NON-CONFIDENTIAL FINAL REPORT

Blackspring Ridge 1 Wind Project

CCEMC Project ID: E120056

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Completion date of the Project

August 24th, 2014

Total CCEMC funds received and amount of hold back

Fund received: $10Million

Submission date

August 21st, 2014

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Disclaimer

Executive Summary

The Non-Confidential Final Report meets the obligations set out in the Contribution agreement between Climate Change and Emissions Management Corporation and Enbridge Blackspring Ridge 1 Wind Project Limited partnership and EEN CA Blackspring Ridge 1 Wind Project L.P.

This wind farm project is 298.8 MW located near the town of Vulcan, Alberta. As of 2014, it is the largest project in Canada this year and the largest project in Western Canada. The project consists of 166 Vestas V100-1.8 MW turbines and provides clean energy to approximately 140,000 households. The project has a 20-year agreement with PG&E for the sale of all Renewable Electricity Certificates (RECs) generated by the project. The project is the largest wind farm developed in a deregulated market in Canada and does not receive the benefit from an eco-Energy incentive nor any power purchase agreement. The project is using a Vestas V100-1.8MW that has been optimized to increase the cut-out speed. The Project will reduce greenhouse gas emissions by generating electricity through a wind-powered facility and thus offsetting the amount of energy produced by fossil fuel based sources. The expected lifetime of the Project will be 25 years.

Achievements of the project include the following:

- Site Selection Innovation – The project utilized an innovative strategy in site selection to prioritize transmission over wind resource. This allowed the developer to frontiers unexplored by other wind developers in Alberta. As a result the project was interconnected using a short transmission build, rather than requiring any large extension of the network, or extensive network upgrades. Blackspring Ridge project was therefore developed 2-3 years ahead of other wind farms as a result of site selection innovation.
- Commercial Viability through Innovative Business Model – The project achieved commercial viability through the following: Sale of RECs to Pacific Gas and Electric over a 20-year period, and innovation in risk reduction. Risk was innovatively reduced through a collaborative EPC contract with Mortenson that understood the project requirements and has extensive experience in wind farm construction; and extensive win-win negotiations with the turbine supplier that produced turbines that match the wind regime of Blackspring Ridge and is operating and maintaining the turbines for the next 20 years.
- Technology adaptations for the site – These achievements included an increase in the turbine cut-out speed for several turbines on the site. This enhancement improves the wind farm production. The use of this turbine demonstrates Class II/III wind farm development in Alberta. The technology adaptation led to an improvement in the expected energy yield from the project.
- Innovative revenue sharing with landowners – The use of an innovative revenue sharing model with landowners that recognize them as important stakeholder in the project.

- Risk sharing – The project has mitigated a key risk by entering into a long term, multi-year service and maintenance agreement with the turbine manufacturer. The project has a production guarantee from the turbine manufacturer.

Power generated by the Project will be tracked on the Western Renewable Energy Generation Information System (WREGIS). Over a 10-year period spanning 2015-2024, it is estimated that the project will reduce up to 5.7 million tonnes CO_2e of GHG emission in Alberta. Over a 20-year period, the project will reduce up to 10.1 million tonnes of CO2e emission reductions averaging reduction per annum of 510,000 tonnes of CO_2 e.

The combination of process improvements and innovations with technology adaptation and integration was key in advancing this project ahead of other projects and also improving the production from the assets and enhancing the economics of the project. These innovations can transform areas with lower wind regimes into world-class utility-scale wind energy projects where market pricing for power and environmental attributes are attractive. The innovations assist in unlocking the value of Alberta's untapped resources and foster geographic diversity in wind farm development in Alberta. This geographic diversity will allow for integration of additional wind resources in the Alberta grid by adding diversity to the production profiles of wind power in the province.

Communication plan

The communication plan meets the requirement set forth in the Contribution Agreement that requires public acknowledgement of CCEMC in articles published and presentation to the public; and the notification to CCEMC communication personnel on media releases that mentions CCEMC.

The communication plan includes the promotion of the project status through various media avenues – newspaper articles, local presentations, liaison committee meetings, and public meetings.

