

STIRLING WIND PROJECT LP | OCTOBER 2016

WELCOME

OCTOBER 2016

STIRLING WIND PROJECT | PUBLIC OPEN HOUSE
PLEASE SIGN IN AND WALK AROUND
WE ARE HERE TO ASSIST YOU

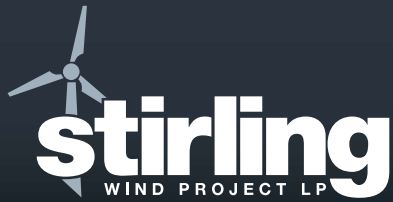
**For more information about
the Stirling Wind Project or
SWLP please visit our website
or contact a representative
by telephone or email**

Dan Tocher
Stakeholder Relations Manager
Email: info@stirlingwind.com
Number: 1.855.219.7207
www.stirlingwind.com



STIRLING WIND PROJECT LP, BY ITS GENERAL PARTNER STIRLING WIND PROJECT LTD. (SWLP)





STIRLING WIND PROJECT LP

OCTOBER 2016

ABOUT US

Greengate Power Corporation is a leading renewable energy company based in Calgary, Alberta. To date, Greengate has successfully developed 450 MW of operating wind projects in Alberta. These projects represent over 30% of the wind energy generated in Alberta and provide a clean source of energy to approximately 200,000 homes.



www.stirlingwind.com

Potentia Renewables Inc. is an independent power producer focused on developing, managing and operating renewable energy systems. Potentia Renewables Inc. is a wholly owned subsidiary of Power Corporation of Canada, a diversified international management and holding company.



www.greengatepower.com



www.potentiarenewables.com



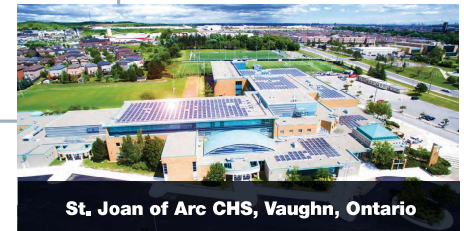
150 MW Halkirk Wind Project



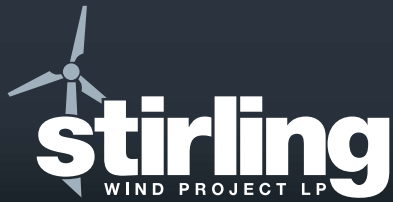
300 MW Blackspring Ridge Wind Project



All Saints CSS, Whitby, Ontario



St. Joan of Arc CHS, Vaughn, Ontario



PROJECT INFORMATION

PROJECT INFORMATION

PROJECT OWNER

- Stirling Wind Project LP, by its general partner Stirling Wind Project Ltd. (SWLP)

PROJECT NAME

- Stirling Wind Project

HOST MUNICIPALITIES

- County of Warner No. 5 and Lethbridge County

PROJECT TYPE AND SIZE

- Approximately 113 MW wind energy project

COLLECTION SYSTEM

- 34.5 kilovolt (kV) above ground and underground collector lines that connect into the proposed Red Coat substation



INTERCONNECTION

PROJECT SUBSTATION

- Red Coat Substation is proposed to be located in NW 8-7-18 W4M

POINT OF INTERCONNECTION

- 138 kilovolt (kV) power line built from the proposed Red Coat substation to the existing AltaLink 820L line west of the Project
- Interconnection covered under a separate consultation and application process conducted by AltaLink

OTHER INFRASTRUCTURE

ROADS

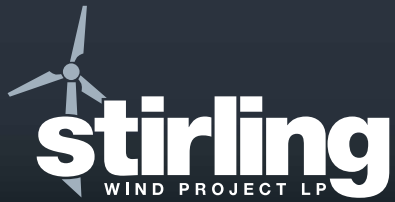
- Approximately 6 metres wide
- Built with existing material to build the crown of the road
- Top dressed with crush gravel

OPERATIONS AND MAINTENANCE BUILDING

- Approximate location beside Project Substation

TEMPORARY LAY DOWN AREA

- Location to be determined



STIRLING WIND PROJECT LP

OCTOBER 2016

PROJECT DETAILS

Number of Wind Turbines Proposed: Up to 46

Total Installed Capacity: Up to 113 MW

Anticipated In Service Date: Q2 2019

Project Duration: 25+ years

Rotor Diameter: Up to 140 metres

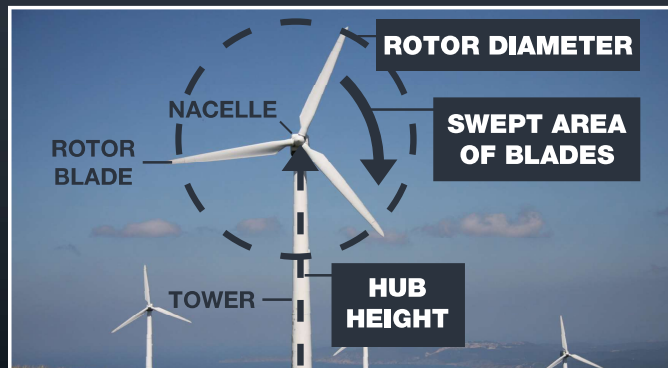
Wind Turbine Capacity: Up to 3.6 MW

Hub Height: Up to 110m

Blade Length: Up to 70 metres

Acres Within Project Boundary: Approximately 12,000

Footprint: Approximately 1 – 2 acres per turbine



The Project will supply enough electricity for approximately

54,000
HOUSEHOLDS





COMMUNITY BENEFITS



CLEAN ENERGY

Wind energy is one of the cleanest forms of electrical power generation. It uses no water, and produces no emissions. It is a clean, renewable source of energy.



COST EFFECTIVE

Wind energy is the most cost effective renewable energy source available and can coexist with farms, ranches and other uses.

COMMUNITY FUND AND INVOLVEMENT

- We are setting up a community development fund for the Project
- We will provide a funding commitment throughout the Project life, and will support local initiatives and projects
- More details on the fund will be shared as the Project progresses
- This is in addition to the municipal tax revenues generated by the Project
- We are also interested in supporting local events and activities in the community

Please let us know if there are ways that we can support local initiatives and the community

DURING CONSTRUCTION

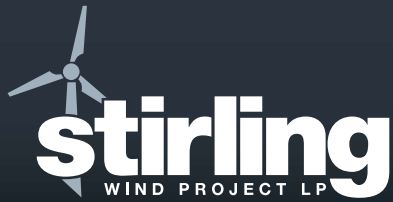
- Local spending
- Construction jobs
- Employment and contract opportunities
- Increased accommodation and meals in the area
- Compensation to participating landowners

DURING OPERATION

- Local spending
- Operator and maintenance employment and contracting opportunities
- Municipal tax revenues – directly allocated to increasing local services or stabilizing local tax rates
- Compensation to participating landowners – boost for rural economic development



If you are interested in providing goods and services to the Project, please provide your contact information on the contractor list at the sign in table.



