



Samsung Renewable Energy Inc. and Pattern Energy

Consultation Report
For
South Kent Wind Project

Volume 2 of 3



Samsung Renewable Energy Inc. and Pattern Energy

**Consultation Report** 

Volume 2 of 3

For

South Kent Wind Project

H335806-0000-07-124-0011 Rev. 3 May 14, 2012



Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project Consultation Report

#### Volume 1

**Main Report** 

Appendix A Public Stakeholder Lists
Appendix B Notices and Sample Letters

Appendix C Copies of Display Boards and Other Material at the First Public Meeting

#### Volume 2

Appendix D Copies of Display Boards and Other Material at the Final Public Meeting

Appendix E Landowner Presentation
Appendix F Correspondence with Agencies

#### Volume 3

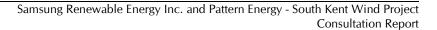
Appendix G Correspondence with Municipalities
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Project Report

May 14, 2012

# Samsung Renewable Energy Inc. and Pattern Energy South Kent Wind Project

#### **Consultation Report**

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# Appendix D Copies of Display Boards and Other Material at the Final Public Meeting





# Samsung Renewable Energy and Pattern Energy

# Welcome You to the Final Public Meeting for the South Kent Wind Project

Saturday September 24, 2011

2:00pm to 5:00pm

Tilbury Memorial Arena, Ryder Hall, 55 Bond Street, Tilbury, ON

# Purpose of this Final Public Meeting

#### Stakeholder Input:

An important aspect of the Renewable Energy Approval (REA) process is stakeholder input. This meeting provides you with an opportunity to:

- » Provide verbal or written comments on the REA supporting documents (such as the Design and Operations Report)
- » Raise concerns or issues regarding the proposed Project and the REA supporting documents
- » Ask any questions regarding the proposed Project and the REA supporting documents
- » Gain a greater understanding of the proposed Project, Samsung Renewable Energy and Pattern Energy

You can provide comments or concerns the following ways:

- » Fill out a comment sheet provided at this public meeting.
  If you provide your mailing address this can be used to add your information to the Project mailing list
- » Discuss with any of the Project representatives present at this meeting
- » Contact the Hatch or BowArk Energy representatives:

Kimberley Arnold, BSc, MES Hatch Ltd.

4342 Queen St., Suite 500 Niagara Falls, Ontario, L2E 7J7

Tel: 905-374-0701 Ext.5318 Fax: 905-374-1157

Email: karnold@hatch.ca

Keith Knudsen
BowArk Energy Ltd.
915, 530 8th Avenue SW
Calgary, Alberta T2P 3S8
Tal: 403-264-2259

Tel: 403-264-2259 Fax:: 403-261-1708

Email: kknudsen@bowark.com

Please visit www.southkentwind.ca for more information







# Pattern Energy

Pattern is one of North America's leading independent wind and transmission companies. Our mission is to provide our customers with clean, renewable energy, which we seek to achieve by developing, constructing, owning and operating projects that are built for lasting success.

Commitment to community is one of Pattern's core values. We are dedicated to building strong relationships with our landowners, communities, business partners, and customers. We are also committed to the environment, and we make the effort and take the time to understand and minimize our projects' impact on local habitat and wildlife.

We work with landowners to help them transform their land's renewable resource into a steady revenue stream. We are strong supporters of the local communities we work in, and strive to be a good corporate citizenand neighbor. Skilled contractors and vendors help to build our projects, and we frequently join together with local development partners who bring expertise and knowledge of the area. At the end of this process are the customers who purchase the energy we produce. All are critical partners in our mission to provide consumers with clean, renewable energy.



# **BowArk Energy**

Pattern Energy and BowArk Energy have a long history of developing projects together in Canada. BowArk Energy has been developing Projects for the past 8 years, and is currently acting as a development partner with Pattern on the South Kent Wind Project. BowArk is assisting in permitting activities and landowner relations as it relates to the Renewable Energy Approval Process.

Pattern Energy and Samsung Renewable Energy have retained Hatch Ltd. to undertake the REA process. Hatch is an Ontario–based consulting, engineering, environmental and management company with operations worldwide and a reputation for excellence acquired over 85 years of continuous service to its clients.







# Samsung



Since the company began in 1938, we have brought advanced technology and product excellence to fields as diverse as resource development, textiles, plastics, finance, construction – even fashion. Increasingly, we have shifted our focus to alternative energy in line with global aspirations for a greener world. Samsung is embracing the green-growth paradigm by focusing on energy and the environment, natural resources, and industrial material.

Samsung is comprised of many companies, one of which is Samsung C&T. It is Samsung C&T's two business divisions – Trading & Investment Group and Engineering and Construction Group with its partners – that will be building and operating the Wind and Solar Power Projects here in Ontario. Samsung has logged many milestones over the years in preparation for such an opportunity. Among them, launching Korea's first solar energy project.

In a changing world, our company mission remains constant: To create superior products and services, thereby contributing to a better global society.

This vision has helped Samsung C&T emerge as a leading player in the new and alternative energy sector, offering solutions to customers worldwide through a network of over 100 offices in 44 countries.



# Kepco

Kepco (Korea Electric Power Corporation) is South Korea's sole vertically integrated power utility, handling generation, transmission, distribution, and sales. It operates a total of 10 subsidiaries, six of which are directly involved in power generation. The company has a generation capacity of 64,500MW, making it one of the world's top power utilities. Kepco aims to lead the industry in low-carbon generation, high-efficiency transmission and distribution, and other green technologies. Kepco is building a global business infrastructure encompassing nuclear, hydro, renewable energy, and resource development as it pursues business opportunities around the world.





# Why Renewable Energy

» The Green Energy and Green Economy Act (GEA) received Royal Assent in the Ontario Legislature on May 14, 2009. According to the Government of Ontario, this legislation is part of Ontario's plan to become a leading green economy in North America.

A component of GEA is the Feed-in-Tariff (FIT) program which was launched in Ontario on October 1, 2009. The purpose of the FIT program was to encourage use of renewable energy sources, and promote growth within the environmental industry. The intent of the FIT program is to:

- Create new jobs
- Boost economic activity and
- Further the development of renewable energy technology and expertise in Ontario, while helping to phase out coal-fired electricity generation by 2014

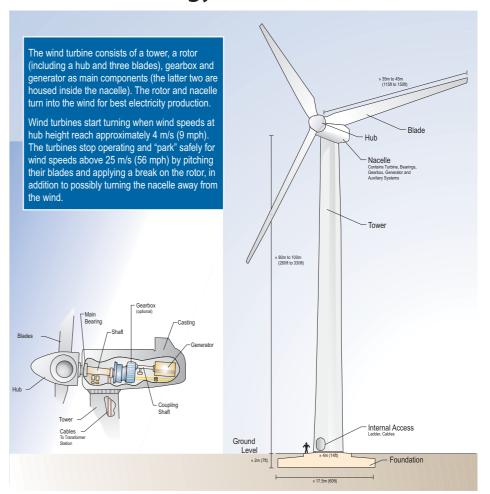
Pattern Energy, Samsung Renewable Energy and KEPCO aredeveloping the South Kent Wind Project in response to the initiatives established in GEA.

# **Advantages of Wind**

There are numerous advantages to wind. These advantages include:

- » Wind is an inexhaustible resource
- » Turbines are quick to install and are low maintenance once in place
- » Benefits the environment by reducing dependence on fossil fuel based power generation
- » Is compatible with mixed land use; grazing, agriculture and hunting
- » Provides a steady income to farmers and property owners
- » Strengthens the local tax base, helping to improve municipal services, including; schools, police and fire departments
- » Produces energy with stable production costs, offering a hedge against other energy sources with volatile fuel markets

# Wind Technology: How it Works



Wind, like water, can be harnessed to transform the kinetic energy into electrical energy. Wind turbines do this by having blades mounted on towers which are turned by the wind, causing them to turn a shaft that's attached to a generator. This creates an electrical current that is carried by cables to the power grid, which, in turn, transmits electricity to your home.





# **Project Location**

The Project is located south of Highway 401 between the Towns of Tilbury and Ridgetown (refer to draft site plan figure below) to the west and east, respectively, within the Municipality of Chatham-Kent in southwestern Ontario.