Introduction

This report meets the obligations set out in Schedule A of the Contribution Agreement dated 19 February 2014 between Climate Change and Emissions Management (CCEMC) Corporation and Enbridge Blackspring Ridge 1 Wind Project Limited partnership and EEN CA Blackspring Ridge 1 Wind Project L.P. This report also meets the requirements identified by Alberta Innovates Energy and Environment Solutions as part of the requirements of the Non-Confidential Final Report.

This report includes;

- (i) a concise summary of what the project has achieved, including a description of the project, innovative application of technology, geographic innovation, innovative approaches to landowner compensation, financing innovations, innovation in risk reduction and a description of greenhouse gas reductions,
- (ii) conclusions and recommendations for further fields of research inquiry together with the status of performance of the Project in terms of process, output, outcomes and impact measures,
- (iii) a delineation of all Project Technology developed in the course of the Project,
- (iv) sufficient detail to permit readers to use or adapt the results for research and analysis purposes and to understand how the conclusions are arrived at, and
- (v) a communication plan detailing how the Recipients intend to publically communicate concerning the Project.

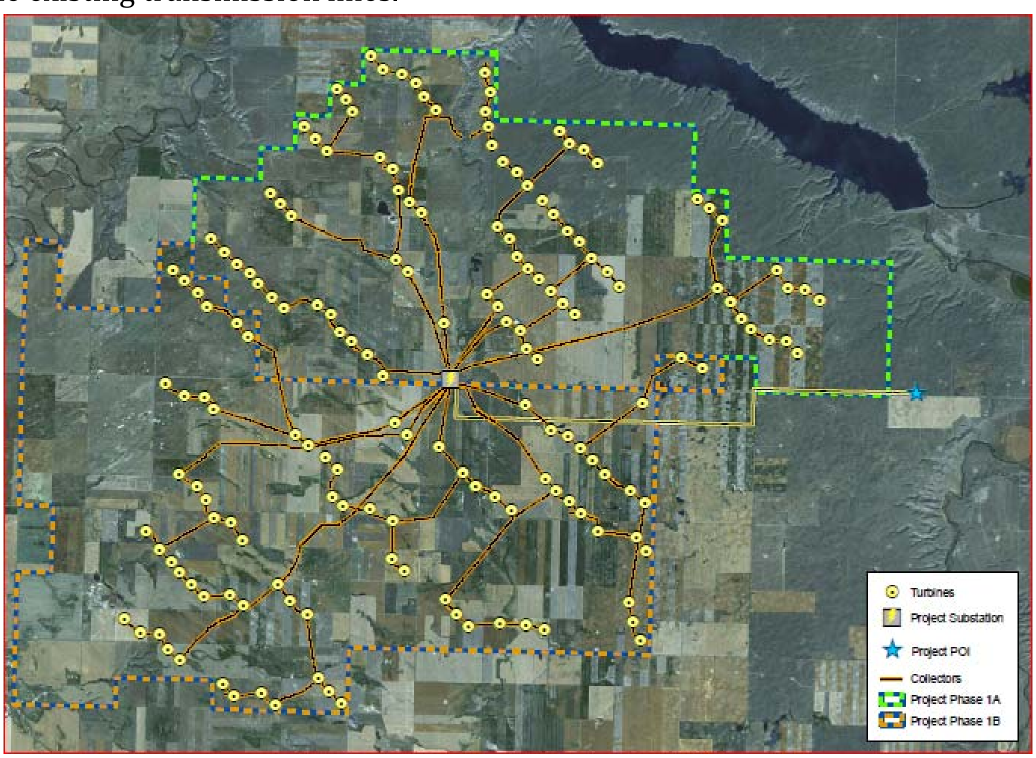
This non-confidential final report is based on the Final Outcome Report with confidential information removed.

Project Overview

The Blackspring Ridge project is a 298.8 MW wind energy project, located in southern Alberta on 45,000 acres of private land under lease. The Project is owned 50% by Enbridge Inc. (Enbridge) and 50% by EDF EN Canada Inc. The project is managed by EDF EN Canada Development Inc. (ECDI), a wholly owned subsidiary of EDF EN Canada Inc. (EDF EN). As of 2014, it is the largest project in Canada this year and the largest project in Western Canada. The project consists of 166 Vestas V100-1.8 MW turbines and provides clean energy to approximately 140,000 households.