STIRLING WIND PROJECT LP | OCTOBER 2016

CONSULTATION SCHEDULE



DEVELOPMENT PHASE **2007 - 2017**

PERSONAL CONSULTATION
OPEN HOUSE
ONGOING ENGAGEMENT
AND UPDATES



CONSTRUCTION PHASE **2018 - 2019**

ONGOING
ENGAGEMENT
AND UPDATES



OPERATIONS PHASE **2019 - 2044+**

ONGOING
ENGAGEMENT
AND UPDATES

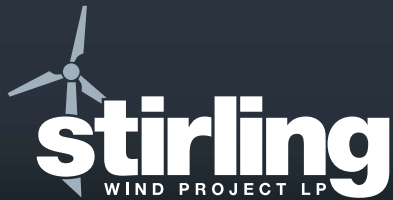


DECOMMISSIONING **AFTER 2044**

CONSULTATION WITH
STAKEHOLDERS ON
DECOMMISSIONING/
RECLAMATION/
REPOWERING

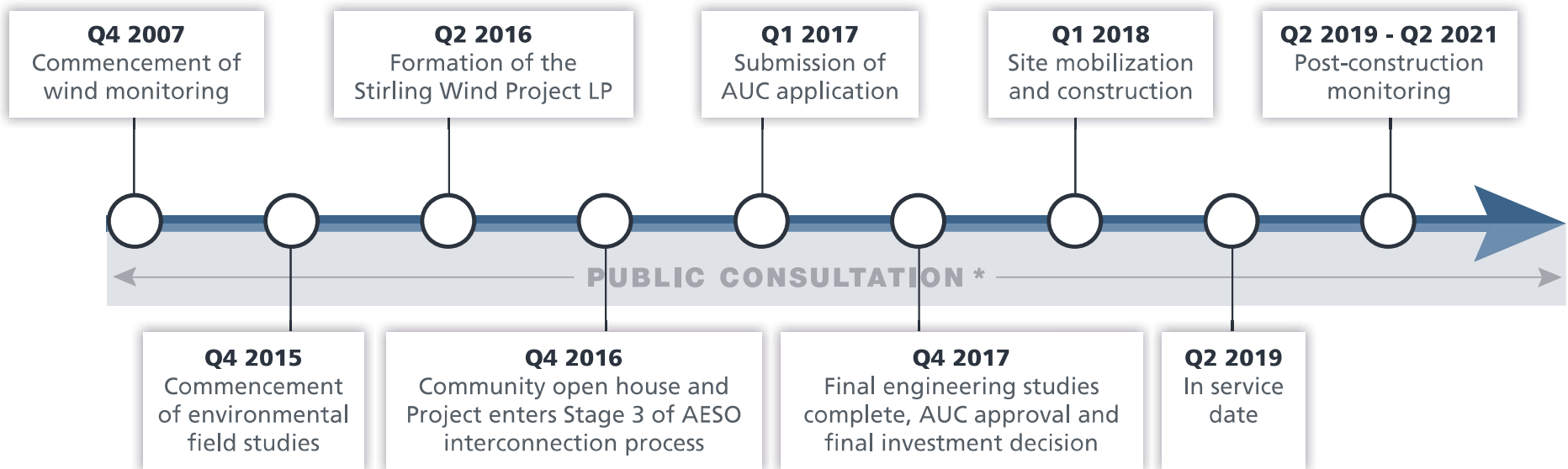


We are committed to engaging landowners, public stakeholders, and other members of the local community and we look forward to a continuing dialogue and partnership with you over the coming months and years



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EXPECTED PROJECT SCHEDULE

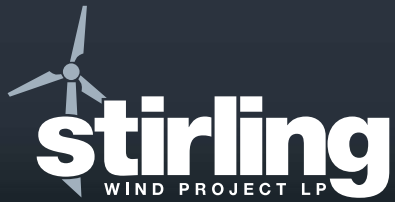


*** Public consultation will continue through the life of the project, from development, through construction, operations and decommissioning**

NOTE

This schedule is subject to change. Project timing is dependent on regulatory approvals, and results of the Government of Alberta's Renewable Electricity Program (www.aeso.ca/rep)

We will continue to provide schedule updates as the Project progresses



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STAKEHOLDER CONSIDERATIONS



CONSTRUCTION

DUST

- We will work with the Counties to ensure dust mitigation is in place and impact is kept to a minimum

INCREASED TRAFFIC

- Main access is through highway 4 and highway 61
- We will work with the Counties to reduce impacts on the community from traffic



OPERATION

NOISE

- See poster

SHADOW FLICKER

- See poster

VISUAL IMPACT

- See poster

WILDLIFE IMPACTS

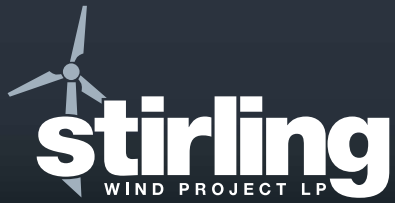
- Setbacks used to reduce risk
- Post-construction monitoring plan