# **Project Description**

The Project is described as a Class 4 Wind facility with a nameplate capacity of up to 270 MW consisting of approximately 130 wind turbines, as well as supporting infrastructure, including access roads, buried cables and overhead collector lines. A 34.1 km 230 kV transmission line and two (2) substations are required to step the voltage from 34.5kV to 230 kV to enable connection to the Chatham Switching Station (SS).

**REA Project Schedule** 

First Public Meeting – November 22, 2010 and November 23, 2010

Final Public Meeting – September 24, 2011

REA Application Submission – September 30, 2011

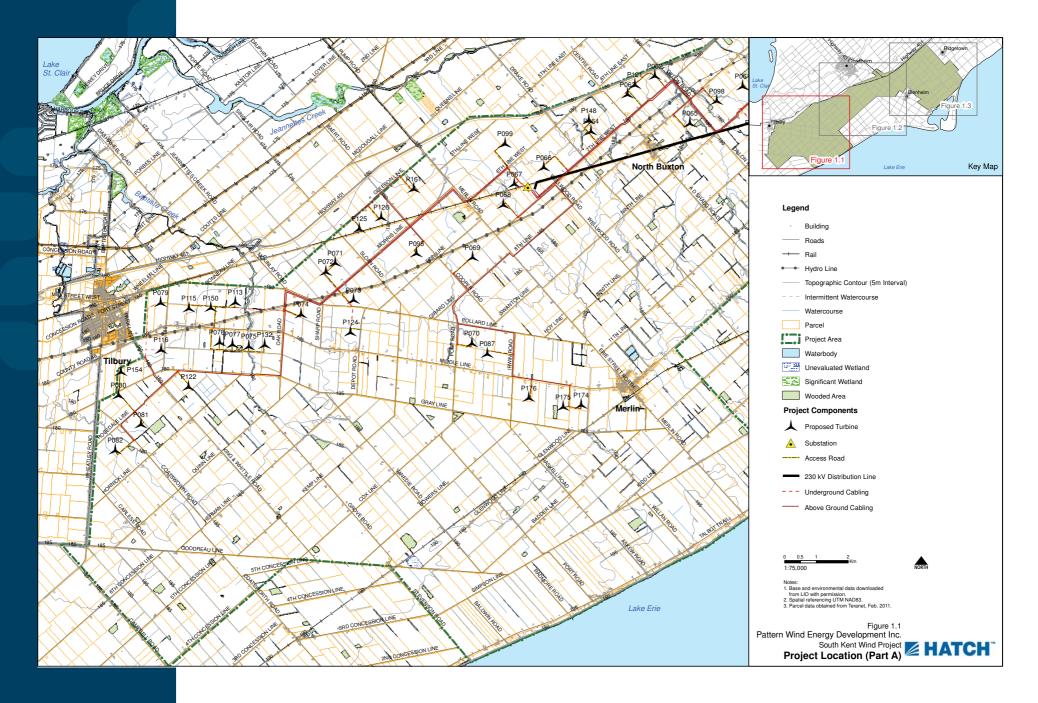
REA Received –Early 2012

Start of Construction – Mid-2012 (subject to receiving final REA)

Commercial Operation Date –2013

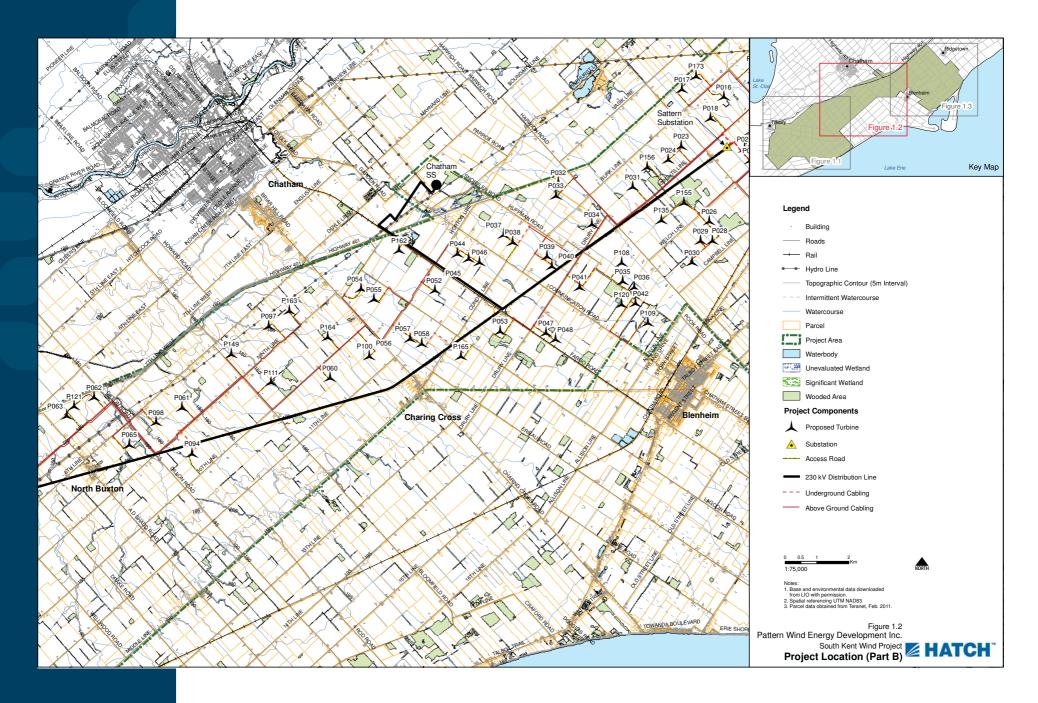






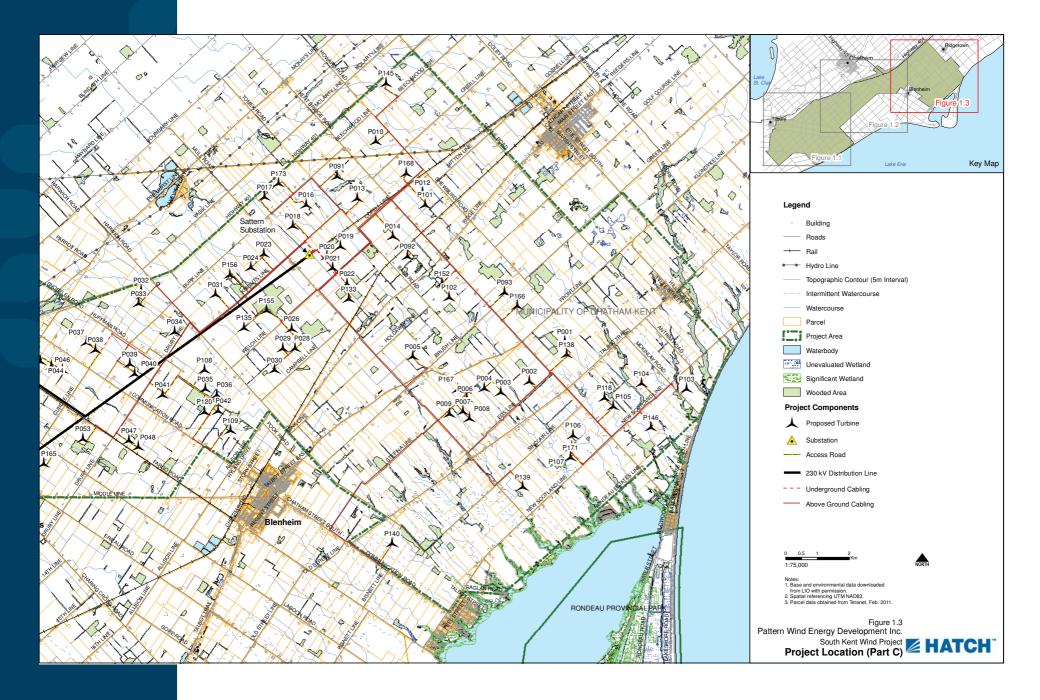
















#### **Natural Features**

Roadside surveys were completed at each site, and if the Project is to be located within 120 m of a natural feature, individual site surveys were completed. These individual site surveys confirmed the boundaries of the feature and collected more detailed vegetation community information.

