

March 15, 2021

To Whom it Concerns,

Please find attached an assessment of the economic impacts of the Buffalo Plains Wind Project currently proposed for construction in Vulcan County. This report was commissioned by SouthGrow at the request of community leaders who live in the region in response to growing opposition to the project. It was communicated to us that there was a need to clarify the economic issues at stake from a 3rd-party expert perspective.

SouthGrow has been leading the way on promoting renewable energy investments and opportunities in Southern Alberta since 2007. We have been vocal supporters of wind, solar, geothermal, and hydro projects and have conducted numerous studies on their community impacts. We also have a great wealth of lived experience to draw on from communities that are adjacent to renewable energy projects. This experience is an excellent source of expertise for the present issue. The reality is that the citizens of Vulcan County and Lomond do not have to speculate about what the impacts of the project will be, their neighbours within the region have lived the experience and can report back on that experience.

Randolph Seibold of Survival Energy Partners has been a long-serving contractor for the SouthGrow Regional Initiative and our partners with the Southern Alberta Alternative Energy Partnership. Mr. Seibold is a well-informed expert in southern Alberta energy, and we commissioned him to investigate and report on the following issues:

1. Are the benefits advertised by ABO Wind competitive and reasonable?
2. What are the real estate impacts from the construction of wind projects?
3. What have other communities that are adjacent to wind projects experienced?

We present the attached report below for your consideration.

SouthGrow works to enable economic development to sustain or improve the quality of life for the people of our region. It is our informed opinion that the potential benefits of the ABO Wind project vastly outweigh the negatives, and that most of the perceived negatives of the project will be put to rest by lived experience.

Sincerely,



Peter Casurella
Executive Director
SouthGrow Regional Initiative
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Buffalo Plains Wind Project: Potential Benefits & Impacts Review



Prepared for the Southgrow Regional Initiative and Vulcan County
by Survival Energy Partners (Randolph Seibold, Consultant)

Delivered 02/17/2021.