TURBINE LIGHTING

- Required for air transportation safety
- Transport Canada regulated

ICE THROW

- Setbacks and operational protocols used to reduce risk

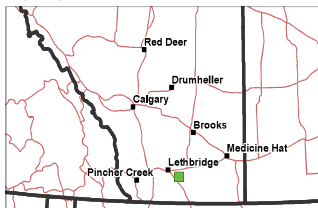


REGIONAL MAP

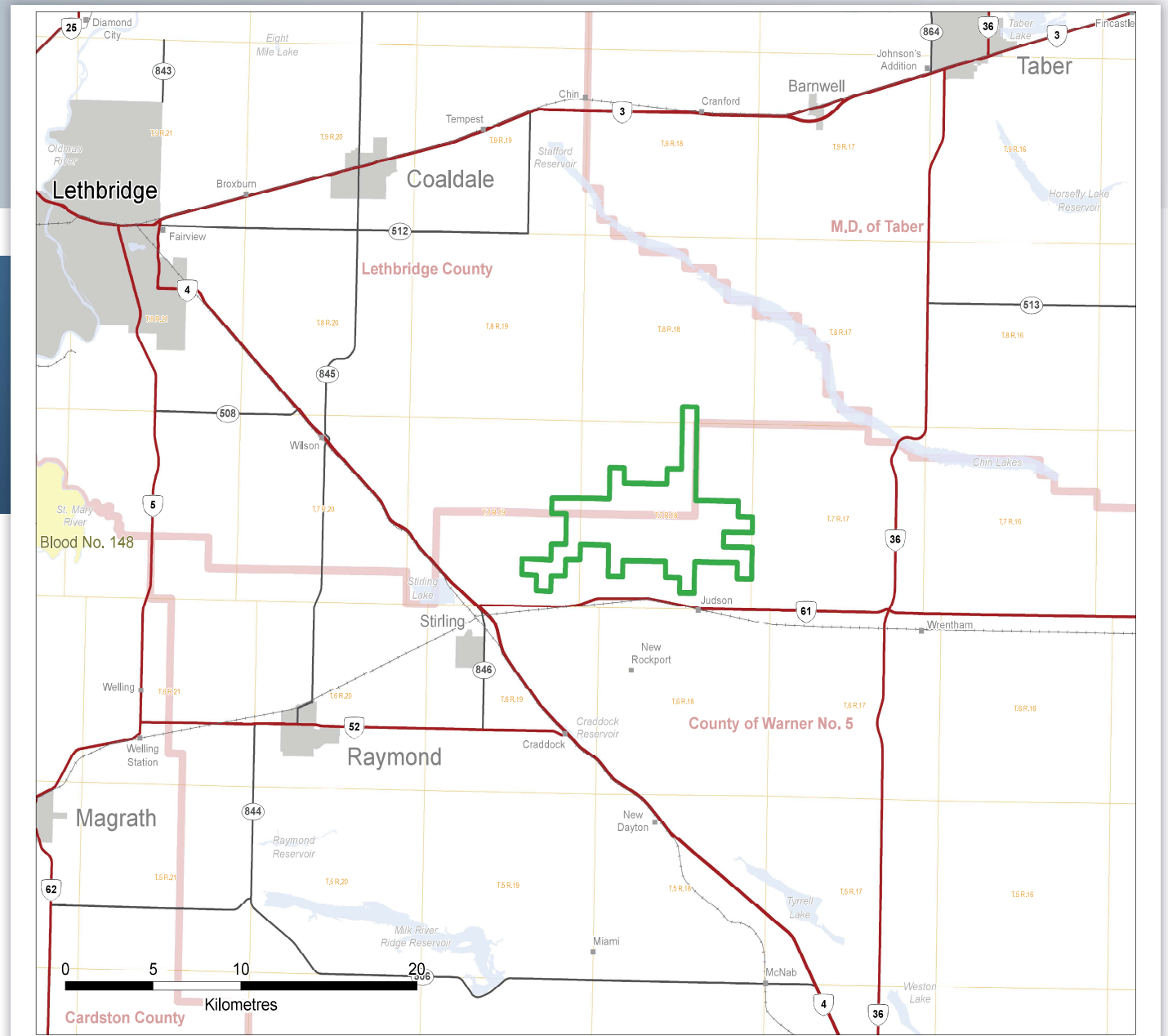
- Project Boundary
- Primary Highway
- Secondary Highway
- Railway
- City, Town or Village
- Major Waterbody
- First Nations Reservation
- Municipal District or County Boundary
- Provincial Boundary
- Township

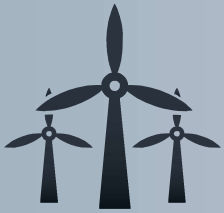
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Date: 2016-10-20
Layout: 20161011
Prepared By: WSP

Datum: NAD 83
Projection: UTM Zone 12N
Scale: 1:100,000

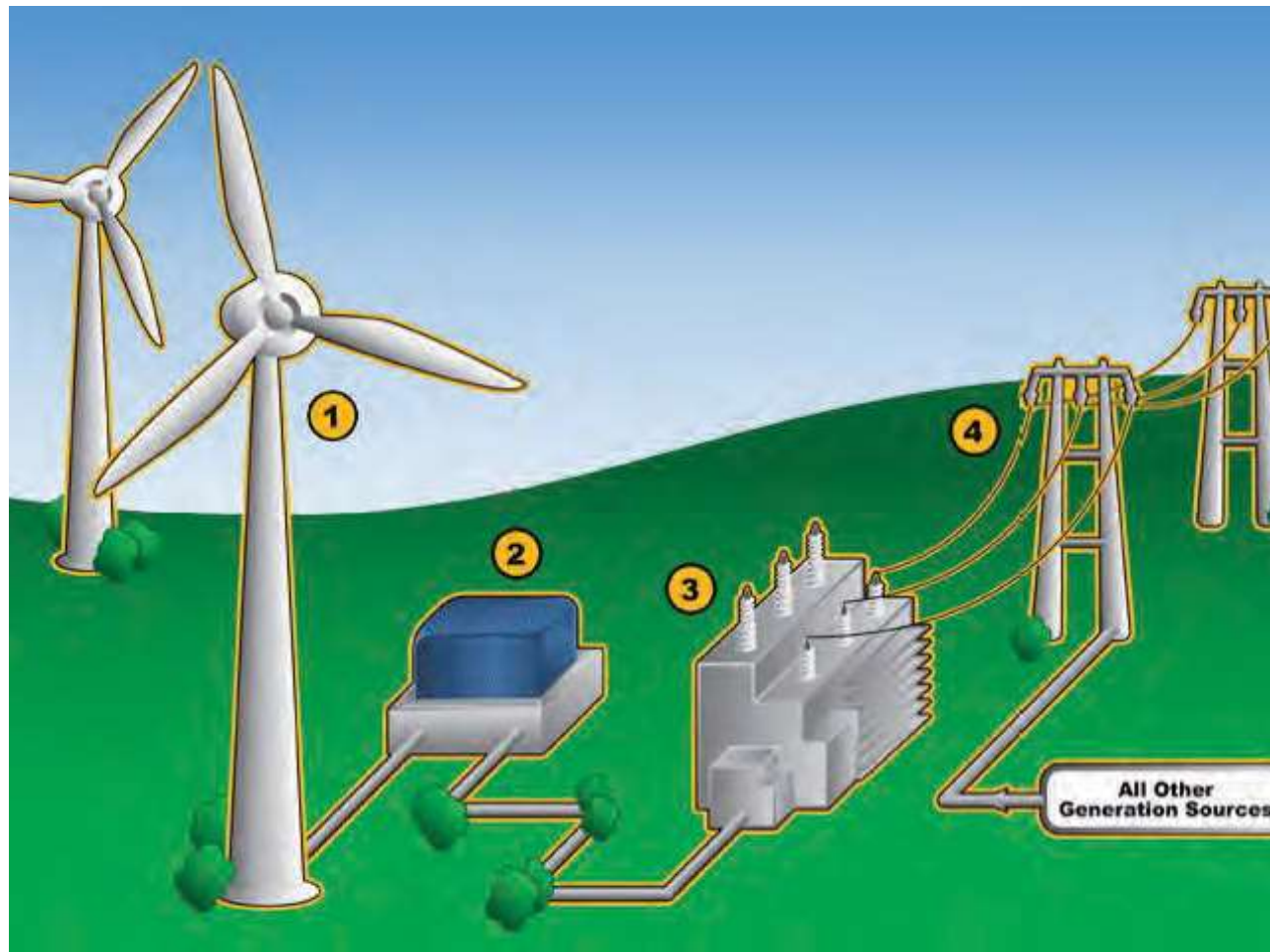


Base Map Data Credits: AtlasJS (c) Government of Alberta.