Each feature was assessed for significance based on criteria from the Ministry of Natural Resources Natural Heritage Reference Manual and Significant Wildlife Habitat Technical Guide.

A total of 86 significant natural features were identified on or within 120 m of the Project location. Results include:

- A total of 34 of the 42 significant woodlands were identified as being indirectly impacted by the Project.
   3 woodlands are located directly adjacent to proposed above or below ground cabling and 4 woodlands would have the above/below ground cabling installed within the woodland.
- » 5 significant wetlands within 120 m of the Project location were identified. No direct encroachment will occur within the significant wetlands.
- » 11 bat maternity roosts are present on and within 120 m of the Project location. No direct encroachment will occur within these significant natural features.
- » 2 open country bird breeding habitats were identified on and within 120 m of the Project location. Underground cabling and access roads would occur within these habitats.
- » Fifteen significant woodland habitats for 3 bat species of concern (Eastern Small-footed Bat (Myotis leibii), Northern Long-eared Bat (Myotis septentrionalis), and Tricolour Bat (Perimyotis subflavus) are located within 120 m of wind turbines and associated infrastructure. Direct encroachment would occur only in one significant habitat.

» 8 animal movement corridors were identified on and within 120 m of the Project location. 7 are associated with watercourses and 1 associated with the vegetated corridor along the railway line. The 7 watercourse animal movement corridors are interrupted at various locations by municipal and farm access roads. While components of the transmission line (and service road) will be within the railway animal movement corridor, the transmission poles and the service road would temporarily limit but not prevent the movement of wildlife through this area.

# **Mitigation Measures**

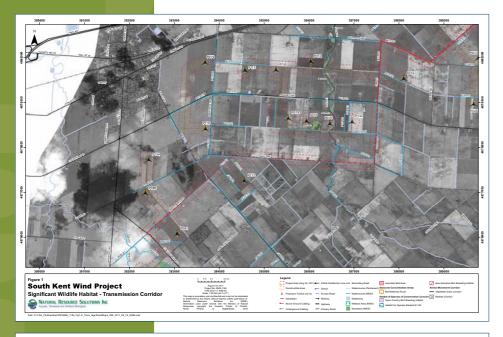
A variety of mitigation measures will be implemented throughout the Project. Examples of mitigation measures include:

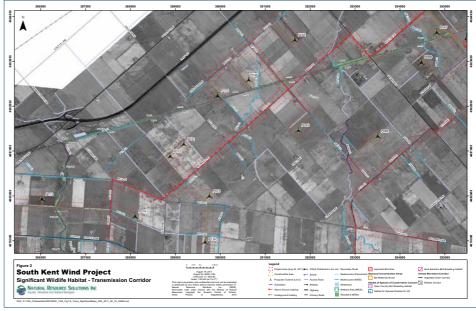
- » Clearly marked work areas, to limit impact of construction
- » Where possible, vegetation and earth moving activities to occur outside of the bird breeding season; otherwise an avian biologist will determine if nests are located in the Project footprint and if so, appropriate avoidance will be maintained until the birds leave the nest
- » Reduced speed on access roads
- » Daily monitoring for wildlife and establishment of wildlife encounter protocols
- » Erosion and sedimentation control measures (e.g. silt fence barriers, straw bale flow checks) will be in place to minimize and sediment into significant habitats
- » Post-construction monitoring of birds and bats in accordance with MNR requirements and guidelines will be completed. Should mortality be greater than stipulated levels, the Proponent will discuss mitigation measures with MNR and implement accordingly.

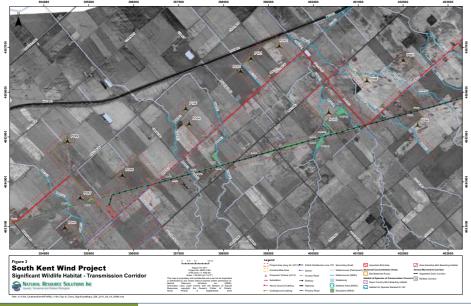
For more details on mitigation measures please see the Natural Heritage Environmental Impact Study.









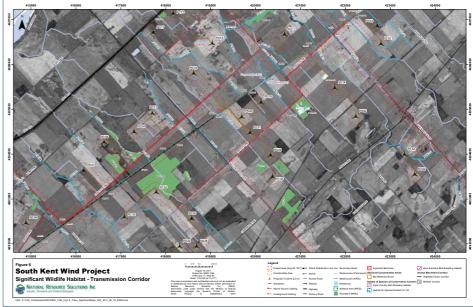




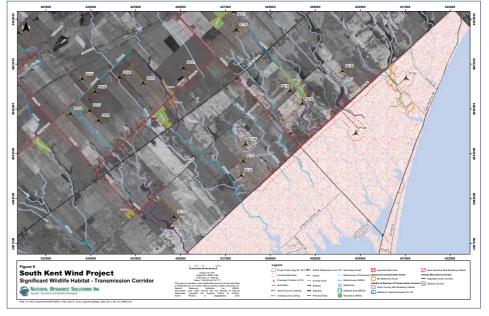
















# **Aquatic Environment**

Roadside surveys were completed at each site to either confirm the presence or absence of a water body. Individual site surveys were conducted at each location where a water body is within 120 m of a Project component.

The water bodies and associated habitat characteristics (including aquatic vegetation, substrates, water depths, temperatures, etc.) found within the Project area are typical of the southwestern Ontario landscape. An extensive system of drains has been established to facilitate land drainage for agricultural practices. These drains represent a large proportion of the water bodies found throughout the Project area, typically located alongside roads and agricultural fields. Additional permanent and intermittent streams are found as naturally vegetated tributaries that flow either northward to the Thames River and ultimately into Lake St. Clair or southward into Rondeau Bay or Lake Erie. A summary of water bodies is as follows:

- » A total of 367 water body observations were included in the report including 188 observations from the investigations carried out in 2010 and 179 in 2011.
- » Confirmation of the presence of 218 water body locations consisting of 139 different drains are within 120 m of the South Kent Wind Project. Additionally, 244 total crossing locations where water bodies are crossed by project infrastructure were documented. Of these, 162 crossings are attributed to aboveground cabling, 9 are access roads only, 9 are underground cabling only, and 69 are a crossing location that includes both access roads and underground cabling at the same location.

- » None of the documented water bodies are found within 30 m of a turbine location. A total of 19 water bodies were documented within 30 m of the project location, including measurements from access roads, cabling, and the extent of blade sweep area surrounding the turbine locations.
- » No lakes, lake trout lakes were identified within the Project area, however a total of 8 sites were found to have aquatic vegetation (i.e., watercress) indicative of groundwater seepage areas.
- » Essential habitat for fish and other aquatic organisms is provided in many of these streams year round and therefore careful consideration must be given in order to protect the streams from immediate or prolonged degradation.

## Mitigation Measures

A variety of mitigation measures will be implemented throughout the Project. Examples of mitigation measures include:

- » Erosion and sedimentation controls measures (e.g. silt fence barriers, straw bale flow checks) will be in place to minimize any sedimentation into nearby water bodies.
- » Stormwater management measures (e.g. site revegetation) to allow water to naturally percolate into the ground will be implemented to maintain natural and original drainage
- » Spill response measures (e.g. spill kits and emergency response plan) will be implemented to minimize the potential for spill adjacent to a water body

For more details on mitigation measures please see the Water Body Heritage Environmental Impact Study.





# Anticipated Construction Schedule

Activity	Start	Finish
REA Approval (Estimate)	Spring 2012	Spring 2012
Turbine Procurement, Fabrication & Delivery	Spring 2012	Spring 2013
Mobilize	Spring 2012	Summer 2012
Installation of Site Access Components	Summer 2012	Winter 2013
Safety and Security	Summer 2012	Fall 2013
Temporary Facilities	Summer 2012	Summer 2013
Power and Communication	Summer 2012	Summer 2013
Turbine Site Preparation	Summer 2012	Winter 2013
Foundations	Summer 2012	Spring 2013
Turbine Erection	Fall 2012	Spring 2013
Electrical Systems	Fall 2012	Spring 2013
Commissioning	Fall 2012	Summer 2013
Commercial Operation Date	Summer 2013	Summer 2013
Remediation and Demobilization	Summer 2013	Fall 2013

# **Project Construction**

Construction expected to occur from 7:00 am to 7:00 pm Monday through Saturday for the duration of construction. If required, the daily construction time could be extended to 11:00pm as per Municipal by-law.