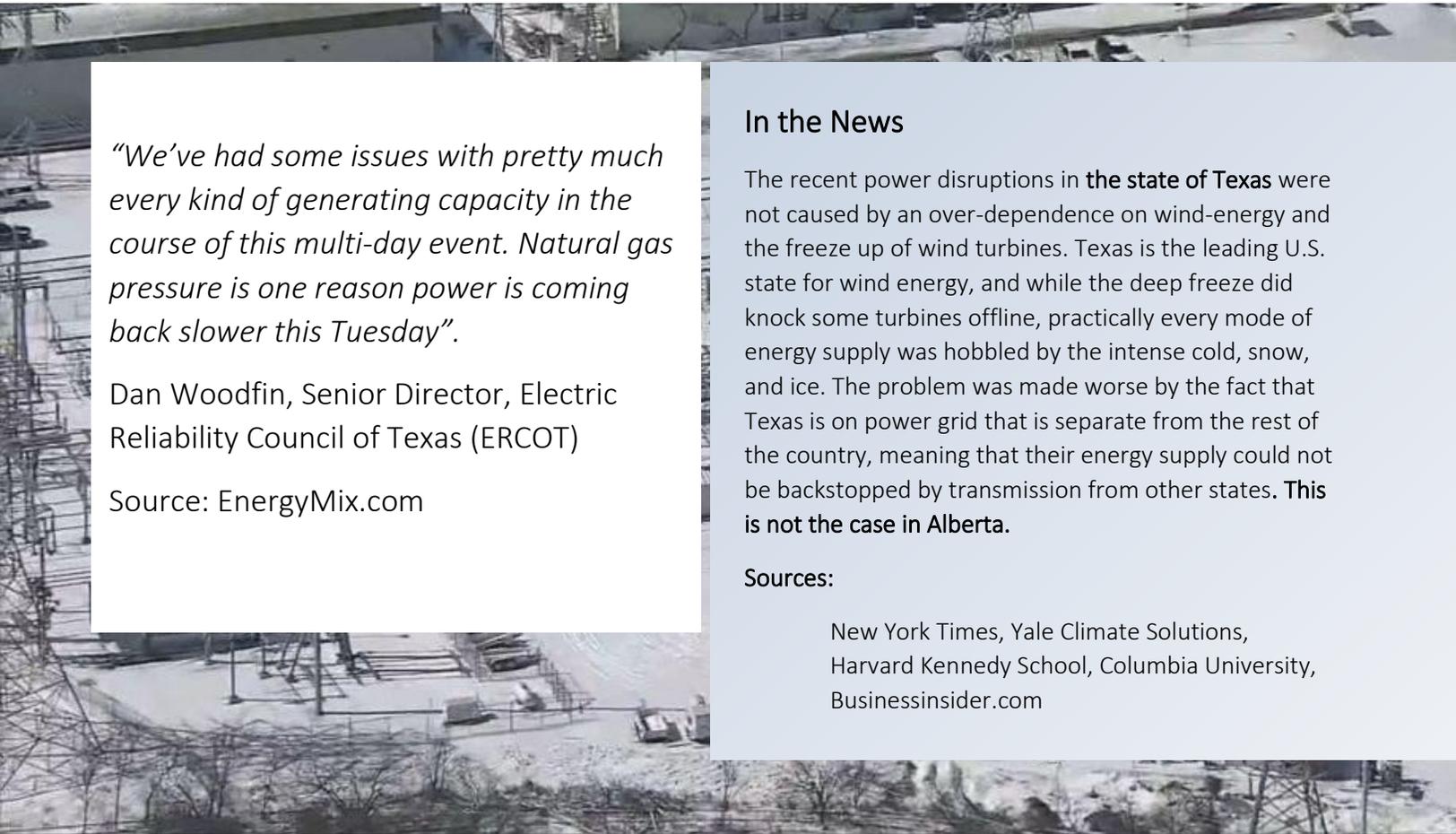
Introduction

Thank you for engaging Survival Energy Partners in reviewing the proposed economic benefits of the Buffalo Plains Wind project, by ABO Wind. Vulcan County and the Village of Lomond have the opportunity to host a well-developed, high-tech wind farm facility in their region. Properly acknowledging and addressing concerns is key to a successful project partnership between community members and project proponents.

Recognizing the economic and social value to the region that would be created by Buffalo Plains, as well as potential risks, the Southgrow Regional Initiative has requested a 3rd party opinion from us on three key topics of interest for the member communities that would potentially benefit. These topics are:

This Third-Party Review Will Research and Confirm:

1. Are the benefits advertised by ABO Wind competitive and reasonable?
2. What are the real estate impacts from the construction of wind projects?
3. What have other communities that are adjacent to wind projects experienced?



“We’ve had some issues with pretty much every kind of generating capacity in the course of this multi-day event. Natural gas pressure is one reason power is coming back slower this Tuesday”.

Dan Woodfin, Senior Director, Electric Reliability Council of Texas (ERCOT)

Source: EnergyMix.com

In the News

The recent power disruptions in **the state of Texas** were not caused by an over-dependence on wind-energy and the freeze up of wind turbines. Texas is the leading U.S. state for wind energy, and while the deep freeze did knock some turbines offline, practically every mode of energy supply was hobbled by the intense cold, snow, and ice. The problem was made worse by the fact that Texas is on power grid that is separate from the rest of the country, meaning that their energy supply could not be backstopped by transmission from other states. **This is not the case in Alberta.**

Sources:

New York Times, Yale Climate Solutions, Harvard Kennedy School, Columbia University, Businessinsider.com

Community and Regional Economic Benefits Offered by ABO Wind

ABO Wind, a Germany-based company with extensive experience in wind and solar energy development, has been developing the Buffalo Plains project for the past several years. **83 turbines**, each capable of generating **6.2MW** of electricity, would be sited between the Village of Lomond and the Lake Macgregor Reservoir. The turbines have a hub height of 115 meters and a total height to blade tip of 200 meters. They are the newest and most efficient onshore turbine produced by Siemens Gamesa, the SG 5.8 170.

ABO Wind has put forward a comprehensive package of financial measures, summarized below, which is designed to reward the entire host community of the Village of Lomond for its participation in the project.

