

WISOKOLAMSON ENERGY LP

# WISOKOLAMSON ENERGY PROJECT ENVIRONMENTAL IMPACT ASSESSMENT

April 16, 2018





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WISOKOLAMSON ENERGY LP

FINAL

PROJECT NO.: 161-08790-00  
DATE: APRIL 16, 2018

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April 16, 2018

New Brunswick Department of Environment and Local Government, Environmental Assessment  
(Section)  
PO Box 6000  
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To Whom it May Concern,

Wisokolamson Energy LP is proposing the development of the Wisokolamson Energy Project. The proposed Project is located on Crown land south of New Ireland Road, in Albert County, New Brunswick, and will have an aggregate electrical capacity of 18 megawatts. In addition, the Project's electrical substation will be located on a private parcel adjacent to a section of New Brunswick Power's 69 kilovolt circuit which ends at the Albert substation, south of Riverside-Albert. The Project will consist of five (5) wind turbine generators, access roads, collector system, substation, and associated temporary laydown areas required for construction. Construction of the Project is scheduled to begin in 2018, with wind turbine generator delivery and commissioning commencing in June 2019.

This Project is considered to be an "Undertaking" as defined in Schedule A of *Environmental Impact Assessment Regulation 87-83*, as described by item (b) of Schedule "A" ("all electric power generating facilities with a production rating of three megawatts or more").

The following report is an Environmental Impact Assessment to determine if the Project will cause significant negative effects to biophysical and human components that may be influenced by the Project. Based on the results of this assessment, WSP is of the opinion that, with the use of the mitigation measures described in this report, there will be no significant residual effects to the environment. In addition, it is believed that the Project will have a positive effect on employment and business opportunities in the region and the Province of New Brunswick.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Christina LaFlamme'.

Christina LaFlamme, M.Sc, EP  
Project Manager| Environment (NB)

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# EXECUTIVE SUMMARY

Wisokolamson Energy LP (WISK) is proposing the development of the Wisokolamson Energy Project (Project). WISK is a limited partnership between SWEB Development LP and Woodstock First Nation (WFN). The Project is located on Crown land south of New Ireland Road, in Albert County, New Brunswick, and will have an aggregate electrical capacity of 18 megawatts (MW). This Project is considered to be an “Undertaking” as defined in Schedule A of *Environmental Impact Assessment Regulation 87-83*. Schedule A of the Regulation identifies the types of undertakings that must be submitted for registration. Because the Project is an electric power generating facility with a production rating of 3 MW or more it is an Undertaking for the purposes of the Regulation and must be registered with the Sustainable Development, Planning and Impact Evaluation Branch, Department of Environment and Local Government

The Project will consist of five (5) Wind Turbine Generators (WTG), access roads, collector system, substation, and associated temporary laydown areas required for construction. The Project is expected to consist of Vestas V126 wind turbines with a nominal power of 3.6 MW. Each assembly will consist of the tower, hub, nacelle, rotor blades, and controller, with a total height of 180 metres (m). The total WTG rotor diameter will be 126 m. It is anticipated that each WTG will be erected on a concrete foundation. The dimensions, depth, and type of foundation will depend on an evaluation of the local soil, surficial geology characteristics, wind forces at the location, and site-specific details of each location. The proposed substation location is near New Ireland Road and Highway 114. The substation area will be approximately 40 m x by 40 m.

The proposed schedule for the Project is dependent on receiving all necessary approvals. It is expected that site preparation and construction will begin in late summer/early fall of 2018, and take approximately 14 to 16 months to complete. Construction will be scheduled to occur during daytime hours. It is expected the Project will be in operation by late 2019. The anticipated life of the Project is estimated to be 25 years, which is consistent with the WTG life expectancy.

WISK has and will continue to engage First Nations communities in proximity to the Project site throughout its development, construction, and operation to ensure that all questions and concerns are addressed in an appropriate fashion. In addition, WISK intends to include First Nation community members with applicable traditional knowledge to assist the Partners during the EIA process, Project development and construction.

To date, WISK has commenced engagement with a number of stakeholders. Throughout the Project’s life, WISK will continue to engage community members regarding Project construction information and safety measures, as well as educational sessions that familiarize community members with the operation of a wind energy project. In addition, WISK will engage the appropriate local authorities and agencies regarding construction timing and important road use information to ensure the Project’s construction and operation meet the highest safety standards.

WISK has and will continue to hold focused meetings with government representatives and key stakeholders to ensure that they are kept apprised of all Project-specific information and planning. WISK has been proactive by engaging NB members of parliament, members of the legislative assembly, and other government officials to inform them of the potential development in the Fundy region. In addition, consultation with federal agencies including Navigation Canada (NAV Canada), Transport Canada, the Royal Canadian Mounted Police (RCMP), Environment Canada Radar, Canadian Coast Guard (CCG), and the Department of National Defence (DND) has also been completed.

The majority of the Project crosses existing roads and forest that is currently disturbed by harvesting activities and has been sited to avoid environmentally sensitive areas. Fifteen (15) vascular plant Species of Conservation Concern (SOCC) have been historically and recently observed within 5 km of the Project; the majority of which have been documented in Shepody National Wildlife Area. No records of nonvascular plant SOCC have been documented within 5 km. A total of 60 wildlife SOCC have been previously detected within 5 km of the Project. Of these, 4 are mammals, 50 are birds, and 5 are invertebrates. Although many SOCC ranked by the Atlantic Canada Conservation Data Centre (ACDC) are considered rare in New Brunswick (NB), those protected or designated by federal and provincial legislation are of particular concern. These included six (6) mammals (which include three (3) bat species), fourteen (14) bird species, and one (1) invertebrate. Of these, fourteen (14) are listed under the federal

Species at Risk Act (SARA), fourteen (14) are listed under New Brunswick Species at Risk Act (NB SARA), and fifteen (15) designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Five (5) bird SOCC were observed during the field surveys. These included pine siskin (*Carduelis pinus*), turkey vulture (*Cathartes aura*), common nighthawk (*Chordeiles minor*), eastern wood-pewee (*Contopus virens*), and evening grosbeak (*Coccothraustes vespertinus*).