#### **Site Preparation**

- » Staking and surveying, clearing and grubbing, if required
- » Installation of security measures, e.g fencing
- » Preparation of construction staging areas

#### **Construction of Facility**

- » Construction of access roads
- » Installation of foundations for turbines
- » Base preparation for substations
- » Wind turbine and substation installation
- » Installation of distribution and transmission lines
- » Testing and commissioning

#### Site restoration

- » All construction material and temporary facilities will be removed and disposed of properly
- » Top soil will be backfilled where appropriate to achieve property drainage
- » Re-vegetation and hydro-seeding to occur, where needed

#### **Traffic and Roads**

- » Only designated transportation routes will be followed
- » Proper signage for detours will be promptly displayed
- » Flagman and police escorts will be used as necessary

#### Safety

- » Fencing and signs will be used to mark off construction zones
- » Spills will be handled by the procedures outlined in the Emergency Response Plan





# **Design and Operations**

#### **Project Components**

Project Component	Number	Description
Wind Turbine	130	Siemens SWT-2.3-101
Substation	2	Sattern and Railbed substations – prefabricated building, transformer to be surrounded by 5 - 6 m tall sound barriers

#### **Project Operations**

- » Real time monitoring of the Project will occur remotely to adequately ensure the performance and safety of the wind turbines.
- » Weekly and monthly maintenance activities are to occur throughout the life of the Project.





# **Decommissioning**

It is anticipated that the Project will have a useful lifetime of at least 20 years, which can be extended further with proper maintenance, component replacement and repowering. It is assumed that the Project will be decommissioned after the conclusion of its useful economic life.

Activities involved in decommissioning include:

- » removal of the wind turbines and all electrical appurtenances for salvage
- » removal of foundations and any access roads not wanted for future farming purposes to a depth suitable for ploughing (approximately 1.0 m)
- » replacement of topsoil to a depth of surrounding undisturbed lands and plant with suitable ground cover dependant on time of year and in consultation with property owner
- » ensuring that there are no environmental impacts related to decommissioning activities.





# **Property Values**

"In the study area, where wind farms were clearly visible, there was no empirical evidence to indicate that rural residential properties realized lower sale prices than similar residential properties within the same area that were outside of the viewshed of a wind turbine."

Canning, G., and L. J. Simmons. (February 2010). Wind Energy Study Effect of Real Estate Values in the Municipality of Chatham-Kent. Canning Consultants Inc. & John Simmons Realty Services Ltd. Prepared for the Canadian Wind Energy Association.

"Research collected data on almost 7,500 sales of single family homes situated within 10 miles of 24 existing wind facilities in nine different U.S. states. The conclusions of the study are drawn from eight different hedonic pricing models, as well as both repeat sales and sales volume models".

The various analyses are strongly consistent in that none of the models uncovers conclusive evidence of the existence of any widespread property value impacts that might be present in communities surrounding wind energy facilities. Specifically, neither the view of the wind facilities nor the distance of the home to those facilities is found to have any consistent, measureable, and statistically significant effect on home sales prices.

Although the analysis cannot dismiss the possibility that individual homes or small numbers of homes have been or could be negatively impacted, it finds that if these impacts do exist, they are either too small and/or too infrequent to result in any widespread, statistically observable impact."

Hoen, B., Wiser, R., Cappers, P., Thayer. M., and G. Sethi. (December 2009). The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Hedonic Analysis. Ernest Orlando Lawrence Berkeley National Laboratory. Prepared for the Office of Energy Efficiency and Renewable Energy.







# **Community Benefits**

#### Supports the local economy by:

- » Purchasing good and services during construction and operation
- » Significantly increasing revenue for all service businesses, i.e. local restaurants and hotels during construction and operations

# Significantly contributes to the tax base annually with approximately \$800,000/year, benefiting:

- » Local Government and Related Services
- » Lambton Kent School District

Through land lease agreements with landowners, the Project will provide additional income for farmers

#### **Job Creation**

#### Construction

# Job opportunities: up to 300 positions during peak construction periods

- » Subcontractors experienced in civil work (grading, excavation, and concrete), electrical work, and mechanical assembly
- » Construction managers, electricians, heavy equipment operators and general labourers for assembly & civil work

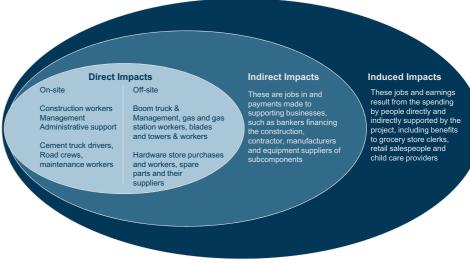
#### Operation

» Maintenance personnel proficient in mechanics or electrical/ electronic technicians

#### Manufacturing

- » This project is part of the Samsung Green Energy Investment Agreement, which is committed to the establishment of four manufacturing facilities in the Province of Ontario. The manufacturing facilities will create:
  - 900 or more jobs (from 4 manufacturing facilities)
  - 550 or more (steel industry etc.)
     (excluding construction, operation & maintenance jobs)

# Wind Energy's Economic Ripple Effect



Source: National Renewable Energy Lab







# Environmental Benefits of 270 MW of Wind Energy Compared to Coal-Fired Generation

#### Carbon Dioxide Emissions Reduced

877,077 tonnes/year 157,172 car equivalent

#### Coal

409,491 tonnes/year

#### **Sulfur Dioxide**

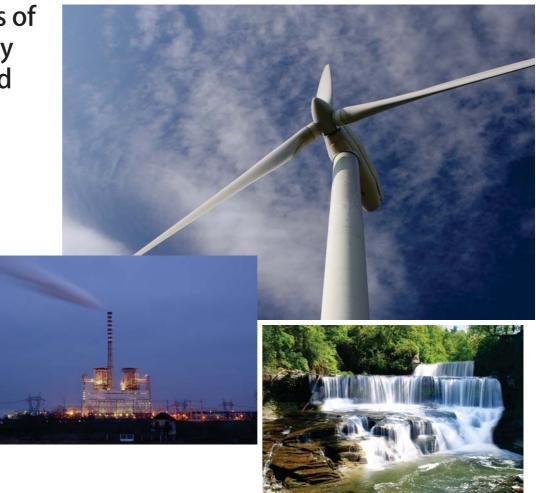
3,940 tonnes/year

### **Nitrogen Oxides**

1,331 tonnes/year

#### **Water Conserved**

1,840,610,359 litres/year 5,042,768 litres/day 56,031 people each day



Sources: Based on information from the Energy Information Administration, National Energy Technology Laboratory, and U.S. Geological Survey. Annual emission offsets based on 270 MW wind project offsetting coal-fired generation, using capacity factor for Chatham-Kent area and accounting for regular turbine maintenance. Water conserved compared to coal-fired generation (541 gallon/MWh), source American Wind Energy Association. People supplied figure based on USGS estimation of 80-100 gallons/day per capita water consumption, US Geological Survey, "Water Q&A: Water use at home," http://ga.water.usgs.gov/edu/qahome.html.





# Blowing Smoke: Correcting Ontario Anti-Wind Myths

#### Myth 1: Health impacts

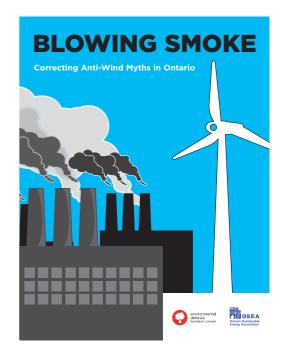
» Reality: Repeated studies around the world have found no scientific evidence of health impacts from wind power projects.