- Over **\$1 million** in annual payments to local farmers and landowners.
- Approximately **\$7.5M per year** in local county property taxes which are reinvested locally for municipal infrastructure and service investments. Linear taxes also help offset the burden of future tax increases on residents and local businesses.
- During the estimated 18-month construction period, an average of **300 construction jobs**, including contracted services, materials, and skilled labour to be sourced regionally whenever possible. Wages during the construction phase can average \$4,000 to \$8,000 per month for local employees, working on average 50-60 hour weeks.
- **10 to 15 permanent positions** created (\$45-100k/year salary range) for site management and maintenance.
- A “Community Vibrancy Fund” established to provide further benefits through long-term funding of initiatives within the local community (\$600k over the lifespan of the project, approximately 30 years).
- An innovative Green Option Program has been released, which is anticipated to contribute more than a million dollars to landowners living within 2km of a Buffalo Plains wind turbine over the lifespan of the Project.

Source: <https://www.abo-wind.com/en/the-company/international/canada/buffalo-plains.php>

\$1 million in local payments

\$7.5 million per year in taxes

300 construction jobs

10 – 15 full-time jobs

\$600,000 community vibrancy fund

Green Option Program



Comparison of Offerings

Figure 1.1 is a comparison of economic measures associated with three new wind projects in Alberta: Riverview in the MD of Pincher Creek, Whitla in the County of Forty Mile, and the Buffalo Plains project. The Riverview project in the MD of Pincher Creek was approved for construction in July of 2019 and the Whitla project in the County of Forty Mile has been in operation since 2019, so both are timely and relevant comparisons.

As can be seen below, the Buffalo Plains project offers more pay-back to local residents than either of its comparable projects. Linear taxes and land leases are dictated by municipal bylaws and land-owner negotiations. Community sponsorships are present across all three projects; however, the Buffalo Plains project stands out in the offering of both Proximity Payments and a community fund.

From looking at other project offerings, our assessment is that the Buffalo Plains project has competitive and comparable economic impact estimates and excels in its promise of community give-back. If ABO can be held to their commitments, the community give back options should be considered highly attractive to Vulcan County and the Village of Lomond.

Figure 1.2 below is a summary of the local sponsorships that the Whitla Wind 1 power project has already invested in with only 1 year of activity in the region.

Figure 1.1 Comparison of Similar Regional Projects

Benefits	Riverview	Whitla	Buffalo Plains
Linear Taxes	YES	YES	YES
Land Leases	YES	YES	YES
Sponsorships	YES	YES	YES
Proximity Payments			YES
Community Fund			YES

Figure 1.2 Recent Community Supports – Whitla Wind 1 (2019 – 2020)

- Bow Island Foremost Victim Services Golf Tournament
- Bow Island Children’s Festival
- Forty Mile Regional FCSS
- Annual Foremost Rodeo
- Burdett 105th Anniversary Committee
- Foremost Municipal Library
- Bow Island Municipal Library
- Pleasant View Seniors Lodge
- Bow Island Minor Hockey Association
- Southern Alberta MedicAir Society HALO
- County of Forty Mile Food Bank
- Bow Island and District Health Foundation

Source: www.capitalpower.com/operations/whitla-wind

Did you Know?

The MD of Pincher Creek has benefit massively from wind energy projects over the past 2 decades. For example, the Summerview project alone (est. 2004) pays \$1.2 million per year in municipal taxes to the MD, accounting for 11% of the MD's total income. This taxation pays for fire, police, ambulance, and other essential civic services. 34% of all of the MD of Pincher Creek's annual tax revenue comes from power generation projects. (Source: canwea.ca)



Wind Energy and Real Estate Market Impact Studies and Related Research

Between 2012 and 2019, numerous studies were performed by real estate agencies, government departments, and research groups. Consistently, no significant negative impact was found on the price index or resale prospects of properties located near wind turbines, when compared to those located at a further distance. In addition, survey respondents were more likely to choose living wind turbines versus other forms of power generation infrastructure. Two examples of these studies are cited below.

