

Northern Valley Wind – Frequently Asked Questions

What is the Northern Valley Wind Project?

The Northern Valley Wind Project (the “Project”) is a proposed 75 MW wind project located within the counties of Two Hills, St. Paul, and Vermilion River being developed by Northern Valley Wind GP Inc., a project entity owned by Elemental Energy Renewables Inc. (“Elemental”). It will be comprised of up to 17 turbines. These wind turbines will have a tower height of up to 125m and a blade length of 82m. In addition to the turbines, the Project will require access roads, a collector system, switching stations for interconnection and an operations and maintenance building.

Who is Elemental Energy?

Elemental is a Canadian private renewable energy developer and operator with over 200 MW of wind, solar and hydro projects in operations and over 1,000 MW of projects in development. This includes three operating wind projects in Canada and five operating solar projects in Alberta.

Why is the project located in the Northern Valley area?

There are several factors to consider when siting a wind energy project, including wind resource, potential environmental impacts, access to existing electric distribution /transmission infrastructure and capacity, existing land use, and demand for electricity.

The Project is situated on a small ridgeline feature where publicly available data and measurements from the onsite meteorological tower indicate the wind resource is strong. The turbines are sited on previously disturbed private agricultural land. The Project has also been designed to avoid important wildlife habitats, such as forested areas and wetlands.

There is existing industrial development in the area including hundreds of oil wells, oil processing facilities and a waste disposal facility across the Project area. As a result of existing industrial development, there is a network of large electrical distribution lines serviced by the existing Irish Creek Substation. The distribution lines and Irish Creek Substation have the electrical capacity for the Project connection without new transmission infrastructure.

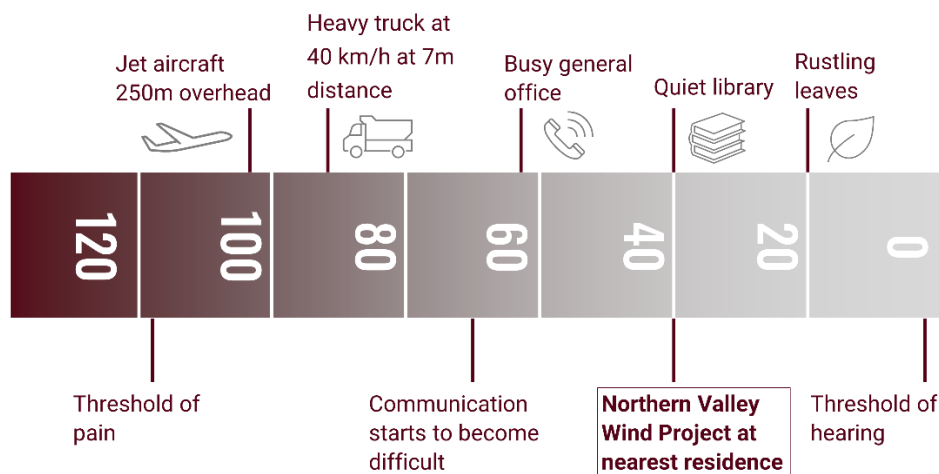
What community engagement has been done to date? What have we heard?

Elemental has consulted with local landowners, local businesses, local government, industrial interest holders and nearby Indigenous Communities. In February 2023, we provided an introductory letter to landowners within 1.5 km of the Project boundary. In June 2023, Elemental met with municipal staff and presented to the Reeves and Councils of Two Hills, St. Paul and Vermilion River County. In July 2023, we hosted a Project information session in Elk Point, and mailed Project information to landowners within 1.5 km of the Project boundary. Since February 2023, we have been engaging directly with stakeholders over the phone, by mail, email, and in person. There has been interest in many areas such as noise, potential health impacts, impact on livestock and wildlife, property values, visual impacts, and decommissioning as well as interest in employment, contracting opportunities and benefits to the local community.

How loud will the project be?

Wind turbine noise is created by the generator and from the blades as wind moves passed them creating a faint “whooshing” sound. Noise from all power plants, including wind power plants, is regulated by the Alberta Utilities Commission (“AUC”) through [AUC Rule 012: Noise Control](#). A Noise Impact Assessment considers the cumulative noise from existing facilities and proposed Project to ensure the Project meets provincial regulatory requirements at each residence within 1.5 km of the Project boundary. The Project is compliant with the regulatory requirements and the predicted nighttime sound level at the nearest resident is 40 dBA, which is comparable to a quiet library. The Noise Impact Assessment is available on the Project website (northernvalleywind.ca).

SOUND LEVELS (dBA)



Is the potential for low frequency noise considered?

Low frequency noise has been considered and assessed. Low frequency noise is included in the Noise Impact Assessment and the results indicate compliance with regulatory requirements. The Noise Impact Assessment is available on the Project website (northernvalleywind.ca).

Will the Project impact human health?

Attributes from operating wind turbines with the potential to affect human health include effects from noise (audible sound and low frequency sound) and effects from shadow flicker. It is common across the industry to employ residential dwelling turbine setbacks to minimize potential human health risks. Generally, turbine setbacks are determined through a combination of government regulations (compliance with AUC Rule 012), modeling (sound or shadow flicker), and industry best practices for minimizing health effects from operating turbines. Studies have shown that when constructed in compliance with regulatory requirements, wind turbines do not pose a risk to human health.