This site is 260 km^2, (48,000 hectares of land) which is much larger than any previous wind energy development in Alberta. The project has a 20-year agreement with PG&E for the sale of all Renewable Electricity Certificates generated by the project. The project is the largest wind farm developed in a deregulated market in Canada and does not receive the benefit from an eco-energy incentive nor any power purchase agreement. The Project received all approvals needed to develop its potential including an approval from the Alberta Utility Commission (AUC) to connect to the nearby 240 kV transmission line.

The Project took a new approach to developing wind farms. Instead of building the facility where the wind potential is considered the strongest, the Blackspring Ridge I Wind project utilized new technology to use the potential of less desirable wind areas. This also allowed the facility to be built near an existing transmission line, which in turn reduced the scope and capital costs of construction. The site map below shows the turbine locations, collection systems, project substation, AltaLink new 240kV transmission line and AltaLink switching station to connect the project to the existing transmission lines.



Collector system:

Blackspring Ridge Wind project has two phases: BSR IA and BSR IB of 150 MW each. Each phase has six collection feeders connecting to its own main power transformer in the substation.

The collector system is an underground system with one aerial section. The total length of the collector system is approximately 160 km of three-phase circuits.

The typical connection of wind turbine in the collector system is illustrated in the following single line diagram. Approximately fourteen (14) wind turbines, or twenty-five (25) MW, are connected to one feeder. Each feeder is connected to the substation and can be isolated in case of a failure or preventive maintenance. In addition, each wind turbine is equipped with a switchgear and can be isolated from the collector system.

Blackspring Ridge 485S substation:

The 240 kV substation was designed to incorporate the production of the entire project (300MW). It is equipped with the following major equipment:

- A slack span connecting the substation to the transmission line last structure.
- One 240kV dead-tank circuit breaker and associated switches to isolate the project from the grid.
- Two (2) 200MVA 240-34.5kV main power transformers manufactured by Hico America.
- At the low voltage side of the main transformers, a 34.5kV circuit breaker with associated switches.
- One 34.5kV bus bar and associated circuits breakers and switches for both 1A and 1B, where the collector system feeders are connected.

1042L Transmission line (by AltaLink):

The transmission line 1042L is a new 14 km 240 kV line that connects the Travers 554S switching station to the Blackspring Ridge 485S substation. It is a 240kV single-circuit line with 1033.5 MCM ACSR single conductors with an over-head optical ground wire for communication.

The line was designed to minimise length and landowner impact. During construction, a helicopter was used to string the line above identified Traditional Land Use (TLU) to mitigate the impacts.

Travers 554S switching station (by AltaLink):

The new 240 kV Travers 554S switching substation is dividing the existing line 1036L in two circuits and the line between Travers and North-Lethbridge is renamed to 1041L. Travers 554S has a ring-bus configuration and is used to connect the new 1042L line to the grid. The substation is equipped with three 300kV circuit breaker, switches and required command and protection equipment.

Wind farm control system:

Blackspring Ridge wind farm is equipped with a modern control system that allows the project to be locally and remotely controlled. The control includes the active power control, the voltage control, the frequency control and the monitoring of the entire project. All data collected are stored in a local and remote data historian system, in addition to the Phasor Measurement Unit (PMU) installed as per AESO requirement.

Each turbine is connected via a fiber optic cable to the substation control house. A secured access with a microwave link to the project is available for remote control and monitoring performed by the operator and the owners of the projects. The project is being monitored 24/7 by the owner operation center.

In order to provide the AESO with remote control and monitoring, another access is available with AltaLink telecom link. This link is available from the optical ground wire installed with the transmission line.

At last, the substation physical access and the network access are secured with an industrial security system and firewalls.