In cases where evidence of negative impacts on real estate values has been cited, the proponent of this view has been either found to be biased against wind energy, has used incomplete models or data, or both. For example, a 2012 study (by Ben Lansink AACI, P. App, Lansink Appraisers & Consulting), analyzed only twelve properties within the township of Melancthon, Ontario, all with wind turbines sited less than 1 km away, and analyzed the resale value of these properties in isolation against their previous resale

values before the turbines were erected, but not against similar priced homes across the region at similar or greater distances to wind turbines. Farm properties were excluded from the survey. Most examples and citations of negative impacts on property values are from before 2013, when regulations required lower “setback” thresholds, for example 550 meters in Ontario. Today, setbacks from residential buildings are typically 1,500 - 2,000 meters.

For more information on the historical data on the impacts of wind energy development on residential real estate values, the following resources are provided for the reader’s consideration.

“Consistently, no significant negative impact was found on the price index or resale prospects of properties located near wind turbines, when compared to those located at a further distance.”

Relative Preference Study, Nature Energy, published March 18, 2019.

Abstract

“Studies on social acceptance of wind power projects typically evaluate wind power in isolation, or as a choice between wind and no wind. However, at a societal level, the choice is not limited to whether, how or where wind turbines should be sited, but whether society should generate electricity by wind or from some other source. Consequently, it is important to understand whether those living near local wind projects prefer them relative to other local power projects.

Here, we show that approximately 90% of individuals in the United States who live within 8km of a wind turbine prefer their local wind project to a centralized power plant sited a similar distance away. Wind is also preferred three to one over solar among the approximately two-thirds who have a preference. These results are relatively consistent across states with different characteristics, suggesting a strong social preference for wind turbines among their neighbours.”

Source: <https://www.nature.com/articles/s41560-019-0347-9>

Municipal Property Assessment Corporation, 2016 Study

“MPAC found that the level of appraisal for properties within 1 km of an IWT (Industrial Wind Turbine) is 1.007. The level of appraisal for properties within 1 to 2 km of an IWT is 0.995. These numbers are within 3.3% and 2.1% of the level of assessment of properties more than 5 km from an IWT (0.974) and are below the 5% threshold. By definition, equity is said to exist if the

difference between the property categories is 5% or less. This definition follows the International Association of Assessing Officers (IAAO) ratio study standards.”

Source:

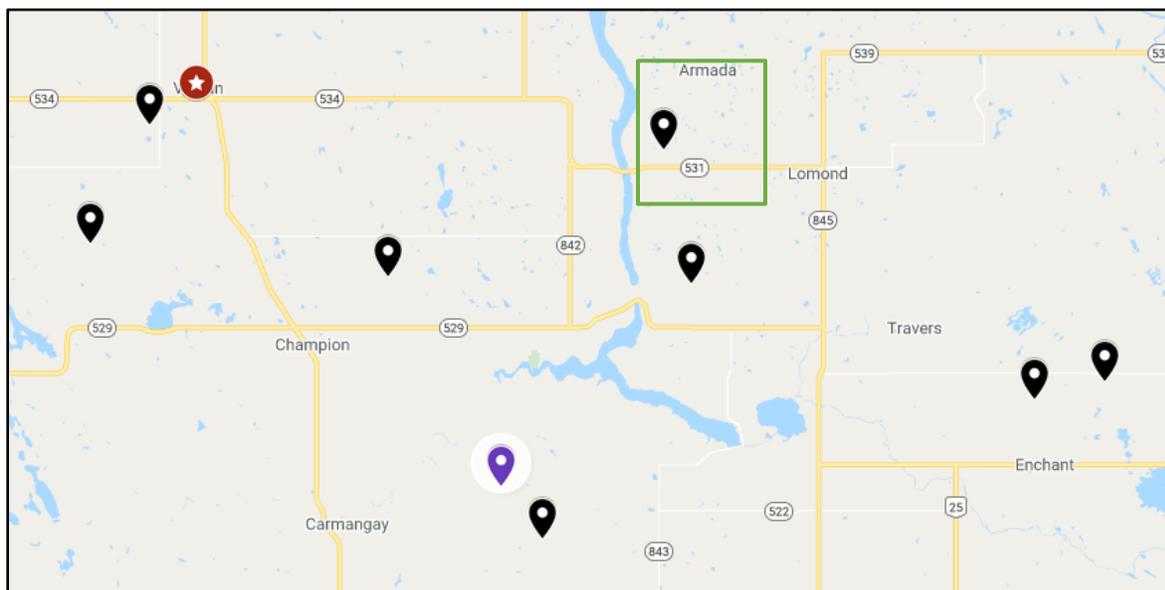
<https://www.mpac.ca/en/PropertyTypes/SpecialStructuresProperties/Windturbinesnearorproperties>