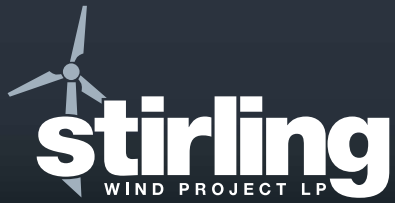




HOW WIND POWER WORKS



- 1** Wind is produced by the uneven heating of the earth's surface by the sun. The wind causes the turbine blades to spin. The spinning blades cause a generator to rotate, converting the wind energy into electricity.
- 2** The transformer increases voltage for transmission to substation.
- 3** The substation further increases voltage for transmission over long distances.
- 4** Electricity generated travels through transmission lines and distribution lines to homes and businesses.

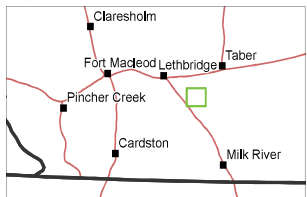


46 TURBINE PROPOSED PROJECT MAP

- Project Boundary
- Signed Project Lands Within Project Boundary
- Approximate Turbine Location
- Proposed Project Substation and Proposed O&M Building
- Potential Underground or Above Ground Collector (34 kV)
- Potential New Road
- Existing 820L Transmission Line (138 kV)
- Existing MATL Transmission Line (240 kV)
- Minor Highway
- Other Road
- Railway
- Residence
- Municipal District and County Boundary
- Township Lines and Section Numbers

Version: 9
Date: 2016-10-20
Layout: 20161011
Prepared By: WSP

Datum: NAD 83
Projection: UTM Zone 12N
Scale: 1:25,000

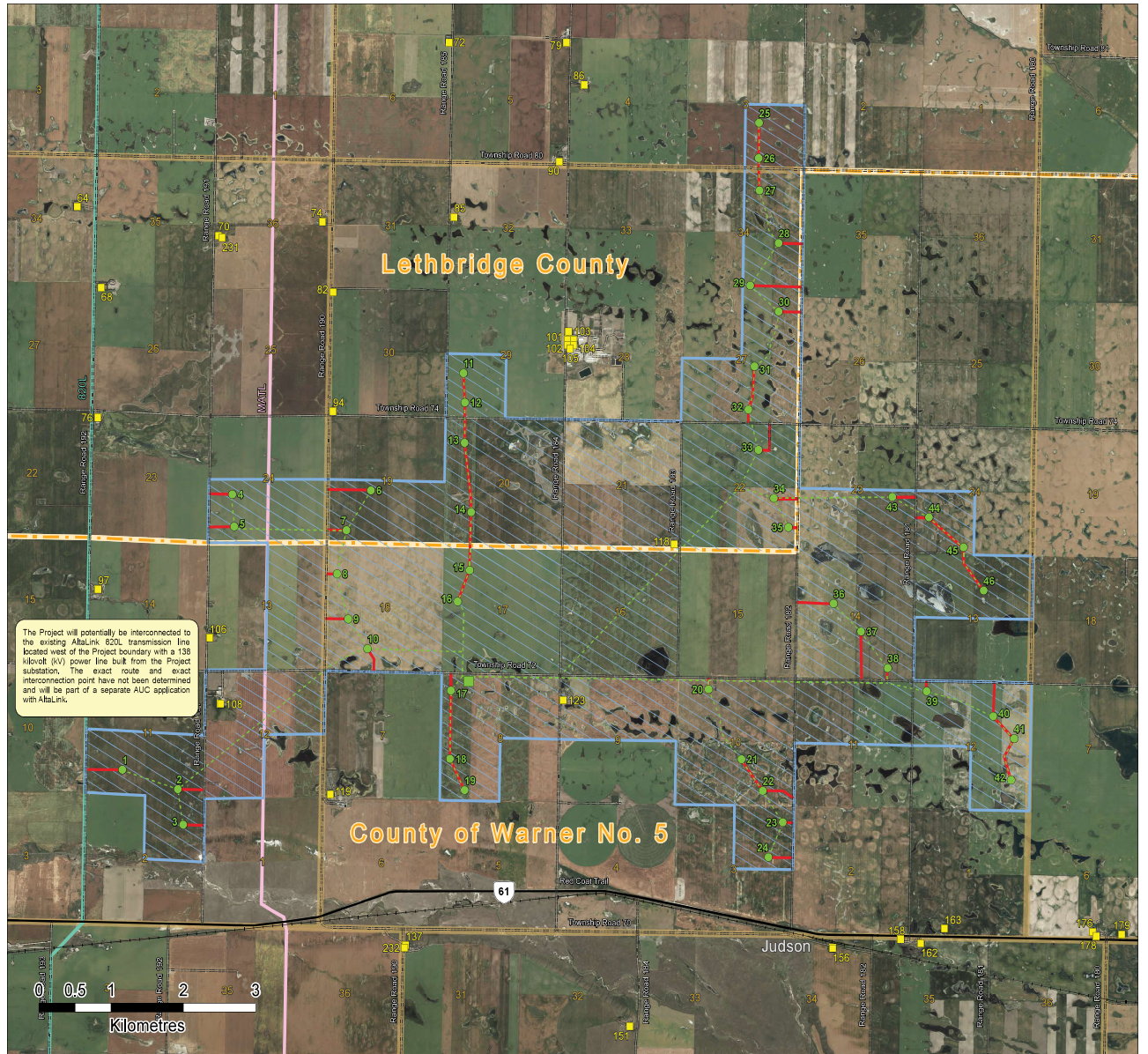


Data Credits: Alberta (a) Government of Alberta; (a) OpenStreetMap contributors; (a) Esri Inc. Imagery Credits: Source Data, Imagery Data, Google Earth Imagery, GeoEye Imagery, DigitalGlobe, USDA, USGS, NOAA, GeoEye, Aerialcam, BBN, BBN, and the US User Community