Project Goals

The project's goals are as follows:

1. Speed to development
    - Site Selection Innovation - Innovative strategy to prioritize access to transmission over wind resource.
2. Commercial Viability through an Alternative business model:
    - Achieve commercial viability through the generation of non-emitting renewable electricity in the Alberta grid through a different business model.
    - Geographic innovation
    - Generate emission reductions and sell the environmental attributes through a certified renewable electricity certificates to the California market place.
    - Financing innovation
    - Innovation in risk reduction
3. Adapted technology
    a. Demonstrate the use of newer technology Vestas V100 – 1.8 MW turbines in the Alberta wind regime taking advantage of a less desirable resource by extending the cut-out speed.
4. Co-operative landowner arrangement:
    a. Utilize an innovative approach to landowner compensation to increase involvement and acceptance of a large-scale project.
5. Increase awareness
    a. Create awareness of the viability of wind power in Alberta under the sale of environmental attributes to interested markets.

Project Final Outcomes

1. Site Selection Innovation

The project utilized an innovative strategy to prioritize transmission over wind resource. This broadened the site specific search beyond frontiers explored by other wind developers in Alberta and allowed this project to complete development while other projects stalled waiting for expensive and time-consuming provincially funded transmission upgrades. AltaLink interconnected the site through using only a 12 km transmission build, rather than require any large extension of the network, or extensive network upgrades.

Many wind power projects are still waiting on transmission availability. A review of the AESO project list shows that likely over 500 MW of projects are waiting on transmission access for over 7 years, during the same timeframe as the development of Blackspring Ridge.[1] Many of these projects are waiting on transmission that will not be developed for over 3 years.

Result: Blackspring Ridge project was developed 2-3 years ahead of other wind farms as a result of the site selection innovation.

2. Commercial Viability through Innovative Business Model

The project, as demonstrated in the financial report below, has achieved commercial viability through the combination of the following in the business model:

a) Sale of environmental attributes (RECs) to Pacific Gas and Electric over a 20-year period.
b) Innovation in risk reduction: Reduction in capital costs through the following: collaborative EPC contract with Mortenson to understand the project requirements for commercial viability; and extensive win-win negotiations with the turbine supplier, allowing the turbine supplier to open recently shut down manufacturing facilities in the United States; mitigation of a key risk by entering into a long term, multi-year service and maintenance agreement with the turbine manufacturer; development of a project in close proximity to existing transmission facilities and reducing cost of interconnection, reduction in operating cost by self-operating the facility.

Result: The project was acquired by Enbridge and EDF EN and constructed in 2013-2014. Both owners consider the project a commercially viable investment.

3. Technology

V 100 1.8 MW turbine cut-out speed adapted specifically for the site

The Vestas V100-1.8 MW turbine is designed for low-wind onshore sites. It features a greater rotor diameter enabling it to deliver higher output at low wind speeds. As a result this technology allows for a greater return on investments, even at sites

[1] http://www.aeso.ca/21648.html

where wind power plants have not previously been profitable. The blades have been tried and tested in other wind regimes since 2006, however have never been installed in Alberta. This technology opens up opportunities for projects in Alberta.

Alberta's turbines have largely been installed in Class I or Class I/II regimes. Class I is the windiest sites, those with an annual average wind speed of 10 m/s at hub height. Class II is less windy sites with an average wind speed of 8.5 m/s at hub height. Class III is for even lower a wind site with an average wind speed not to exceed 7.5 m/s. Class IV is for very low-wind speed sites with an average wind speed of 6 m/s at hub height. The Blackspring Ridge site is a Class II/III site and is one of the first sites in this class to be developed in Alberta.

Cut-out speed is defined as the speed at which the turbine blades are brought to rest. The Vestas V100 cut-out speed has been improved on several turbines for the Blackspring Ridge facility. This increases the production from the facility.

Model yields

The wind resource modeling of the wind farm layout was completed using the Vestas V100-1.8MW at standard and at an improved cut-out speed. The impact of increasing the cut-out speed is higher electricity production since the turbine operates at a broader range of wind speeds as well as a higher percentage of time that the turbine is operating. This improves the economics as well as the grid integration since the wind power is generated more often and fewer adjustments are required to be made on the part of the system operator.

The wind turbine, as modified, results in a more power output from the same wind conditions than the average turbine used in Alberta.

