour supply?	Transformation of area to industrial landscape may create net local employment loss (<i>e.g.</i> , wind farm jobs do not offset lost residential/recreational building/renovation jobs).
7. Heritage and Culture	
7.1 have negative effects on heritage buildings, structures or sites, archaeological resources, or cultural heritage landscapes?	Excavation of archaeologically sensitive areas, domination of heritage landscapes (<i>e.g.</i> , Niagara Escarpment) by tower installations.
7.2 have negative effects on negative on scenic or aesthetically pleasing landscape or views?	Domination of public and private landscapes (including the Niagara Escarpment) and views by tower installations.

Not all proposed wind farm sites will be subject to material adverse environmental effects stemming from the installation of a wind farm. The environmental effects of many proposed wind farm developments may well be mitigated to an acceptable degree. However, there will be many sites in Ontario where a mitigation of adverse environmental consequences to acceptable levels may not be possible. These sites may only be reliably identified, and effectively protected, if the 2 MW environmental assessment requirement is maintained.

It is noteworthy that the wind power industry is not yet firmly established in Ontario to any significant degree. Indeed, the largest installation in Ontario currently consists of a 9 MW installation adjacent to the Bruce Nuclear Station near Kincardine, while the next two largest installations are single 1.8 MW towers at (i) OPG's facility in Pickering, and (ii) Sky Generation's facility at Ferndale. While there are significant development and planning issues which wind farm development presents for Ontarions, there is currently a dearth of Ontario policies and permitting processes which have been proven to be effective and which can be relied upon as the industry breaks out of its infancy in Ontario and into a potentially significant growth period. The maintenance of an environmental assessment requirement for wind power generating facilities at the existing 2 MW threshold level is appropriate at this time, since the existing assessment requirements provide useful guidance as to the nature of many issues requiring consideration and mitigation during the development process.

It is also noteworthy that Ontario has significant developable wind resources. For example, in his February 18, 2002 presentation to the Legislative Assembly's Select Committee on Alternative Fuels, the Chair of the Wind Power Task Force stated that the Wind Power Task

Force's studies indicate that Ontario's commercial grade wind lands could contribute up to 7,500 MW of installed capacity, and that Ontario's offshore resource is much larger. With the benefit of such significant wind resources, wind power developers have the luxury of being able to identify for first development those sites at which the least significant adverse environmental effects are likely to result. An environmental assessment requirement at these sites will not impair a developer's ability to develop appropriate sites promptly and without incurring unreasonable assessment-related expense.

It is also noteworthy that the Government has produced a draft policy relating to the use of Crown land for wind farm development purposes. Upon the adoption of that policy, significant development possibilities will be facilitated. An environmental assessment requirement in respect of appropriate proposed development sites on Crown land will not delay appropriate developments or impose unreasonable assessment-related expense.

Some comment regarding the "Consultation on Proposed Changes to Environmental Assessment Requirements for Electricity Projects" (the "Consultation") may be helpful. The Consultation states that there are several considerations in proposing to raise the threshold in respect of wind turbines from the current 2 MW up to 100 MW. Those considerations, and our related comments, are as follows:

Consideration 1: *The Wind Power Task Force Report recommended raising the threshold for wind to 10 MW seeking parity with treatment of natural gas systems. The Select Committee on Alternative Fuels supported this recommendation.*

Coalition's Comment: The cited recommendation was to increase the threshold to 10 MW. The rationale for the recommendation, however, appears to have been to maintain parity with the then-current natural gas system threshold of 10 MW. As noted earlier in this submission, a wind farm of even a small rated capacity will involve the installation of a significant number of substantially-sized towers, together with significant related infrastructure (e.g., access roads, transmission lines, sub-stations, etc.). While the Task Force's recommendation, and the Select Committee's support for that recommendation, indicate some support for an increase in the threshold to 10 MW, they do not indicate support for a threshold increase to 100 MW. The desire for parity between wind and natural gas related thresholds must be balanced against the size of a wind power facility and the related environmental effects.

Consideration 2: *A single wind turbine in the most cost effective range is 1.8 MW, and prototype turbines up to 3.6 MW are being tested in Europe.*

Coalition's Comment: This consideration appears to imply that because a single turbine may have an installed capacity in the area of 2 MW, the consequence should be that the existing 2 MW environmental assessment requirement threshold should be increased. We do not see the logic in that analysis. As the size of a turbine increases, its potential negative environmental effects will also increase. We note our understanding that the referenced 3.6 MW prototype turbines are being developed primarily for offshore installations and installations in particularly remote locations.