#### Myth 2: Viability

» Reality: Wind power has been successfully used for decades and the world is rapidly scaling up its use because it works, particularly in light of climate change.

#### • Myth 3: Economic & Environmental Benefits

» Reality: Wind power is creating thousands of jobs across Ontario and letting us reduce the use of harmful fossil fuels.



# Sierra Club: The Real Truth About Wind Energy

June 2011 report by the Sierra Club Canada

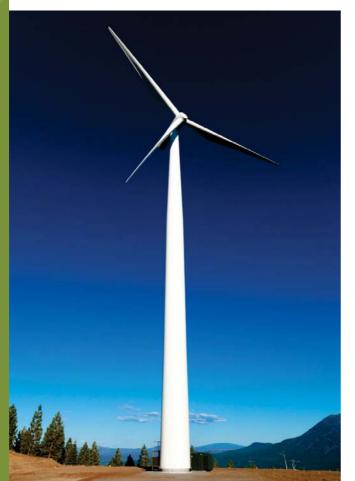
- " After a thorough review of the science, we are confident in saying there is no evidence of significant health effects that should prevent the further development and implementation of wind turbines, wind farms and wind energy."
- "The further development of wind energy as a growing portion of our energy supply will reduce direct carbon emissions, improve the quality of the air we breathe, and generally improve the health and well-being of Canadians, our families and the environment in which we live."
- "With a full review of available data, including that referenced by wind opposition groups, Sierra Club Canada adds its voice to the overwhelming majority of governmental, non-governmental, scientific and environmental groups in saying that a link between wind turbines and health concerns is unfounded."











# **Public Health and Safety**

- » Public health and safety will be considered during all stages of the Project (i.e. construction, operation and decommissioning).
- » To date, much study has been done on the effects of environmental noise on human health.
- » A recent summary of scientific literature related to wind turbines and public health, as compiled by Ontario's Chief Medical Officer of Health, revealed the following:
  - "...while some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects. The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct health effects, although some people may find it annoying".

(The Potential Health Impact of Wind Turbines - Chief Medical Officer of Health Report, Dr. Arlene King May 2010)

Additional information from the report includes:

- » The report includes an assessment of sound/noise, low frequency sound, infrasound, vibration, electric and magnetic fields, shadow flicker, ice throw and ice shed, and structural hazards
- » Ontario used the most conservative sound modelling available nationally and internationally, which is supported by experiences in the province and in other jurisdictions
- » Low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects
- » With regards to vibrations from wind turbines the Wind Turbine Sound and Health Effects, An Expert Panel Review states:
  - "The ground-borne vibrations from wind turbines are too weak to be detected by, or to affect, humans". It also states "there is nothing unique about the sounds or vibrations emitted by wind turbines.

(W. David Colby, M.D., Robert Dobie, M.D., Geoff Leventhall, Ph.D., David M. Lipscomb, Ph.D., Robert J. McCunney, M.D., Michael T. Seilo, Ph.D., Bo Søndergaard, M.Sc.)





## **Your Comments**

Comments or concerns can be provided in the following ways:

- 1. Completion of a comment sheet. Please deposit the completed sheet in the Comments Box provided at this meeting or complete at home and fax/e-mail. If you wish to receive future Project mailings, please ensure your complete mailing address is provided.
- 2. Identification of comments or concerns to any Pattern Energy, Samsung Renewable Energy, Bowark or Hatch representatives present at this Public Meeting.
- 3. Contact the representatives for the Project at the addresses provided below:

Kimberley Arnold, BSc, MES Manager – Environmental Services Hatch Ltd. 4342 Queen St., Suite 500, Niagara Falls, Ontario, L2E 7J7 Phone: 905-374-0701 Ext. 5318 Fax: 905-374-1157 karnold@hatch.ca

#### **Keith Knudsen**

Project Manager BowArk Energy Ltd. 915, 530 8th Avenue SW, Calgary, Alberta T2P 3S8 Phone: 403-264-2259 Fax: 403-261-1708 kknudsen@bowark.com Please visit the South Kent Wind Project website at www.southkentwind.ca for more information on the Project and the Proponent.





# **Next Steps**

A consultation report, documenting all concerns and questions, will be produced and a complete package will be sent to the MOE for acceptance.

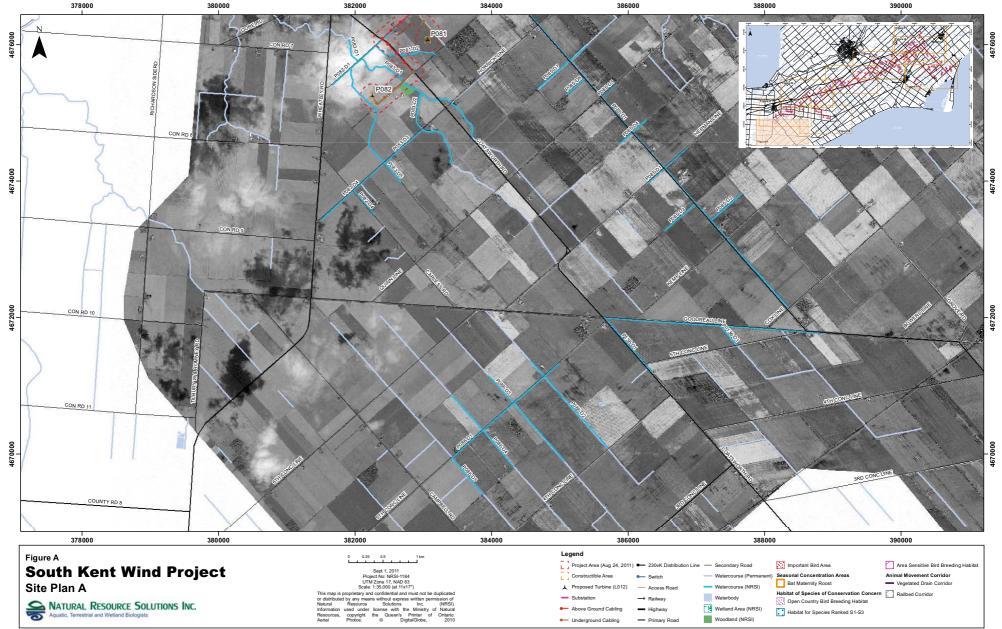
Following acceptance and posting on the Environmental Registry (www.ebr.gov.on.ca), a Notice of Posting will be published in the Chatham Daily News and the REA reports, including the Consultation Report, will become available for review on the Project website (www.southkentwind.ca) with any further comments to be sent to the Ministry of the Environment.

Approval can take up to six months after which the public has 15 days to request an appeal of the approval decision with the Ministry of the Environment

Thank you for attending our Final Public Meeting.