The Project layout has been designed to minimize noise and shadow flicker impacts. Elemental has completed noise impact and shadow flicker assessments to confirm the Project is compliant with Alberta regulatory requirements as well as other guidelines and best practices for turbine siting to minimize adverse health effects from the Project. These reports are available on the Project website or via mail upon request.

Health Canada, along with Statistics Canada and other external experts, conducted a Wind Turbine Noise and Health Study. The results released in 2014 indicated that wind turbine noise was not linked to self-reported medical illnesses and health conditions. A [fact sheet](#) prepared by the American Clean Power Association summarizing peer reviewed studies that focus on the relationship between wind turbines and human health is provided on the Project's website.

Do wind projects impact nearby livestock?

Many wind projects have been built and are currently operating across Alberta and North America where the turbines are co-located in fenced pastures and fenced grazing fields with livestock. Livestock often graze right up to the base of turbines. Despite the significant number of wind turbines installed in livestock grazing lands, there is limited published literature on the potential health risks and/or other behavioural effect to livestock from operating wind farms. Experts have suggested this is a result of the fact that there has not been any evidence or documented concerns about livestock health once projects are operating.

We are unaware of any regulations in Alberta, Canada or North America pertaining to minimum or required wind turbine setbacks from fenced pasture lands, livestock corrals or barns that regularly contain livestock including cows, horses, or other domesticated animals.

How has the Project considered potential effects to birds and other wildlife?

Comprehensive environmental desktop and field surveys for the Project were completed in 2022. The surveys included vegetation assessments, sensitive habitat mapping, wetland assessments, bird and bat migration surveys, and nest searches. Elemental has considered the results of the surveys in the Project design, and sited Project infrastructure away from important environmental features to minimize the potential impact on wildlife and wildlife habitat.

Will the project impact Whooping Crane?

Whooping Cranes are ranked as Endangered by COSEWIC, the federal *Species At Risk Act*, and the *Alberta Wildlife Act.*, and the government of Canada has published a [recovery strategy](#) for the species.

In Canada, the Whooping Crane Nesting Area and Summer Range is within a large wetland complex, within and adjacent to Wood Buffalo National Park, which straddles the border between the Northwest Territories and Alberta. The project is located on the western edge of the known migratory route between critical habitat in Wood Buffalo National Park and overwintering grounds in the Texas Gulf Coast. Most of the known migratory stop over locations are wetland complexes in Saskatchewan, and east of the Northern Valley Wind Project Area.

Wildlife surveys conducted at the Project site in 2022 included spring and fall bird migration surveys and breeding bird surveys; no whooping cranes were detected during these surveys and no incidental observations were recorded.

Is the project subsidized by the Government?

The Project is 100% privately funded by Elemental.

Do wind projects impact property value?

Numerous studies have been conducted on the impact of county residential and agricultural property values in and around wind farms in Canada, the United States, and internationally. These studies indicate there are many factors that can influence property value. The results of these studies have found that the presence of wind

energy projects typically does not cause a statistically significant impact on property value.

How will the wind turbines impact my view?

We understand the visual impact of wind turbines is a concern to some stakeholders. A series of [visual simulations](#) have been generated and are available on the Project website.

Are the geotechnical conditions suitable for a wind project?

Elemental has completed a desktop review including reviewing publicly available maps and data for the surficial geology of the Project area. The Project area has conditions that are suitable for a wind project. During the detailed design phase of the Project, site-specific geotechnical surveys will be conducted.

What happens at the end of the project's life?

The Project will operate for an estimated 35 years and then either be re-powered by installing new modern technology or be decommissioned. Decommissioning and reclamation obligations are governed by legislation and regulations, specifically the [Environmental Protection and Enhancement Act \(Alberta\)](#) ("EPEA") and the [Conservation and Reclamation Regulation](#) enacted thereunder. Elemental has developed a Conservation and Reclamation Plan that outlines the decommissioning activities, process, and environmental requirements to reclaim the site to standards outlines in the Conservation and Reclamation Regulation. The Conservation and Reclamation Plan will be publicly available upon the Project's submission to the AUC.

Will there be a "Phase 2" of the Northern Valley Wind Project?

Elemental is not exploring the development of a second phase. The project has been designed to meet the current available capacity in the local electrical grid.

Will the Elk Point Airport and other local air traffic be affected?

Consultation has been carried out with government agencies including NAV Canada and the Department of National Defence who consider and assess the potential impact to air traffic. NAV Canada and the Department of National Defence have both issued a letter of non-objection for the Project.

How does this project benefit my community?

The Project is estimated to create 100 jobs during the approximately 18-month construction period. Where possible, preference will be given to local contracting companies in various fields including land surveying, safety, civil construction, mechanical and electrical work. Elemental will maximize the local procurement of gravel, concrete, and other construction materials where possible. It is estimated that there will be 4 to 10 full time equivalent jobs throughout the operations phase of the Project.

The Project is expected to provide more than \$35 million dollars in tax revenue to the host Counties over the life of the Project. This could result in increased county services or a reduction in taxes paid by other taxpayers, such as residents.

Elemental has also committed to developing a community benefit plan to support the communities we work with. We've heard interest in residential power rebates and donations to the local library or arena.

What if I have more questions?

If you have any further questions about the information presented or the project in general, please feel free to reach out. Our contact information is:

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northernvalleywind.ca