More Resources

Additional North American real estate studies may be accessed at the website of CANWEA (Now a part of the Canadian Renewable Energy Association):

<https://canwea.ca/communities/property-values/>

Figure 1.3 Similar projects in Vulcan County



According to the SAAEP Alberta RE Projects Map, about 10 projects, including the operational Blackspring Ridge wind project, and Travers solar project (near construction) are proposed or operating in Vulcan County, bringing significant economic growth to the entire region. The Buffalo Plains project is outlined in green. (<https://saaep.ca/industry/projects-map/>)



Wind farms blend well with agriculture, as demonstrated here on the Blackspring Ridge Wind Project. Crops can be grown and harvested right up to the tower base, and livestock is free to roam across the facility. All tower entry doors, junction boxes, etc., are secured to prevent injury or damage to humans, livestock, or equipment. The best part is that wind farms do not threaten to contaminate the valuable farmland around them if something goes wrong.



Blackspring Ridge – Vulcan County

Alberta Communities and Wind Energy – Lived Experience Feedback

Since 2003, industrial wind energy development has been a mainstay of the Southern Alberta economy. With several older generation turbines coming to the end of their operational life, the opportunity for wind energy ‘repowering’ projects, replacing many smaller machines with a much lower number of larger capacity turbines, may also benefit Alberta communities soon.

The 2019 Regional Economic Development study, commissioned by SAAEP (Southern Alberta Alternative Energy Partnership, link below), estimated the direct economic impacts of nine wind and solar energy projects being built or in late-stage development across the southern Alberta.

As exciting as the potential for a new project may be, when considering the actual risks and benefits, it is useful to review the experiences held to date by similar Alberta communities who also host wind projects in their regions. Below you will find feedback from neighboring communities on their own experiences with adjacent wind projects.

Municipal District of Pincher Creek

Roland Milligan, Development & Planning Department

403.627.3130 adminirdev@mdpincercreek.ab.ca

Summarized: The overall execution of the Riverview and Castle Ridge Expansion projects in 2020 was very positive for the MD. Restoration of roads and on-going site maintenance has been excellent. The MD is now realizing a positive financial return from the project in the form of linear taxes payable. Generally speaking, the MD of Pincher Creek, during its more than 20 years as host to some of Canada’s first wind farms, has seen no negative impacts on real estate values or inventories. The wind industry in the Old Man River region of Alberta has contributed to one of the most well-diversified local economies in the province. Regarding negative impacts, the most contentious issue has turned out to be aviation lighting on turbines, which flash continuously during the night-time hours, and are viewed as disruptive.

Town of Pincher Creek

Marie Everts, Economic Development, 403.627.3156 economic@pincercreek.ca

Summarized: Significant employment and sub-contracting benefits have been realized by the Town of Pincher during the project’s 2019/2020 construction cycle. Moreover, during 2020 increased local spending on hotels, restaurants and more, helped offset the deep economic impact from the Covid-19 pandemic and related measures.

In addition, four turbines are sited on parcels owned by the municipality, which generate annual land lease payments. This is the first time the Town of Pincher Creek has been able to realize revenues from wind turbines directly.

County of Forty Mile

Keith Odean, CAO 403.867.3530 keith.odean@fortymile.ab.ca

Summarized: Forty Mile has four major wind developments in play; Whitla Phase 1 (202MW, Capital Power, operational), Whitla Phase 2 (97MW, Capital Power, pre-construction), Rattlesnake Ridge (113MW, RES Canada, in-construction), and Forty Mile (200MW, Suncor, pre-construction). To date, the community experience during project construction of the Whitla and Rattlesnake projects has been generally positive.