Result: This technology adaptation led to an improvement in the expected energy yield from the project

4. Innovative revenue sharing with landowners

The developer was mindful that success of the venture is only possible with the cooperation of the landowners and the community. Most wind energy projects in Alberta have only compensated landowners for turbines installed on their property. The developer of Blackspring Ridge noted that this creates a divide between landowners who have turbines and those who may live in close proximity to the project but who do not receive compensation. The developer designed a unique and equitable royalty structure where each landowner among the 45,000-acre site shares in a royalty pool. This model led to a strong local support and no landowner objections.

Result: The use of an innovative revenue sharing model with landowners recognizes them as important stakeholder in the project.

Discussion and Analysis of results

The multiple aspects of innovation in the project have resulted in a project that was built on time, on budget and commercially viable. No one single innovation can take the claim for the result, but rather the combination of all aspects was key to the success. The following table articulates the innovations and their contribution to the final result.

	Faster development time	Improved project economics	Increased environmental attributes
Site selection innovation	▯		
Innovative business model	▯	▯	
Adapted technology	▯	▯	▯
Co-operative landowner arrangement	▯		

The access to the California market place for sale of RECs was limited and the BSR project was fortunate to gain access at the time. However, the market for out-of-state RECs has closed and is not likely to re-open in the near future. The current Specified Gas Emitters Program in Alberta does pay for environmental attributes in the form of Carbon Offsets, however the current pricing and the revocable nature of the attributes makes it difficult to generate attractive economics.

Achievements

Articles on the achievements

Publication	Date	Name of Article	Reference
The Lethbridge Herald	July 16, 2014	Mega-sized wind farm - Western Canada's largest wind project officially opens east of Carmangay	Appendix A
The Vulcan Advocate	June 30, 2014	Team effort to finish wind farm ahead of schedule, says spokesman	Appendix A
Connaissance des Energies	June 25, 2014	Eolien: le vent se leve dans l'ouest canadien	Appendix A
The Vulcan Advocate	May 30, 2014	Blackspring Ridge Wind Project comes online	Appendix A
Wall Street Journal	May 30, 2014	EDF EN Canada and Enbridge Announce 300 Megawatt Blackspring Ridge Wind Project Commissioned in Alberta	Appendix A
The Vulcan Advocate	May 19, 2014	Wind farm connected to grid	Appendix A
The Vulcan Advocate	November 17, 2013	Blackspring Ridge wind farm update	Appendix A
The Prairie Post	October 25, 2013	Blackspring Ridge Wind project is underway	Appendix A
The Lethbridge Herald	September 27, 2013	Vulcan looking to attract investment with private fibre	Appendix A
The Vulcan Advocate	September 25, 2013	First Turbine up at wind farm	Appendix A
The Lethbridge Herald	September 17, 2013	Southern Alberta wind farm is well underway	Appendix A
The Vulcan Advocate	July 3, 2013	Construction well underway at wind farm	Appendix A
The Vulcan Advocate	May 2, 2013	Blackspring Ridge project to proceed as scheduled, say reps of new owners	Appendix A
The Vulcan Advocate	April 17, 2013	Selling Blackspring Ridge project "best way forward" for wind farm and region, says Greengate's CEO	Appendix A
The Edmonton Journal	April 9, 2013	Enbridge, EDF Energies buy $600M wind project near Lethbridge	Appendix A
The Calgary Herald	April 8, 2013	Enbridge, partner buy big wind power project	Appendix A
The Vulcan Advocate	April 8, 2013	Greengate Power sells Blackspring Ridge Wind Project	Appendix A
The Globe and Mail	April 8, 2013	Enbridge, EDF unit buying $600-million Alberta wind project	Appendix A

Community Presentations

The project developer, Greengate, has made the following presentations on the project.

Presentation	Date	Stakeholder
Public Open House	24-Jun-08	Blackspring Ridge Wind Project Landowners, councils and residents of the neighboring municipalities
Vulcan County	05-Mar-08	Vulcan Council
Meeting with Vulcan County	14-Feb-08	Vulcan Council
Landowner Presentation	16-Nov-07	Blackspring Ridge Wind Project Landowners
Vulcan County	06-Nov-07	Vulcan Council

EDF EN and Enbridge have made the following presentations on the project.