We also note that an increase in the threshold to 100 MW could permit the installation of up to fifty-five 1.8 MW turbines (or up to sixty-seven 1.5 MW turbines) in a single project without any need for an environmental assessment requirement. A photograph of a configuration of approximately twenty turbines with a rated capacity of 660 KW each² (i.e., with an aggregate capacity of approximately 13 MW) appears at Exhibit A. We view the potential absence of an assessment requirement in respect of a project of a magnitude of greater than 2 MW and up to 100 MW to be unacceptable. We note, of course, that the result of an assessment in respect of any such proposed project may be that the project should proceed. However, an assessment requirement should exist in the interest of identifying relevant potential adverse environmental effects and ensuring their mitigation.

Consideration 3: *A 10 MW wind farm consists of approximately 5 wind turbines, and would need a minimum of 100 acres of land. The amount of land required depends on the size and configuration of the turbines, topography, and other factors.*

Coalition's Comment: We do not understand how this consideration supports an increase in the threshold to 100 MW. We note, however, that a 10 MW wind farm may well require a higher number of turbines than five; the required number will depend on the rated capacity of the turbines which are selected for use. A 2.0 MW turbine might be available, but such a turbine would be of a very large size. Five of such turbines, taken together with the related infrastructure (access roads, transmission lines, substation, etc.) could easily give rise to significant adverse environmental effects.

Consideration 4: *A 100 MW wind farm would consist of approximately 50 wind turbines on 1,000 to 10,000 acres of land.*

Coalition's Comment: The intended implication of this consideration is not clear to us. In any event, we would note that the specific design of a particular wind farm will determine how much land the wind farm occupies. As noted in our commentary to Consideration 2 above, a viewing of an approximate 13 MW capacity turbine installation (as illustrated at Exhibit A) is of significant assistance in considering the potential for negative environmental effects from such a project.

Consideration 5: *There are no other provincial environmental approvals or permits required for wind turbines.*

Coalition's Comment: This consideration clearly indicates the wisdom of maintaining a 2 MW assessment requirement threshold for wind turbines. As noted earlier in this submission, the infancy of the wind power industry in Ontario argues strongly in favour of maintaining existing parameters until greater experience results in the establishment of specific and acceptable permitting and development processes.

Consideration 6: *Municipal land use planning would apply.*

² Source: American Wind Energy Association – Wind Project Database.

Coalition's Comment: It is not clear that municipal land use planning will apply. Recommendation 102 of the Select Committee was that a provincial zoning standard be developed for wind turbines, rendering them immune from local municipal prohibition and thereby allowed across Ontario "as of right". Second, the current dearth in Ontario of established municipal zoning standards regarding wind turbine installations means that, assuming that local municipal control is maintained, municipalities will be assisted by the presence of environmental assessment requirements in determining whether adverse environmental effects of a proposed wind turbine installation have been considered and adequately addressed.

Consideration 7: If Crown land is required for a wind farm, and the proponent is not subject to the EAA, MNR has a responsibility under the EAA that must be met prior to disposition of Crown land. It includes conducting an environmental review that features consultation.

Coalition's Comment: As noted earlier in this submission, a wind farm may, depending on the site chosen for development, be expected to have negative environmental effects. Those effects may exist, without regard to whether the proposed site is on Crown land or private land. This consideration indicates that some environmental assessment requirements may apply in respect of Crown land sites even if the threshold is increased. However, the EAA requirements to which MNR would be subject even if the threshold was increased to 100 MW would appear to not apply in the case of a proposed development site on private land. Many proposed sites may be on private land. In any event, for the reasons outlined in our prior comments, the existing assessment requirements assist in the establishment of objective assessment requirements at a time when the infancy of the wind industry in Ontario argues strongly for such requirements.

* * * * *

Based on the analysis and commentary set forth above, the Coalition submits that the existing 2 MW threshold in respect of environmental assessment requirements for wind power facilities under the Electricity Projects Regulation should be maintained at 2 MW and not increased. The Coalition believes that the maintenance of the 2 MW threshold will serve a useful function in identifying inappropriate wind power development proposals while not hindering the development of appropriate proposals.

Respectively submitted,

BLUE HIGHLANDS CITIZENS COALITION

By: _____
Name: Peter S. MacGowan
Title: President

Enclosure

- c:** Honourable J. Wilson, Minister of the Environment and MPP, Simcoe-Grey
- Ms. L. Richardson, Niagara Escarpment Commission
- Ms. P. Hutchison, Grey Association for Better Planning
- Ms. R. Workman, Municipality of Grey Highlands
- Ms. R. Armstrong, The Town of the Blue Mountains

EXHIBIT A



Vestas V-47 turbines installed at Stateline Wind Project, Phase 1, Walla, Walla, Washington State.
Source: Renewable Northwest Project website (<http://www.go-green.org>).