Economic Benefits: Local employment and services, linear taxes to the County, landowner lease payments, community event sponsorships

Nathan Ogden, Development Planner, County of Forty Mile nathan.ogden@fortymile.ab.ca

(Q&A responses, in italics, received by email February 13, 2021)

Q: Did construction of the project put undue strain or burden on the project's neighbors, or community resources?

Neighbors' impacts included busy roads and dust. Community/County impacts included:

- *Biggest issue seems to have been with night-time tower lighting. Company agreed to apply light mitigating technologies to Phase 2 and retroactively to initial phase.*
- *Complaints during public hearings from an aerial spray plane company, mostly to do with proximity and spraying irrigated crops. The association provided us helpful presentation material.*
- *Emergency response required from a site.*
- *Occasional dust control complaints, a few residents did not want to change their routine even for a short duration. Most were understanding.*
- *Requirement for nearly full-time supervision of the project by the Public Works Department for several months*
- *Planning, Development and Linear approval staff spent a lot of time on the project, especially when working out the road-use agreements.*
- *Transmission line subcontractor placed rig mats and removed them during a time when roads were soft. They seem to have done this due to the rental cost of the rig mats. About \$200,000 damage, was not able to be repaired for nearly a year.*
- *It was a new level of development for the County, we had never worked a project of this size all the way through, so we were learning as we went. Subsequent projects have been more straightforward.*

Q: Post-construction, was the road maintenance and other clean up factors well-managed?

Yes, no issues.

Q: Were any locals (county of Forty Mile, Bow Island, Medicine Hat etc) employed by the project, either as employees or sub contractors?

*Yes, please contact Theresa Hardiker, Verge Economic Development for more information.
THardiker@verge-ed.ca*

Q: What financial benefits are being promise and/or delivered by the various projects, to the County or nearby communities?

*Significant property taxes which will improve the overall financial position of the municipality.
Significant landowner payments. All proponents have expressed willingness to donate to local library, community organizations, Halo Air Ambulance, and the hospital. Proponents asked for suggestions from Council.*

Village of Bow Island

Dave Matz, CAO 403.545.2522 dave@bowisland.com

(Q&A responses, in italics, received by email February 16, 2021)

Q: Did construction of the project put undue strain or burden on the project's neighbors, or community resources?

Not that I am aware of.

Q: Were any locals (county of Forty Mile, Bow Island, Medicine Hat etc) employed by the project, either as employees or sub contractors?

Yes.

Q: What financial benefits are being promised and/or delivered by the various projects, to the County or nearby communities?

Many local businesses benefited from the project like autoparts, lumber yard, hardware store, restaurants, and hotels.

Vulcan County

Summarized: Vulcan County became the host municipality to the 300 MW, 166 turbine Blacksprings Ridge wind project, completed in 2014. Since that time, the wind project has made a significant positive impact on the municipal tax base, supporting its ability to deliver services to its residents. The project adds \$318M to the Vulcan County tax assessment base, resulting in annual taxation payments of approximately \$4.5M.

The taxation benefits of new renewable energy projects are especially important to municipalities, considering the continued decline in oil & gas land lease and taxation revenues across Southern Alberta.

In addition, improvements to roads and bridges, performed by project owners EDF and Enbridge, within the footprint of the BSR project have also benefited area residents.

Denise Heckbert, Stakeholder Relations Manager, Enbridge

647.612.1685 denise.heckbert@enbridge.com

Summarized: “Enbridge, and its partners EDF and Vestas, have together continued to deliver community funding commitments, including through the Covid-19 pandemic. In 2020, recipients and programs included the Carmangay Library, technology tools for elementary school students, and an outdoor skills youth camp. With the impact of the pandemic, requests from community partners included PPE, rental of larger learning spaces to facilitate physical distancing, and mental health funding supports. Communities are well-served by wind and solar projects with the project developers remain involved and present within the communities that host their projects, leading to win-win outcomes that strengthen the overall quality of life, as well as the performance of the projects themselves.”