Presentation	Date	Stakeholder
Community Liaison Presentation	December 5th, 2013	Elected officials and Blackspring Ridge Wind Project Landowners
Community Liaison Presentation	July 15th, 2014	Elected officials and Blackspring Ridge Wind Project Landowners
Community Liaison Presentation	August 8th 2013	Elected officials and Blackspring Ridge Wind Project Landowners
Community Liaison Presentation	April 10th, 2014	Elected officials and Blackspring Ridge Wind Project Landowners
Town of Vulcan Newsletter	Sep-13	Town of Vulcan residents

Vulcan County Newsletter	Jul-13	Vulcan County Residents
Blackspring Ridge wind Project Community Newsletter	May-13	All homes in the towns of Picture Butte, Iron Springs, Barons, Carmangay, Champion, Nobleford, Mossleigh and Vulcan
Blackspring Ridge wind Project Community Newsletter	Dec-13	All homes in the towns of Picture Butte, Iron Springs, Barons, Carmangay, Champion, Nobleford, Mossleigh and Vulcan
Project Update Newsletter and Email	Jan-14, Feb-14, Mar-14, Apr-14, Jun-14	Blackspring Ridge Wind Project Landowners, Vulcan County council, Carmangay council, Town of Vulcan council
Village of Carmangay	16-Jul-13	Carmangay Council
Vulcan County	03-Jul-13	Vulcan County Council
Landowner Dinner	11-Jun-13	Blackspring Ridge Wind Project Landowners
Town of Vulcan	27-Jun-13	Town of Vulcan Council
Vulcan County	May 1st, 2013	Vulcan County Council
MLA	13-Jun-13	MLA for Little Bow, Ian Donovan
Blackspring Ridge Community Investment Fund Public Meeting	May 15, 2014	Vulcan County Residents

Greenhouse Gas Impacts

A GHG Verification Report will be provided by the Recipients within one year.

Expected GHG benefits projected over a 10 year period

A Greenhouse Gas Assertion report has been completed and is attached to the Final Outcome Report as Appendix B. This assertion is based on the Alberta Environment Quantification Protocol for Wind Powered Electricity Generation (March 2008, version 1). The Electricity Grid Displacement Factor has been assessed based on the Alberta Electric System Operator Long Term Plan – 2014 to determine the future emission reductions from the facility. All emission reductions are considered indirect as they displace power generated from other sources.

Power generated by the Project will be tracked on the Western Renewable Energy Generation Information System (WREGIS). All Renewable Energy Certificates associated with the project (RECs) each equal to 1 MWh of renewable power generation, will be listed on the WREGIS System. Any transfers of ownership or retirements of these RECs will be tracked on the WREGIS system.

Over a 10-year period spanning 2015-2024, it is estimated that the project will reduce up to 5.7 million tonnes CO_2e the GHG emission in Alberta. Over a 20-year period, the project will generate up to 10.1 million tonnes of CO2e emission reductions averaging over 510,000 tonnes of CO_2 e reduction per annum.

Direct impacts from implementation of the project

While these emission reductions are sold to California, the emission reductions actually occur in Alberta.

The direct impacts from implementation of the project include the following:

10 year period: 5.7 million tonnes CO_2e emission reductions in Alberta

20 year period: 10.2 million tonnes of CO_2e emission reductions in Alberta

Future impacts based on market adoption

The improvements made in the process and technology serves to reduce the time to deployment as well as the potential deployment. Limitations on market adoption include available transmission capacity as well as market factors such as power pricing and environmental attribute pricing such as carbon offsets or RECs.

CanWEA generated an Alberta wind speed map (shown below) that shows a coarse representation of the diversity of wind resource in the province. The majority of the lands in the south central part of the province have wind speeds between 6.0-7.4 m/s. It is these projects that can benefit from an improvement in the turbine technology.

Case #1 - Ultimate Physical Potential

The land that has the combination of similar wind speeds and suitability for wind farm development encompasses approximately 6.7% of Alberta, or potentially

28,000 MW according to the CanWEA Solas Wind Vision Technical Overview Document.