T.8

T.7

T.6



R.19

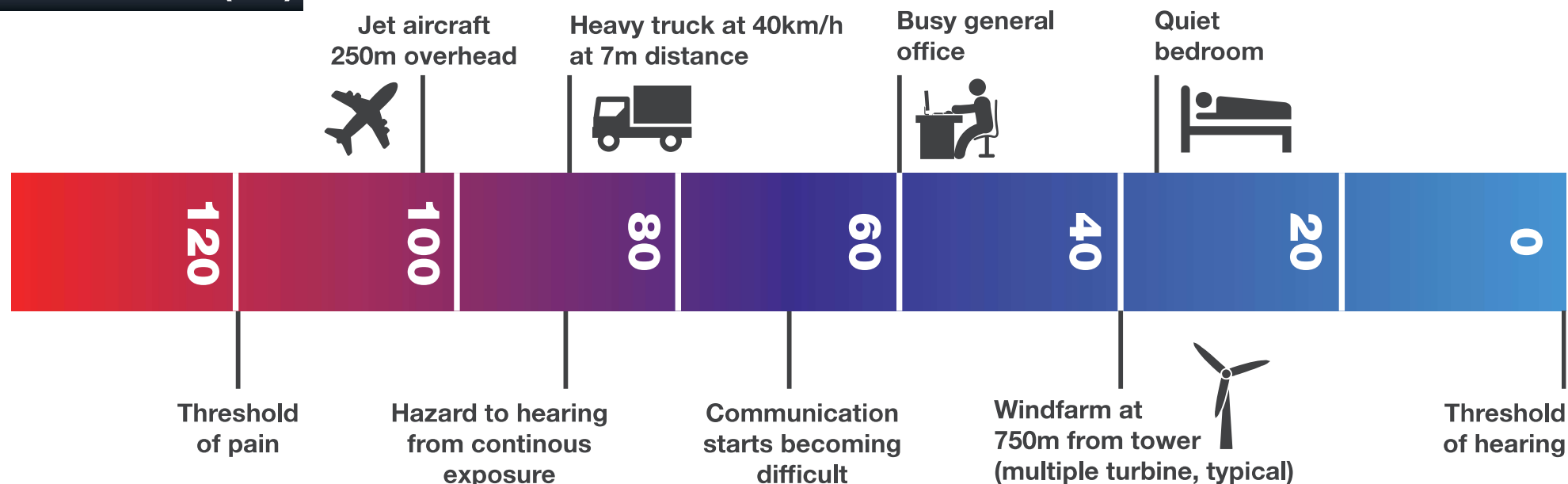
R.18 W4M

R.17



WIND TURBINES AND SOUND

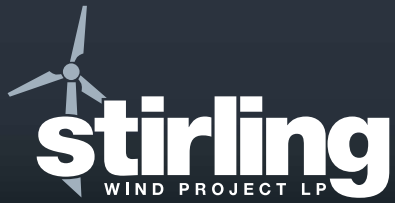
SOUND LEVELS (dBA)



Under windy conditions, turbine noise can be difficult to hear because of the wind.

You can carry on a normal conversation while standing at the base of an operational wind turbine.

Modern wind turbines have been engineered to have low sound.

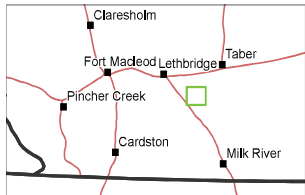


46 TURBINE PRELIMINARY SOUND MAP

- Cumulative Sound Level: 45 dBA
- Cumulative Sound Level: 40 dBA (AUC Compliance Limit for Design)
- Energy-related Sound Source
- Project Boundary
- Approximate Turbine Location
- Proposed Project Substation and Proposed O&M Building
- Existing 820L Transmission Line (138 kV)
- Existing MATL Transmission Line (240 kV)
- Minor Highway
- Other Road
- Railway
- Residence
- Oil and Gas Facility
- ▲ Oil and Gas Active Well
- Municipal District and County Boundary
- Township Lines and Section Numbers

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Data Credits: Alberta (c) Government of Alberta, (c) OpenStreetMap contributors, (c) BND Inc. Imagery Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, Aero, DeLorme, Aerial, (c) IGN, (c) Swisstopo, and the SBB User Community

NOTE: The wind turbine used in this analysis is a Senvion 3.4M140 on a 110 m tower

T.8

T.7

T.6

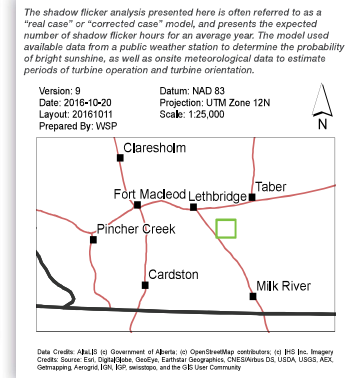
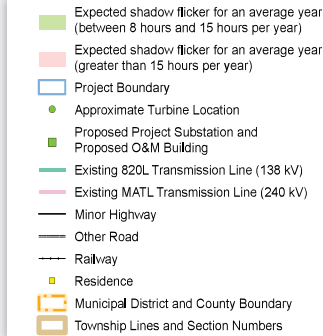
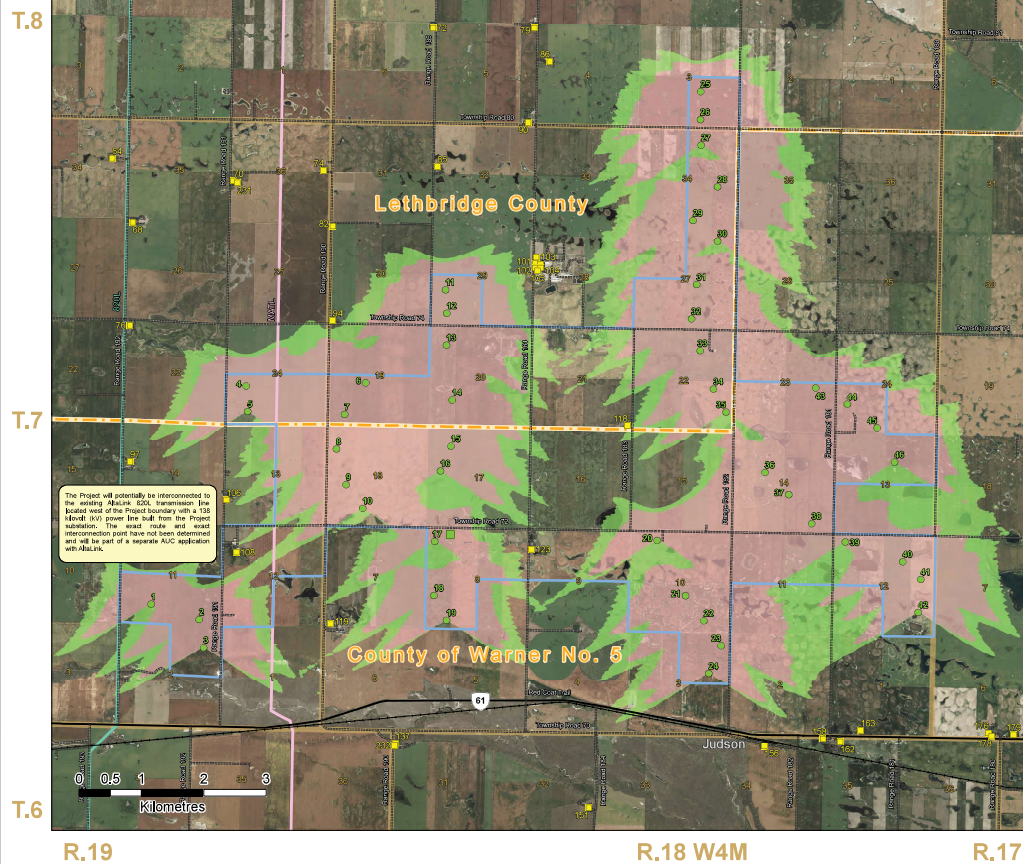