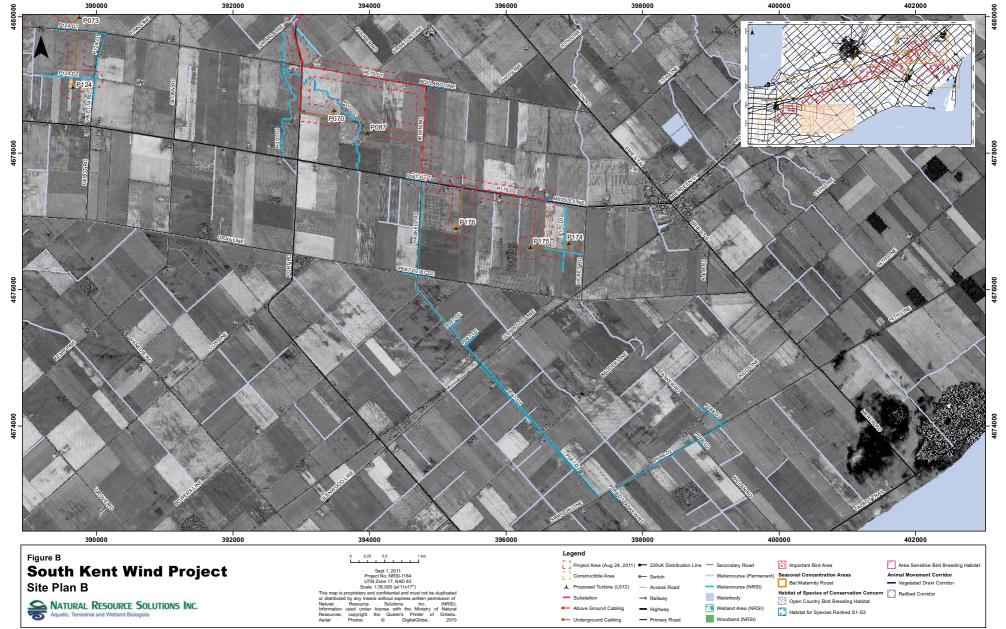






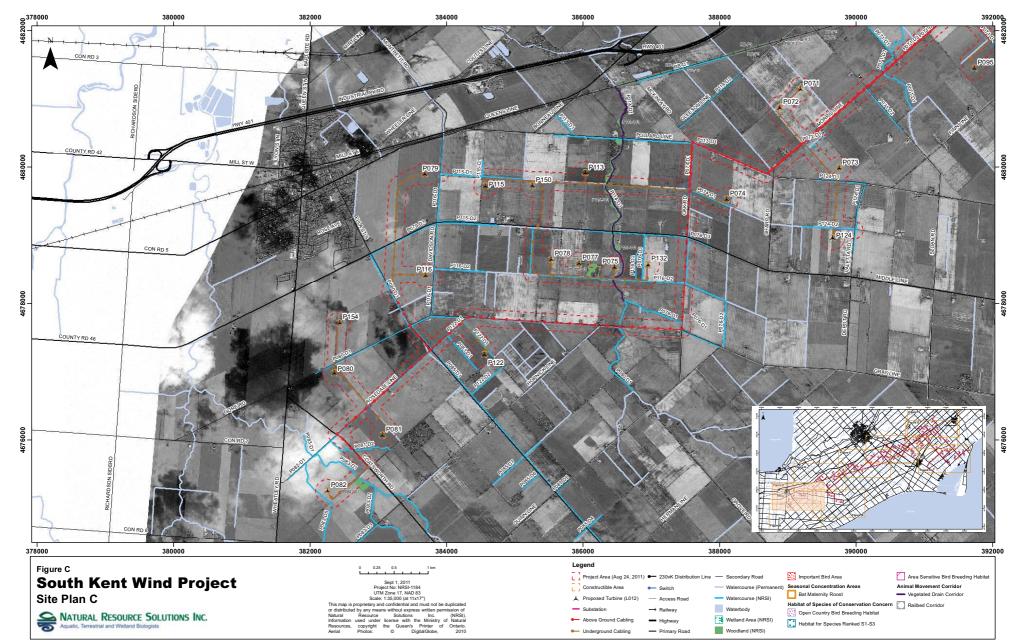






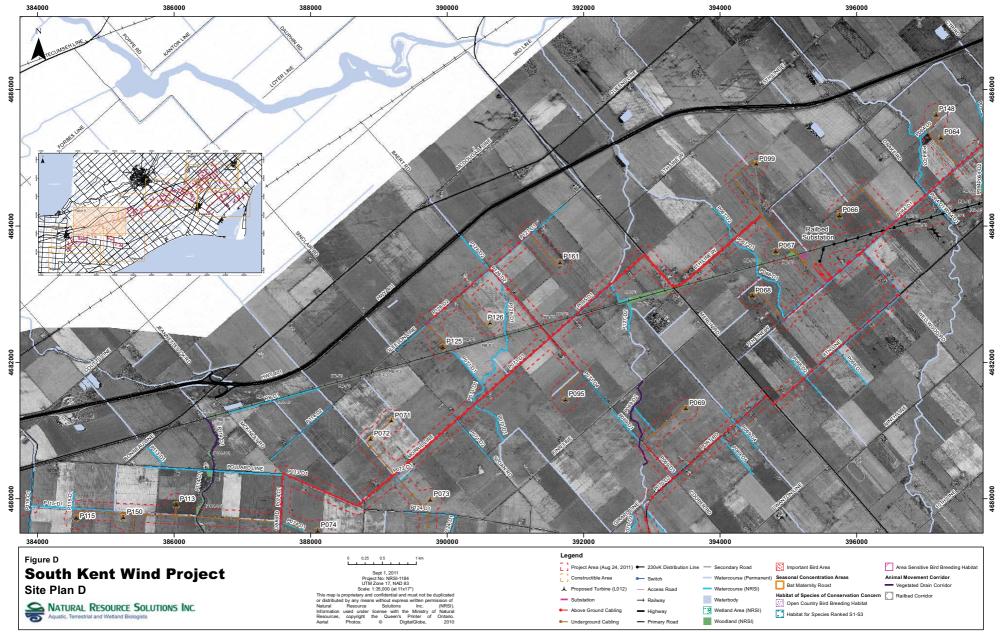






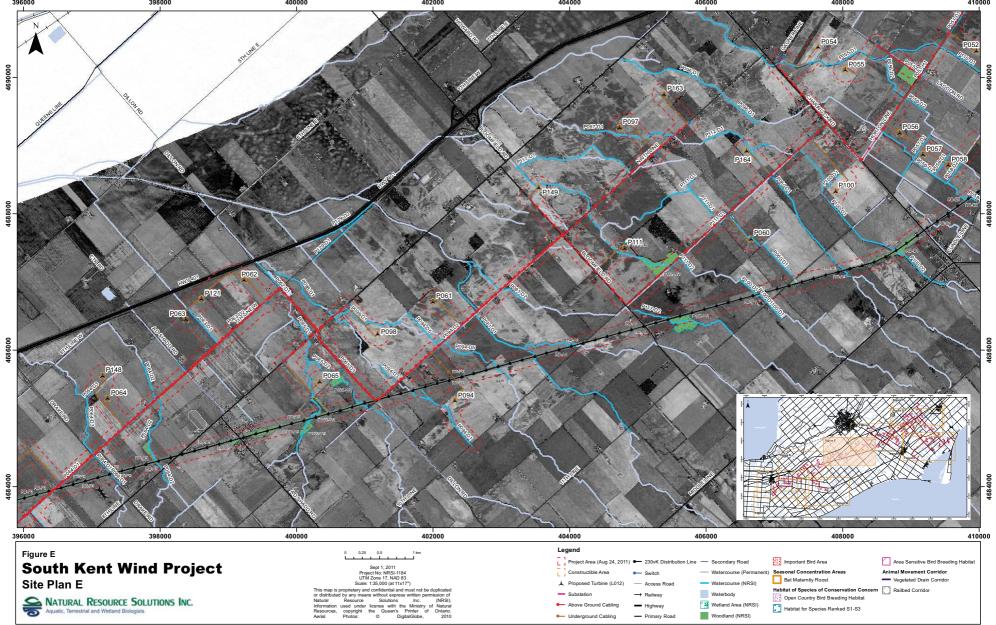






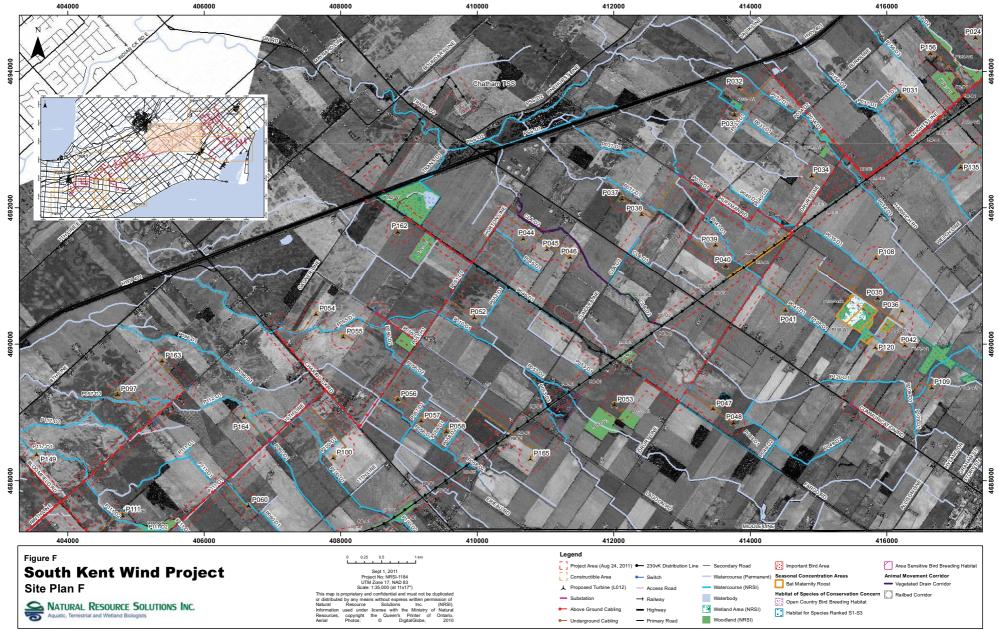






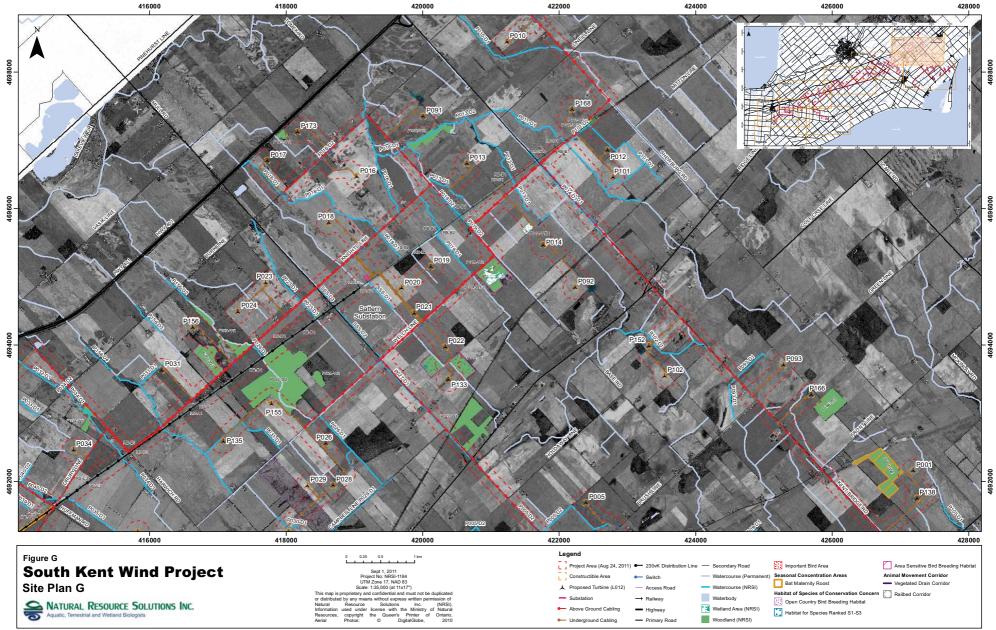






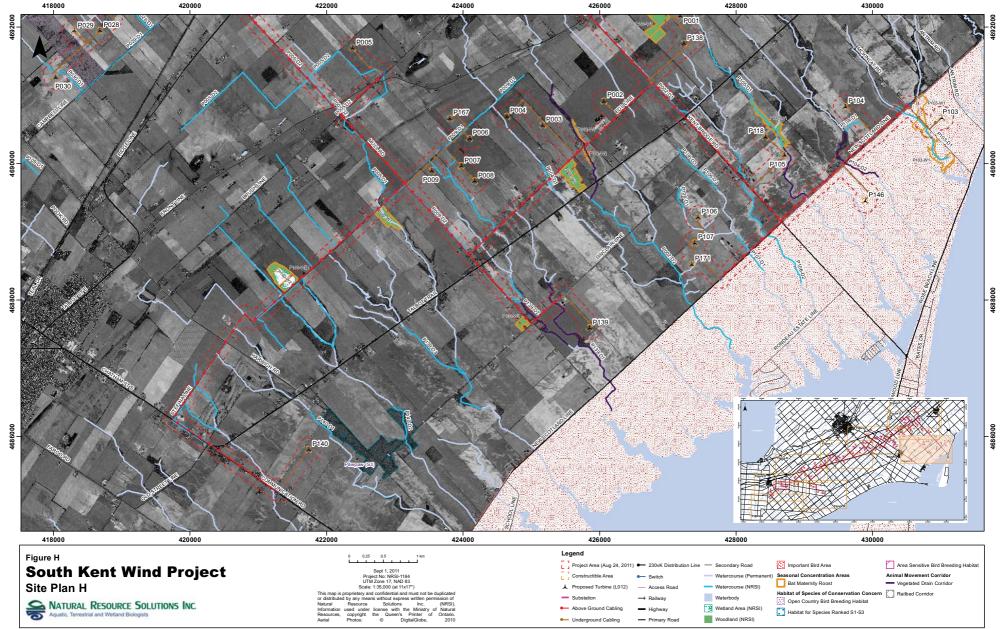








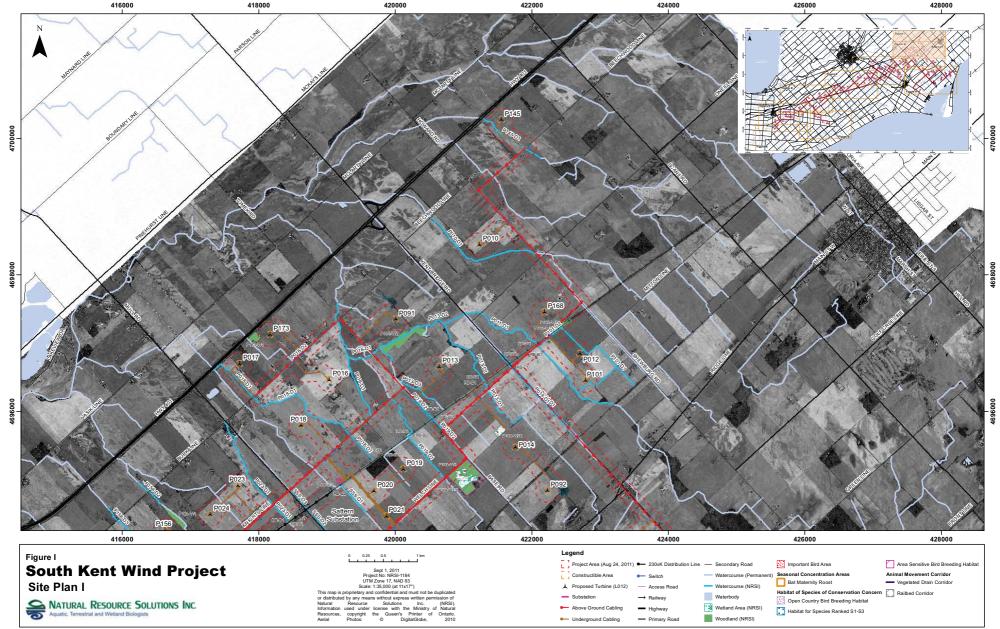




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#### (PLEASE USE BLOCK LETTERS)

#### **South Kent Wind Project – Final Public Meeting**

Date: Saturday, September 24, 2011

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#### **South Kent Wind Project – Final Public Meeting**

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<sup>\*</sup>Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review

#### (PLEASE USE BLOCK LETTERS)

#### **South Kent Wind Project – Final Public Meeting**

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MIKE & DENISE DOPM	n RET	Blenhein	NOPIAO	519-676-9499
GARY SMITH	243	TICBURY	NOP 210	519 682 3178
GARY LANSUE	R#3	11	//	692-2236
JAMIE DAWSON		STONE MOIN	- MORINO	519-798-2300
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#### (PLEASE USE BLOCK LETTERS)

#### **South Kent Wind Project – Final Public Meeting**

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11/2 )	6444 8th Line	Merlin	NOP-INO	354-3002	
Del Jackson	Communicatio. 21402 Rd	Blankein	NOP-140	351-1984	
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Serge Kresen		/	HRIM NUPIAO	6>6 2905	
Carol Inson	3844 Middle Line	Tilbury	NOP 2L0	682-23130	
& Cameron Gelhal	31 PAXTON			354.4094	
Shirley F. Gilhula	31 Paxton	Chatham	N7L 5M1	t <sub>f</sub>	