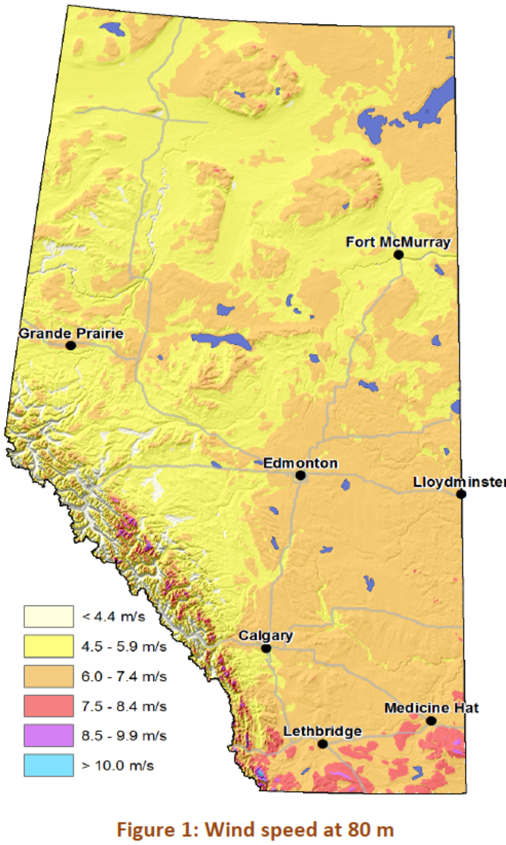


Figure 1: Wind Speed Map for Alberta[2]

An improvement in the capacity factor of 1% as a result of these technical and process modifications would result in an increase in electricity production of 9 TWh/year.

This increase in electricity production from a non-emitting renewable energy source would create a reduction of 4.4 megatonnes per year. This assumes that the Electricity Grid Displacement Factor is an average of 0.49 tonnes/MWh, as per the AESO LTO (2014). Integration of this much wind power in the Alberta grid would not be reasonable given the grid size, capacity limitations and limited interties.

Case #2 – Wind Vision Expected Case:

The Wind Vision Technical Overview Document indicated a case with 3,198 MW installed generating a total of 16.7 TWh compared to the base case of 1,391 MW generating 4.5 TWh. The incremental capacity installed of 1,707 MW generating 12.3 TWh. A 1% improvement in energy production as a result of technology and

[2] Wind Vision Technical Overview Document – Solas Energy Consulting Inc. 2012 prepared for the Canadian Wind Energy Association (CanWEA)

process improvements would generate an incremental 1.23 TWh of energy annually. This would equate to emission reductions of 621.525 tonnes per year.

Case #3: AESO LTO scenario.

The third scenario studied is using the AESO Long Term Outlook (2014), which assumes 100 MW growth in the Alberta market for wind power annually. A 1% improvement in energy production as a result of the technical and process improvements would result in cumulative reductions of 338,023 tonnes over a 20-year period, or 16,901 tonnes per year emission reduction improvement.

A summary of these cases is shown below in the table.

Table 11: Summary of Cases for potential future emission reductions

Case Name	Case #1 - Ultimate Physical Potential	Case #2 - Wind Vision Expected	Case #3 - Minimal – AESO LTO
Total Capacity Installed Incremental	28,000 MW	1,707 MW	100 MW per year over 20 years (2,000 MW)
1% improvement in energy	9 TWh/year	1.23 TWh/year	Average 0.03 TWh/year
Electricity Grid Displacement Factor (Assumed average over 20 years)	0.49 tonnes/MWh	0.49 tonnes/MWh	0.49 tonnes/MWh
Emission Reductions	4,439,467 tonnes per year	621,525 tonnes per year	Average 16,901 tonnes per year

The likely market adoptions are in the range of 16,901 and 621,525 tonnes per year. This will be highly dependent transmission capacity availability and market pricing for power and environmental attributes, which affect the potential for deployment and project economics.

Overall Conclusions

The project has been successfully built on time and on budget and is currently producing electricity into the Alberta grid and selling RECs into the California market.

The combination of process improvements and innovations with technology adaptation and integration was key in advancing this project ahead of other projects and also improving the production from the assets and enhancing the economics of the project. These innovations can transform areas with lower wind regimes into world-class utility-scale wind energy projects where market pricing for power and environmental attributes are attractive. The innovations assist in unlocking the value of Alberta's untapped resources and foster geographic diversity in wind farm development in Alberta. This geographic diversity will allow for integration of additional wind resources in the Alberta grid by adding diversity to the production profiles of wind power in the province.