R.19

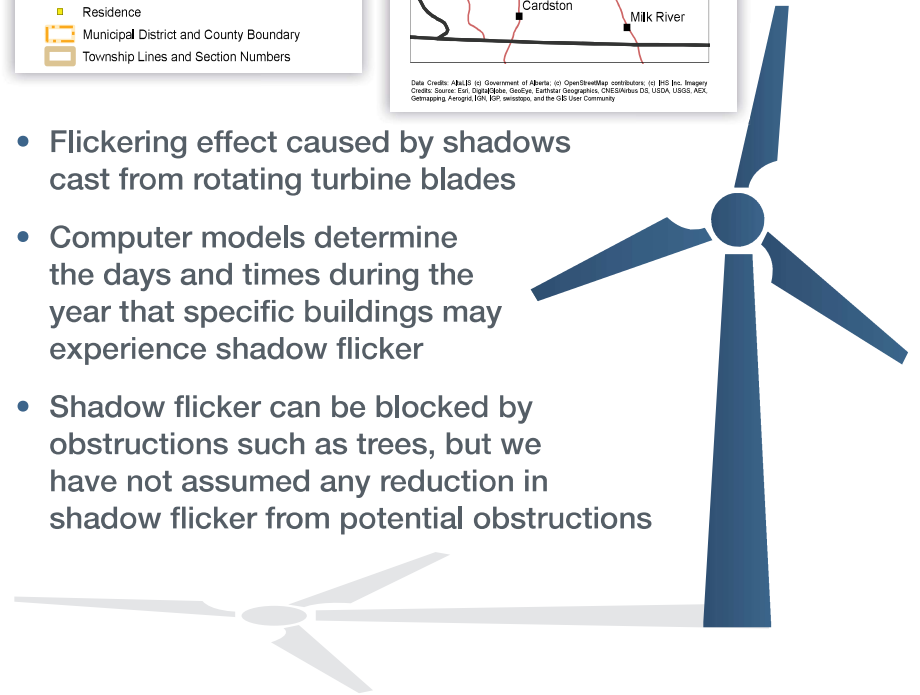
R.18 W4M

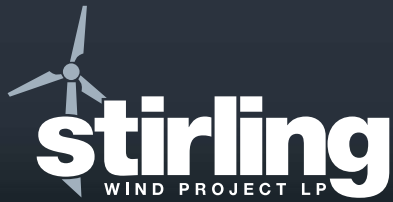
R.17

46 TURBINE SHADOW FLICKER MAP



- Flickering effect caused by shadows cast from rotating turbine blades
- Computer models determine the days and times during the year that specific buildings may experience shadow flicker
- Shadow flicker can be blocked by obstructions such as trees, but we have not assumed any reduction in shadow flicker from potential obstructions





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OTHER TECHNICAL STUDIES

WIND RESOURCE ASSESSMENT

- Acquired over seven years of wind data from 2007 - 2014

GEOTECHNICAL ASSESSMENT

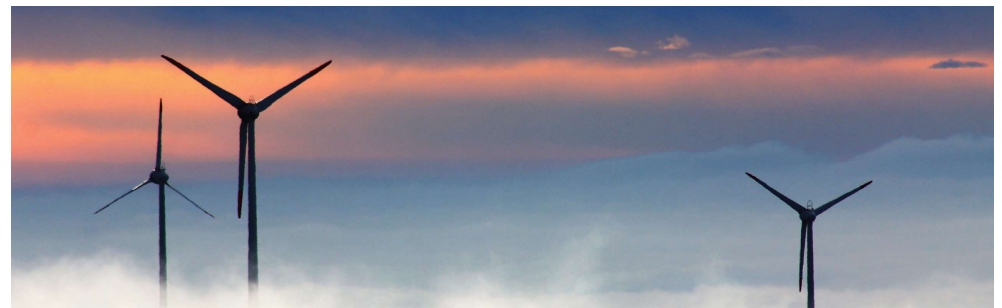
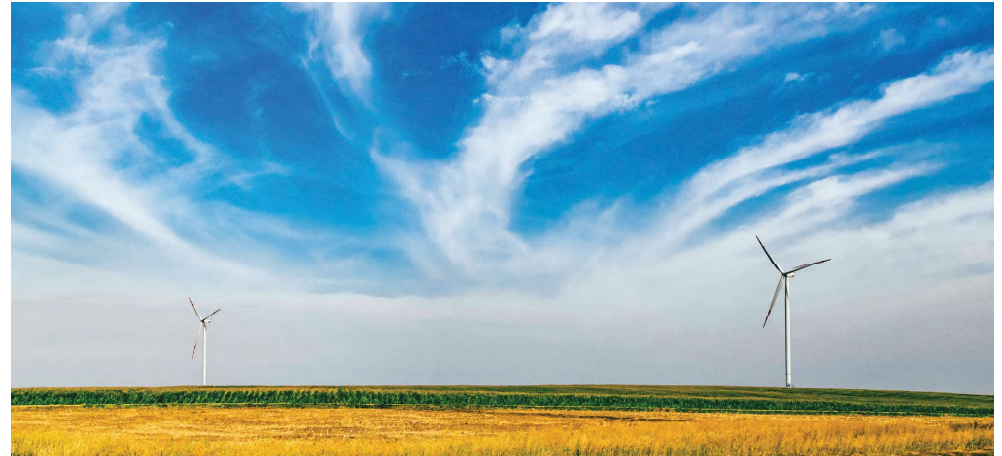
- Information used to design foundations

