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27 June 2018

Aimann Sadik,  
Senior Environmental Assessment Administrator,  
Saskatchewan Ministry of Environment,  
Via email: [environmental.assessment@gov.sk.ca](mailto:environmental.assessment@gov.sk.ca)

Dear Aimann,

**Re: Review of Blue Hills Wind Energy Project Environmental Impact Statement**

The Saskatchewan Environmental Society (SES) has been active in Saskatchewan since 1970. We are a registered charity committed to supporting sustainable living and sustainable resource use in Saskatchewan. We work with, and on behalf of, communities, organizations, businesses and policy makers to encourage informed decision-making that moves us towards sustainability. We undertake research, and use education, community outreach, consultation opportunities and demonstration projects to provide the people of Saskatchewan the information and tools they need to make and to support these informed decisions. Our current areas of activities include sustainable energy and climate solutions, water protection, resource conservation, biodiversity preservation and reduction of toxic substances.

SES has reviewed the Algonquin Power's environmental impact statement (EIS) dated December 19, 2017 concerning the Blue Hills Wind Energy Project. It is our opinion that the EIS conforms to the terms of reference provided by your ministry and, further, that the EIS meets the requirements of *The Environmental Assessment Act*. We look forward to the Blue Hill project providing much needed renewable power for Saskatchewan.

Algonquin Power and its consultant, Stantec, are to be congratulated for the diligence with which they have conducted this assessment. The Algonquin decision to "opt in" to the formal environmental assessment process does much to alleviate public concerns about openness and transparency. The EIS is well executed and often exceeds expectations. For example, the care taken in the surveys conducted in preparing the EIS. The substantial data obtained on birds and bats allows an informed judgement of the fatality risks this project presents. The data on number of birds and bat detections, the apparent absence of a narrow flight corridor in the project area and the flight heights are particularly instructive. Pre-project planning and site selection are universally acknowledged as the most important steps to minimizing wind energy project impacts. This EIS could well serve as a benchmark for evaluating other wind power projects in the province.



Some specific comments are as follows:

1. The security settings for the document are such that we were unable to search or highlight text. This was unfortunate and made reviewing an 800-page document extra difficult.
2. We applaud Algonquin for choosing the area well south of Reed Lake. It meets MOE's avoidance requirements and includes only about 5% native prairie. Judging from our previous discussions concerning this EIS, the local community has been adequately consulted and is on side.
3. As with most any project, there will be ongoing impact on birds and bats. While the survey results indicate a low occurrence of bats on both spring and fall migration, even at a low incidence one must expect bat mortality throughout the life of the project.
4. Having minimized impact on birds and likely bats by avoiding native prairie and wetlands, the severest of impact has been avoided in all likelihood. Some mortalities can still be expected, of course, because birds often migrate in a broad front and not all follow ridges, rivers and creeks or similar habitat that has been included in the observed avoidance zones.<sup>1</sup> Golden eagles, ferruginous hawks and burrowing owls for example appear more vulnerable to being struck by turbine blades than some other birds.<sup>2</sup> There is a population of golden eagles nesting just north of the Blue Hill project area along the South Saskatchewan River and some of these no doubt come close to the project area on their migrations each year. Similarly, ferruginous hawks nest both south and north of the project area and this species is already under threat in Canada as outlined in the EIS.<sup>3</sup>
5. The Stantec survey data show large numbers of snow geese frequenting and no doubt feeding in the area in fall. This is likely influenced by the presence of Reed Lake as a staging and roosting area. Reed Lake has traditionally been used by an estimated 5000 snow geese in fall and many thousands of other birds.<sup>4</sup> There is significant concern for goose fatalities from wind turbines in and outside the project region.<sup>5</sup> Fortunately, as reported in the EIS, geese as a group appear to be moderately vulnerable to being struck by turbine rotors. It is possible that by their regular presence they become familiar with the threat and are able to avoid the turbines.
6. The EIS clearly distinguishes design and construction matters from continuing operating and maintenance matters. As mentioned during our meeting, the documented Vanguard rainstorm details could be consulted to assist in contingency planning during construction.<sup>6</sup>

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<sup>1</sup> Saskatchewan Ministry of Environment (2018). "Adaptive Management Guidelines for Saskatchewan Wind Energy Projects." <http://publications.gov.sk.ca/documents/66/107072-Adaptive%20Management%20Guidelines%20June%202018.pdf> 23 pp.

<sup>2</sup> Watson, Richard T., Patrick S. Kolar, Miguel Ferrer, Torgeir Nygard, Naira Johnston, W. Grainger Hunt, Hanneline A. Smit-Robinson, Christopher J. Farmer, Manuel Huso and Todd E. Katzner (2018). "Raptor interactions with wind energy: Case studies from around the world." *Journal of Raptor Research* **52**(1): 1-18.

<sup>3</sup> Schmutz, Josef K., D. Tyler Flockhart, C. Stuart Houston, Philip D. McLoughlin (2008). "Demography of ferruginous hawks breeding in western Canada." *Journal of Wildlife Management* **72**(6): 1352-1360.

<sup>4</sup> Schmutz, Josef K. (2000). "Community Conservation Plan for the Chaplin, Old Wives and Reed lakes Important Bird Areas." *Nature Saskatchewan, Regina, SK*.

<sup>5</sup> Petrie, S. (2018). "Dangerous blades: Industrial wind turbine development is a threat to waterfowl and waterfowl hunting." *Delta Waterfowl Summer 2018*: 5.

<sup>6</sup> Hunter, F.G., D.B. Donald, B.N. Johnson, W.D. Hyde, R.F. Hopkinson, J.M. Hanesiak, M.O.B. Kellerhals and B.W. Oegema (2002). The Vanguard Torrential Storm (Meteorology and Hydrology). *Canadian Water Resources Journal* **27**:2, 213-227.



7. The Saskatchewan Ministry of Environment has rightly required a post-construction monitoring and reporting protocol with guidelines for adaptive management in the event of significant mortalities. But some impacts will simply be unknown. Watson et al. (2018)<sup>2</sup> state "The search effort during post-construction fatality monitoring is rarely sufficient to locate all individuals killed by wind turbines, making it impossible to conclude that rare species are not affected even if none are found."
8. The above comments and related concerns also point to the intangible elements that are difficult if not impossible to control. Nonetheless, this Blue Hill project provides an opportunity and satisfies an obvious need in Saskatchewan and Canada. "The National Roundtable on the Environment and the Economy estimated in 2011 that by 2050 climate change will cost Canada between \$23 billion and \$34 billion a year."<sup>7</sup>

Algonquin Power Co. has already demonstrated that it is a responsible corporate citizen. The company has abandoned a less suited site, has chosen a suitable site in the current plan, has decided to prepare an Environmental Impact Statement before it was required by government, and practiced due diligence in local planning and consultation. We trust that Algonquin Power Co. will continue to address the possible future intangibles as much as possible and serve the interest of Saskatchewan people well into the future.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Joe Schmutz', written in a cursive style.

Joe Schmutz, SES Advisor

cc. Sean Fairfield, Algonquin Power

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<sup>7</sup> Casselman, A., and Mike Feehan (2018). "Emissions; Impossible. An unprecedented audit shows that Canada's climate change policy is missing its targets." *Walrus* **15**(6): 24-33.