Whitla Wind Project – County of Forty Mile



Conclusion: Buffalo Plains Wind Project Presents Lomond & Vulcan County with Low-Risk Opportunities for Sustainable Growth

In consideration of three key concerns, i.e., the economic benefits, real estate values, and comparable examples of wind energy experiences in Southern Alberta communities, the overall level of likelihood of a high-benefit project outcome is high, with a low risk of the main perceived negative impacts (e.g., depression of property values, ruined views, environmental degradation, noise, and the assignment of employment and contracting opportunities to firms outside the regional economy).

Municipal Taxation

Based on an estimated project value of \$550M, the resulting taxes payable according to the Vulcan County [online tax calculator](#) to Lomond & District may amount to \$7.8M annually, which are then designated primarily for Municipal Operations (64%), and Alberta Education (27%). Additional taxes are assessed on transmission infrastructure.

Local Employment and Contracting

Though it is true that most wind turbine generators are manufactured in Europe and Asia, most services and skilled labour required to erect them is sourced locally. Canadian companies such as Borea Construction (QC, ON, BC), PCL Construction (Calgary AB), EWR (Rocky View County, AB), and SkyFlo Consulting Ltd (Calgary, AB) are all actively engaged in building wind and solar energy projects across Southern Alberta.

Additional examples of locally sourced services and materials on wind projects may include equipment and trailer rentals, safety officers, mobile mechanics, electricians, power-washing, road dust control, waste removal, catering, concrete delivery, trucking and more. In addition, indirect local economic benefits such as property rentals, hotels, grocery stores, restaurants and more are usually realized by neighboring community businesses.

Real Estate Values

Given the increased municipal tax base, local employment opportunities, and community development benefits (e.g., Community Vibrancy Fund, Green Options Program, etc.), the Buffalo Plains Wind Project has the potential to increase the attractiveness of the Lomond area as a desirable rural community in which to live. Moreover, multiple real estate property value impact studies in both Canada and the US, from 2010 to the present, have found minimal difference in real estate resale values between properties located close to wind turbines, versus properties located at a distance (see MPAC example, above). In fact, it is the consultant's opinion that successful projects will enhance property values by increasing the overall prosperity and infrastructure of the community.

First Class Community Benefits Agreement Offered

Wind project developers may offer just a basic economic benefits agreement. Capital Power's Whitla project pays linear assessment taxes, and the company sponsors various community events and programs on a case-by-case basis. The recently completed Riverview wind project, by Enel, pays linear taxes to the MD of Pincher Creek, while the Town of Pincher Creek receives land lease payments and increased local employment and spending. In both cases, the impact of even limited benefits is extremely positive for the overall economic well-being of the communities.

As currently proposed by ABO Wind, Vulcan County and the Village of Lomond can participate in a best-in-class community benefits agreement. As described above, in addition to linear taxes payable to Vulcan County, landowner lease payments, and local employment and spending related to the project's construction, the Green Options Program will compensate neighbors within a 2 km proximity to any turbines. In addition, a fund to contribute to community development (e.g., playgrounds, seniors' care, village events) will help ensure that everyone indirectly benefits from the project.

Specific Recommendations:

To help preserve its rural community quality of life, stakeholders are right to express concerns and seek solutions that address the potential for impacts, whether on property values, viewscales, local resources and the environment.

One of the most disruptive aspects for communities' hosting a modern wind facility in their area are the aviation lighting systems, required on a certain number of turbines at most projects. Requiring that the developer utilize radar-based lighting systems, or lowering the lighting intensity and flash frequency, or both, would help to reduce the night-time disruption that has been cited as one of the biggest negative impacts of wind generation for communities.

Additional Resources of Interest:

1. With Wind Farms, Bias is in the Eye of the Beholder, Popular Science, March 2018
<https://www.popsci.com/aesthetics-wind-energy/>
2. 2019 Regional Economic Impact Report, Southern Alberta Alternative Energy Partnership, December 2019 <https://saaep.ca/2019-regional-economic-impact-report/>
3. Wind Energy's Economic Impacts to Communities, WIND Exchange, US Dept of Energy, 2019
<https://windexchange.energy.gov/projects/economic-impacts>
4. Understanding Community Benefits Payments from Renewable Energy Development, ScienceDirect, June 2017
<https://www.sciencedirect.com/science/article/pii/S030142151730109X>

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