There are three (3) managed areas within 5 km of the Project and include the Caledonia Gorge Protected Natural Area, Shepody National Wildlife Area, and Fundy National Park. A biologically significant site area is within 5 km of the Project, Shepody Bay West Important Birding Areas (IBA). There are no IBA or RAMSAR sites (wetlands of international importance) within the Project footprint. There is a Deer Wintering Area 3.8 km of the southern-most WTG. There are no Provincial Parks, operational quarries and mine sites, economically viable peatlands, Old Forest Communities and Habitats, Eastern Habitat Joint Venture sites, International Shorebird Reserves, or conservation areas managed by Ducks Unlimited within 5 km of the Project.

A review of Project activities, applicable legislation, and previous assessment experience identified Valued Environmental Components (VECs) because of their potential sensitivity to effects from the Project. The VECs selected for this assessment are:

- Terrain and Soils
- Surface Hydrology
- Fish and Fish Habitat
- Wetlands
- Terrestrial Vegetation
- Wildlife including Birds and Bats
- Species of Conservation Concern
- Noise
- Shadow Flicker
- Visual Aesthetics
- Electromagnetic Interference
- Heritage and Archaeological Resources
- Land Use
- Local Economy

The majority of Project-VEC interactions were determined to not result in residual effects. The Project can incorporate mitigation to remove or reduce potential effects and therefore are not expected to result in significant effects to VECs. The following interactions are predicted to result in residual effects to VECs because mitigation cannot remove the Project-VEC interaction. Therefore, further analysis was completed to determine the significance of these Project effects.

- Construction and operation of the Project may result in birds and bats colliding with WTGs
- Construction and operation of the Project may cause birds to alter their migration flyways
- Construction and operation of the Project may displace birds and bats from previously used habitats in the Project area
- Employment and business opportunities

The collision of birds with WTGs and other Project infrastructure and displacement of birds from the Project was determined to be moderate in magnitude because it is unknown what the effects would be at the population level. The Project consists of 5 WTGs in an area that appears to have highly variable distribution of birds based on habitat availability. Similar observations were recorded at the Kent Hills wind farm about 5 km north of the Project. The incremental effects from the Project are predicted to be local in geographic extent and the effects are expected to be reversible following decommissioning and reclamation (long-term). The incremental contribution of the Project to existing conditions is not likely to decrease the resilience and increase the risk to local or sub-regional bird populations in the area. Therefore, the Project was given an overall significance rating of medium and is predicted to not have significant adverse effects on birds. Confidence in this prediction is moderate because of limited knowledge about the resilience of bird populations in the area. To test the prediction of significance presented in this EIA and to reduce uncertainty, a Post-construction Monitoring program will be implemented. If the Project is found to be causing significant mortality during post-construction monitoring, additional mitigation will be evaluated.

The collision of bats with WTGs and other Project infrastructure and displacement of bats was determined to be moderate in magnitude because it is unknown what the effects would be at the population level given the other pressures on bat populations (i.e., white-nose syndrome). The Project consists of 5 WTGs in an area that appears to have relatively low bat activity (i.e., approximately 0.15 calls per night) when compared to other areas with 1.4 calls per night. Similar observations of low bat activity were recorded at the Kent Hills wind farm about 5 km north of the

Project. The incremental effects from the Project are predicted to be local in geographic extent and the effects are expected to be reversible following decommissioning and reclamation (long-term). The incremental contribution of the Project to existing conditions is not likely to decrease the resilience and increase the risk to remaining local or sub-regional bat populations in the area. Therefore, the Project was given an overall significance rating of medium and is predicted to not have significant adverse effects on bats. Confidence in this prediction is moderate because of limited knowledge about the resilience of the remaining bat populations in the area. To test the prediction of significance presented in this EIA and to reduce uncertainty, a Post-construction Monitoring program will be implemented. If the Project is found to be causing significant mortality during post-construction monitoring, additional mitigation will be evaluated.

The Project will have a significant positive residual effect on the social environment in relation to employment and business opportunities. Project construction and operations will create jobs and generate income, although much of the construction workforce may not be hired locally, which will reduce the benefits of job creation and income during Project construction. The Project will result in increased training and experience in the labour force, which will affect future opportunities. Project spending will result in increased gross domestic product and Project operations will generate tax revenue for municipal, provincial, and federal governments. WISK will attempt to source as much of the labour and materials locally when possible.

The Project will implement mitigation practices to limit incremental environmental effects from the Project that will occur. Implementation of the mitigation practices is expected to result in minor changes to the biophysical and socio-economic environments from the Project relative to baseline conditions. The Project is located in an area that contains a large amount of forestry activity that will likely continue for the duration of the Project. Effects on VECs from the Kent Hills wind farm are not expected to overlap with effects on VECs in the local area. As such, no cumulative residual environmental effects are expected. As the Project progresses where necessary, SWEB will develop site-specific mitigation to further reduce the potential for cumulative environmental effects as required.

Effects of the environment on the Project was also reviewed. Severe weather and climate change were the two environmental effects that could potentially effect the Project. Mitigation, contingency plans, and Project design can reduce risks of environmental conditions to the Project.