Next Steps

The process improvements and innovations will be integrated into both organizations as they continue to develop commercial wind farm projects in North America. Some of the process improvements will be key for other technologies such as solar, hydro and biomass facilities.

The technology improvements will be rolled out on the project for the extended cut-out speed.

Communications Plan

EDF EN and Enbridge, through their manager, ECDI, provides regular reports to community stakeholders and has a five year community funding program starting 2014 that support various local community initiatives.

ECDI, as Manager, implemented a series of initiatives designed to foster communication throughout the project cycles with all stakeholders such as elected officials, business owners, private landowners and local citizens.

These channels of communication led to a better common understanding of the project by the host communities, in addition to allowing the company to make the necessary adjustments to ensure an optimal integration of the Blackspring Ridge Wind Project and its work force into the local settings of the Village of Carmangay and Vulcan County.

Council Presentations: Numerous presentations were made to the councils of (i) Vulcan County, (ii) the town of Vulcan and (iii) the village of Carmangay.

Newsletters/Community Boards: Since the start of construction, three Blackspring Ridge newsletters were distributed to all the homes in the towns of Picture Butte, Iron Springs, Barons, Carmangay, Champion, Nobleford, Mossleigh and Vulcan through Canada Post mail drop campaigns.

Project updates were also provided to our stakeholders through:

- Existing community newsletters
- Community boards such as the ones found in Vulcan County and in Carmangay
- Letters to all project landowners informing them of special construction activities or deliveries in their area
- Monthly email updates to all project landowners and surrounding councils.

Liaison Office: A liaison office was established to meet the community and project stakeholders throughout the development and construction process and operations phase. A local liaison agent as well as an experienced landsman was made available to all project landowners to answer any questions or concerns. A dedicated phone line and email address was created to allow for effective and meaningful communications between the project owners and local stakeholders.

Liaison Committee: The first liaison committee meeting was successfully held August 8th at the Carmangay School with a selected group of project landowners, elected officials and the Economic Development Officer of the Vulcan Business Development Society. The meeting was followed by a site visit with the members of the committee and a larger group of guests (elected officials from surrounding communities and Lethbridge College representatives).

Subsequent Liaison Committee meetings were held on December 5th at the Carmangay Senior Citizen Club and on April 10th at the Carmangay Curling Rink.

Blood Tribe: The project is situated on the traditional territory of the Blood Tribe / Kainai and its confederates the Peigan and Siksika. EDF EN Canada and Enbridge continued the long history of consultation with the Blood Tribe as the project transitioned from development to construction. In the summer of 2013, members of the Blood Tribe, including elders and technicians joined several project representatives to take part in a blessing ceremony ahead of construction.

During construction, monitors from the Blood Tribe were on site for the excavation of 15 turbine foundations located in native prairies. Those sites were of particular interests for the Blood Tribe, due to the possibility of vestiges to be discovered during the work. Coordination between the Co-Owners, Mortenson and the Blood Tribe monitors were key to the success of this initiative.

Community Project Funding: This 5 year initiative was launched in May 2014 after months of preparation by the Co-Owners and Vestas. Community driven organizations will be able to apply for funding and a selection committee comprised of the funds representatives and local stakeholders will select and award the funds every year.

Sponsorships/Donations: In addition to the Community Project fund, EDF EN Canada and Enbridge sponsored or donated to the following various events or causes:

- Carmangay Fair & Sports Day
- Wind Energy Summer Day Camp at Lethbridge College
- Royal Tyrrell Museum Cooperating Society
- Donation to Vulcan County and the Vulcan County Fire Department for their flood recovery efforts

Media: Working in collaboration with local, regional and national media outlets, the Co-Owners were able to ensure the accuracy of the project information. Successfully utilizing the media to provide accurate project information was a cornerstone of our educational initiatives. Interviews were conducted with media outlets such as Global TV, CTV, The Lethbridge Herald, the Vulcan Advocate and various industry magazines.

Abstract and key words

Suitable for public use – will be posted on the CCEMC website