The Position of Nature Canada with regard to wind energy development in Canada

Preamble

Climate change is perhaps the most urgent environmental issue we and other species face today. The main human activity that contributes to global warming, one of the most concerning aspects of climate change is the burning of fossil fuels to generate energy for industry, households and transportation.

Nature Canada supports the target of keeping the average rise in the Earth's surface temperature to less than 2ºC above pre-industrial levels (before the late 18th Century). To achieve this, it is essential to reduce emissions of greenhouse gases from fossil fuels through reduced energy consumption and increased energy efficiency. In addition, wind energy and other alternative energy generation technologies can help us curb the green house gas emissions that are fuelling climate change.

Although there is an urgent need for investment in existing and new technologies to develop truly sustainable renewable sources of energy, some alternative energy technologies are being adopted at an accelerated rate in Canada and across the world. According to the Canadian Wind Energy Association, wind is the fastest growing energy source: Canada's installed wind energy capacity grew by 113% in 2006, with an average annual increase of over 30% for the last 5 years.[1]

Unfortunately, despite their potential contribution to combating climate change, wind farms may have significant impacts on wildlife and its habitat, particularly birds and bats. The main potentially detrimental effects of wind farms on birds, as identified in BirdLife International's position statement on wind farms and birds[2] are:

---

[1] http://www.canwea.ca/wind-energy/windfacts_e.php -Fact sheet #9: The Wind Energy Industry

[2] See NABU study: *Impacts on biodiversity of exploitation of renewable energy sources: the example of birds and bats – facts, gaps in knowledge, demands for further research, and ornithological guidelines for the development of renewable energy exploitation*. H. Hötker, K-

- Collision with the moving turbine blades, with the turbine tower or associated infrastructure such as overhead powerlines, or the wake behind the rotors causing injury, leading to direct mortality.
- Disturbance displacement from around the turbines or exclusion from the whole wind farm. Reduced breeding productivity or reduced survival may result if birds are displaced from preferred habitat and are unable to find suitable alternatives. Disturbance may be caused by the presence of the turbines, and/or by maintenance vehicles/vessels and people, as well as during the construction of wind farms.
- Barriers to movement disrupting ecological links between feeding, wintering, breeding and moulting areas and extended flights around wind clusters, leading to increasing energy demand potentially reducing fitness. Large individual wind farms, or the cumulative effect of multiple wind farms, are the main concerns.
- Change to or loss of habitat due to wind turbines and associated infrastructure.

Nature Canada's Position Statement

> Nature Canada supports the development of wind energy in Canada, in conjunction with conservation measures to reduce all forms of fossil fuel consumption. However, wind energy must not be produced at the expense of bird populations. Individual turbines and wind farms should not be located in areas with particular significance to congregating, migrating or breeding birds. We define "areas with particular significance to congregating, migrating or breeding birds" as areas that have been designated for wildlife protection (National Wildlife Areas, Migratory Bird Sanctuaries, National Parks), areas that have been identified as nationally or internationally important for birds (Important Bird Areas, RAMSAR sites, Western Hemispheric Shorebird Reserve Network sites), all provincially or regionally significant off-shore congregatory sites for waterfowl, and the habitat of designated or nominated species at risk including, but not limited to, critical habitat

---

M Thomsen & H. Köster, December 2004
http://bergenhusen.nabu.de/bericht/VoegelRegEnergien.pdf

All wind farm proposals should be subject to environmental assessment prior to development to assess their impact on all wildlife including birds and bats, and consider alternative locations, cumulative impacts on significant species and groups of species and potential mitigating measures.

Wind farms that are proposed adjacent to or near an area of significance for congregating, migrating or breeding birds, or within areas or landscapes and waterscapes that have been identified as important migratory corridors or bottlenecks should be subject to the most rigorous environmental assessments and only be permitted if they could be shown to have no adverse impact on significant species in the area of importance or on the function of the area as a migration corridor. Also, before development is permitted, there should be a full consideration of all alternatives, as well as a resourced plan to thoroughly monitor the effects of any approved schemes after completion.

Any existing or future wind farms within migratory corridors or bottlenecks should be subject to the best practices for mitigating impacts related to exact location of the turbines, the effect of weather, and their operation during the overall migration period and during specific migration episodes. Because some birds avoid wind turbines, any existing or future location of turbines within a migratory corridor or bottleneck should be low density in nature.

References:

Kingsley, Andrea and Becky Whittam, 2005. Wind Turbines and Birds: A Background Review for Environmental Assessment: Bird Studies Canada, for Environment Canada / Canadian Wildlife Service

BirdLife Birds and Habitats Directive Task Force, 2005. Position Statement on Wind Farms and Birds; BirdLife International, European Community Office