INTERCONNECTION ASSESSMENT

- Confirmed ability to connect to the grid

OTHER SETBACKS

- Includes noise, shadow flicker, environmental and infrastructure setbacks described in Alberta Utilities Commission (AUC) Rule 007
- The design must also meet the county setbacks which include:
 - Highways
 - Municipal Road Allowances
 - Existing Homes
 - Abandoned Oil Wells
 - Oil or Gas Wells
 - Pipelines
 - Access Roads
- Proposed turbine locations were selected after consideration of these various technical and stakeholder considerations
- Locations will be confirmed after stakeholder feedback



**PLEASE ASK A REPRESENTATIVE IF YOU
ARE INTERESTED IN SEEING THE COMPLETE
LIST OF PROJECT SETBACKS**



TURBINE LAYOUT VISUAL SIMULATIONS

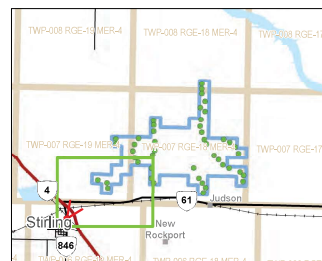
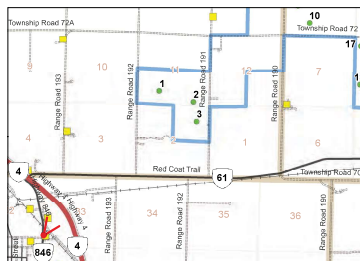
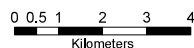


Version: 2
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Layout: 20161011
Prepared By: WSP

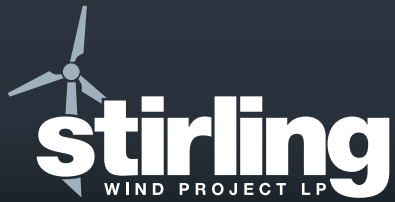
Datum: NAD 83
Projection: UTM Zone 12N
Scale: 1:40,000

Notes:

The photo was taken from the north-east side of the town of Stirling, looking north-east. The wind turbine displayed is a Servion 3.4M140 on 110 m towers.



- Photomontage View
- ▮ Project Boundary
- Proposed Turbine Locations
- Residence
- Major Highway
- Minor Highway
- Paved Road
- Other Road
- Railway
- Waterbodies
- ▮ Section Lines
- ▮ Township Lines



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TURBINE LAYOUT VISUAL SIMULATIONS



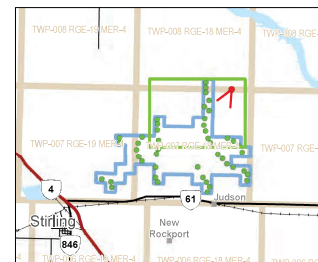
Stirling Wind Project Visual Simulation

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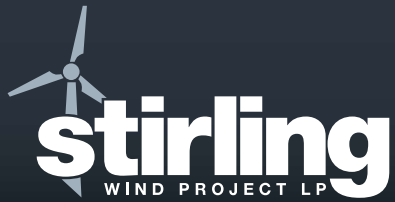
Datum: NAD 83
Projection: UTM Zone 12N
Scale: 1:40,000

Notes:
The photo was taken from the north-east portion of the project, looking south-west. The wind turbine displayed is a Servicon 3,4M140 on 110 m towers.

0 0.5 1 2 3 4
Kilometers



- Photomontage View
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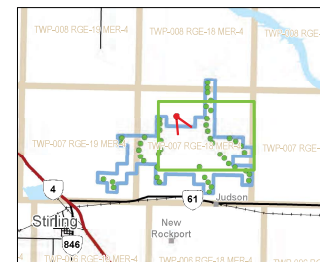
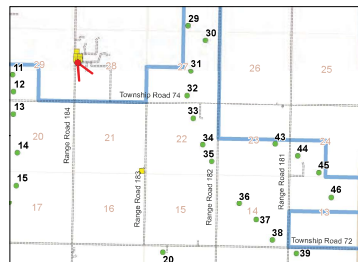
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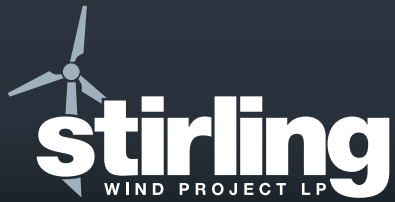
Datum: NAD 83
Projection: UTM Zone 12N
Scale: 1:40,000

Notes:
The photo was taken from the north-central portion of the project, looking south. The wind turbine displayed is a Servion 3,4M140 on 110 m towers.

0 0.5 1 2 3 4
Kilometers



- Photomontage View
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TURBINE LAYOUT VISUAL SIMULATIONS



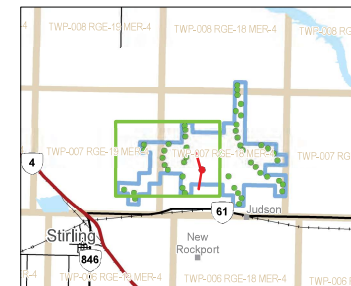
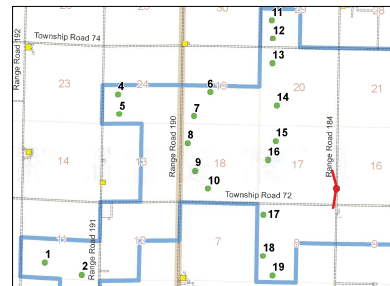
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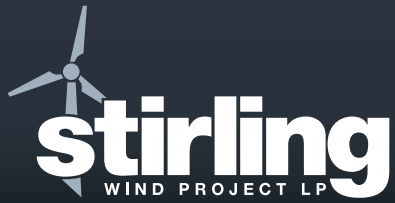
Datum: NAD 83
Projection: UTM Zone 12N
Scale: 1:40,000

Notes:
The photo was taken from an area near the center of the project, looking west. The wind turbine displayed is a Servion 3.4M140 on 110 m towers.

0 0.5 1 2 3 4
Kilometers



- Photomontage View
- ▭ Project Boundary
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TURBINE LAYOUT VISUAL SIMULATIONS



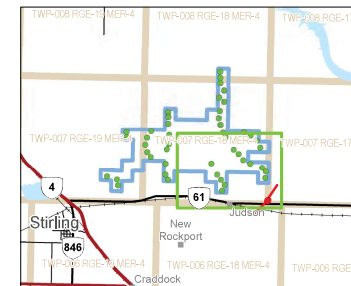
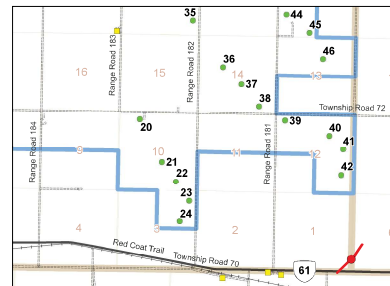
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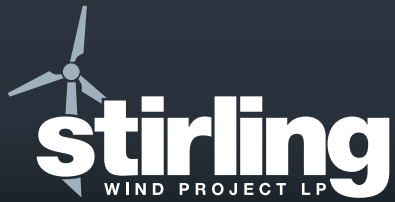
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0 0.5 1 2 3 4
Kilometers

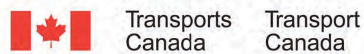


- Photomontage View
- Project Boundary
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REGULATORY APPROVAL PROCESS



Alberta Utilities Commission

Alberta Environment and Parks

Alberta Culture & Tourism

NAV Canada

Transport Canada

Alberta Transportation

County of Warner No. 5

Lethbridge County



ENVIRONMENTAL CONSIDERATIONS

The Project design considers land use, wildlife and vegetation. The actual footprint of each turbine on the land is small.

Field studies were started in early 2016 and continue today. The majority of our environmental studies will be completed by November 2016.

Those studies include:



- Assessment of Wildlife use and Wildlife habitat
- Land Use Assessments
- Wetland Assessments
- Bird Migration Studies (Spring and Fall)
- Breeding Bird Studies
- Raptor Studies and Nest Surveys
- Bat Studies
- Historical Resource Assessments



We are talking to Alberta Environment and Parks (AEP) to understand any potential concerns. Please ask a representative if you are interested in further details.

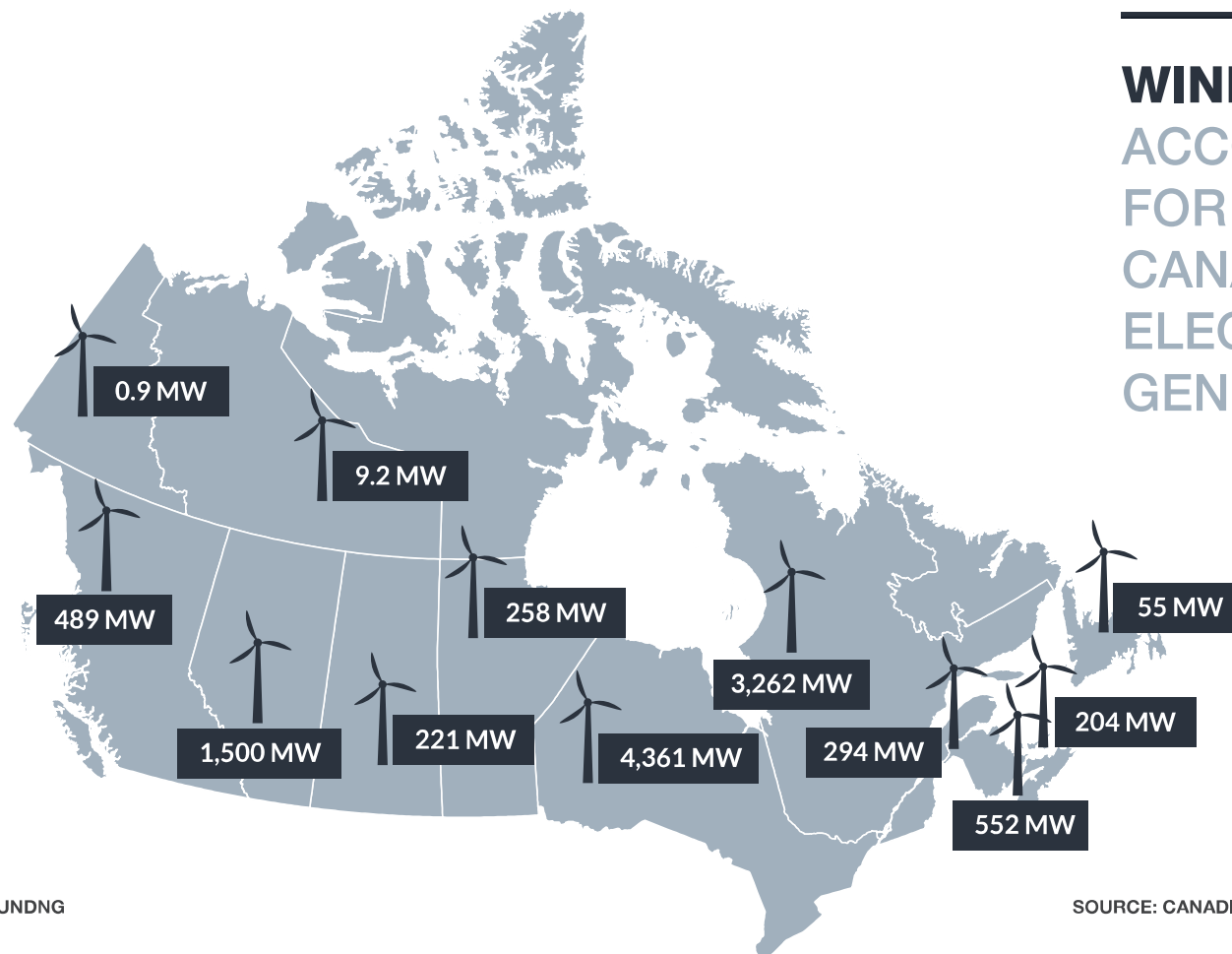




WIND POWER IN CANADA

CANADA'S
CURRENT
INSTALLED
CAPACITY:
11,205 MW

WIND POWER
ACCOUNTS
FOR 5% OF
CANADA'S
ELECTRICITY
GENERATION



* AS OF DECEMBER 2015
MAY NOT SUM TO TOTAL DUE TO ROUNDING

SOURCE: CANADIAN WIND ENERGY ASSOCIATION



STAKEHOLDER PRINCIPLES

- All stakeholders including landowners, municipalities, special interest groups and First Nations, have the right to express their views and seek information from us.
- We will engage in a consultation process with stakeholders to assess suggestions and commendations.
- We will endeavour to provide responses to stakeholder inquiries in a timely and transparent manner.
- When required, we will work with landowners and stakeholders to design projects in a way that reduces the influence on existing land uses, e.g. coordination with agricultural uses.
- We will fully comply with the municipalities' applicable land use bylaws.
- We will review all guidelines set out by Alberta Environment and Parks (AEP) in an effort to protect the local environment.
- We will comply with all directives or decisions set forth by the Alberta Utilities Commission (AUC), in an effort to preserve orderly development in Alberta.
- We will comply with all Alberta Electric System Operator (AESO) requirements to ensure the safe and reliable operation of the local transmission system.