<sup>\*</sup>Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review

#### (PLEASE USE BLOCK LETTERS)

#### **South Kent Wind Project – Final Public Meeting**

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ED WADDICK	7128 NINTH	i		19-436 0733
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<sup>\*</sup>Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review

#### (PLEASE USE BLOCK LETTERS)

#### **South Kent Wind Project – Final Public Meeting**

Date: Saturday, September 24, 2011

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	Street	City	Postal Code	(Please include area code)
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John W. Ellas	223 Harden	Chatham	N7L SM2	5193547174
Chuck & Rileber	R.R.6 m	Certin	NODINO	519 689-45-97
Rich Samrozinski	Charing		NOP- 160	519-355-558
DAN AMERLINCK	20492 KEWT		NOP 2CO	519-624-304
BILL MCGUIRE	7 08DETT			519-682-2028
MIKEWADDICK	RR#5	BLENHEIM	NOP LAO	519 676 2760
RANDY HOPE		1.0		
Maliolu Maybon	9474 hast	dutten	N7A 553	519-351-503

#### (PLEASE USE BLOCK LETTERS)

#### **South Kent Wind Project – Final Public Meeting**

Name		Address	Phone	
	Street	City	Postal Code	(Please include area code)
Jam Englist	RR#4	Blenheim	NOPIAO	(5-19)676-3840
Janjlani	RRHT	Blaken	NOP IAD	(579)676-2129
Time Street	GOLE Course	Ridonte	un NoPCAG	519674-5330
Clice (the of Agricot	120970 Harwid Rd. RR7	Blenhein	NOR 170	519 676-258
Lus Hil	Box 35	T;  bun	NOP 210	5/9-682-4353
BRYON FLYNER.		MAN.	of CK.	
Ed. memillan		Blenheim	NOP-190	519-676-8624
Smild & grains	142 aberden	St. Po Box.	2 Merlen	579.401-1313
Stophen Crackel	Cross Rd	churing	NOP 160	519-436-0718

<sup>\*</sup>Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review

#### (PLEASE USE BLOCK LETTERS)

#### **South Kent Wind Project – Final Public Meeting**

Name	Mailing Address			Phone
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Tell Wilson	RNI	CHENNE	X 408/60	4310714
Henry Wiss	/.	(1	<b>)</b> 1	η,
DANIELP. ONEILL	7507 8th LINE	CHATHAM	N7M.576	519-436-08-28
Mary L Guttridge	Si Cayett. R.R. 1#	Blenheim	NOP 1 HO	519-676-1644
Bernaud Diray	RP"/	Medin	WOP-IWO	519.689.497

<sup>\*</sup>Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review





#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

1. Please describe where you reside in relation to the Project area?
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LAND OWNER
LAIVO OWNESC
2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?
migration patterns for birds & butterflies the abundance of Small wood/ots
- very responsive + polite staff - thanky





3. Please provide any	comments, questions or concerns related to the Project.
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if you would you like and full mailing addr	
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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

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2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?
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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





SAMSUNG RENEWABLE ENERGY INC.

#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

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Mailing Address	::
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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





SAMSUNG RENEWABLE ENERGY INC.

#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

1. Please describe where you reside in relation to the Project area? Mulk Road
Between Ridge Line of Front Line.
2. Please provide any relevant information related to the Project area which in your
2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?
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of Mull Road () in ditch were & mest is Dad's from sonorth of Holdaway Road as 3
My own for 50 ac's swith Bush farm.
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clay tile.
- road allowance is narrow in this area
- road is to narrow now for large Trusks of
farm machinery





SAMSUNG	RENEWABLE	ENERGY	INC.

3. Please provide any comments, questions or concerns related to the Project.
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project so concerns one heard first,
not use have to try + figure out
what is chapsening.
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and help (workers) on Over head lines where
noture to are a real hazard & danger to
people not use to them put there after
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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

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-> F	REFER YOU FIND A DIFFERENT ROUTE
If you would	you like to be included on the Project mailing list, please provide your name ing address below:
	Name: TERRY CASIER
<i>y</i>	Mailing Address: RR 47 BLENHEIM ON
	t. casie-128@gmail.com
	519-676-2129

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





SAMSUNG RENEWABLE ENERGY INC.

#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

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3. Please provide any comments, questions or concerns related to the Project.

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and full mailing address below:
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Name: Puca Charle Charles of 1951
Mailing Address: 209 70 Haswich Rood
RR*7 Blenheim NOP 120 519 (0762552
NOP 120 519 6762552

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU





SAMSUNG RENEWABLE ENERGY INC.

#### South Kent Wind Project Comment Sheet

Final Public Meeting: Saturday, September 24, 2011

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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

## South Kent Wind

Fact Sheet / 2011

Owner	Samsung Renewable Energy and Pattern Energy Joint Venture
Location	Chatham-Kent, Ontario
Turbine Manufacturer	Siemens Energy
Number of Turbines	Approximately 125
Project Capacity	270 MW
Power Equivalent	73,000 homes
Target Construction Start	First Quarter 2012
Target Operation Start	First Quarter 2013
Permanent Jobs	Up to 20
Construction Jobs	Up to 300
Estimated Tax Revenue	\$800,000 per year



Pattern and Samsung are jointly proposing to develop the South Kent Wind Farm, a 270 MW wind energy project, which will be located within the Municipality of Chatham-Kent. Once complete, the project will produce clean and renewable energy equivalent to the annual needs of 73,000 Ontario homes.

The electricity produced by South Kent Wind will offset more than 877,000 tonnes of carbon dioxide a year compared to electricity generated by coal – the equivalent as taking 157,000 cars off the roads each year. The project will also bring many benefits to the Chatham-Kent region, including the creation of employment positions, the strong capital infusion from the tax and royalty payments, and the economic ripple effect resulting from the project.

We are in the final stages of completing the environmental reports and necessary site studies required under the Renewable Energy Approval (REA) process. The draft reports and project turbine layout are now available on the website, www.southkentwind.ca, and in the South Kent Wind office located at 57 Talbot Street West in Blenheim.

Your comments are important to us. You can contact the project team by emailing southkentwind@ patternenergy.com, calling (519) 676-0237, or stopping by the South Kent Wind project office. We are always seeking ways to contribute to communities where we build projects and look forward to announcing a South Kent Wind community benefits package soon.





#### **ABOUT PATTERN**

Pattern Energy Group LP is one of North America's leading independent wind and transmission companies. Our mission is to provide our customers with clean, renewable energy, which we seek to achieve by developing, constructing, owning and operating projects that are built for lasting success.

Pattern commenced operations in June of 2009 as one of the most experienced and best-capitalized renewable energy and transmission development companies in the United States when a private equity fund managed by Riverstone Holdings LLC, an energy and power-focused private equity firm with the largest renewable energy fund in the world, and our Executive Management Team purchased our thriving energy business and development pipeline to form Pattern.

The Pattern team employs more than 100 highly-skilled scientists, legal and financial professionals, engineers, and construction and operations experts located in San Francisco, Houston, San Diego, New York and Toronto. We are all devoted to a common purpose: developing high performance renewable energy and transmission projects.

Pattern has 525 MW of wind projects in operation, including our 138 MW St. Joseph Wind Farm in southern Manitoba. We are growing and building on our current development pipeline, which includes over 4,000 MW of wind projects and multiple transmission projects in the United States, Canada and Latin America.

#### **ABOUT SAMSUNG C&T CORPORATION**

Founded in 1938, Samsung C&T is the mother company of the Samsung Group, South Korea's largest conglomerate with interests in electronics, chemicals, finance, and numerous other fields. Today, the company's two business groups – Trading & Investment and Engineering & Construction – are involved in a broad and growing portfolio of businesses, delivering creative, integrated business solutions to customers worldwide through a network of over 100 offices in 44 countries. Both business groups have achieve many landmark accomplishments over the years in preparation for such an opportunity - among them, launching one of Korea's first solar energy projects and building the world's tallest skyscraper.

Samsung C & T, Korea Electric Power Corporation (KEPCO) and Pattern Energy plan to build and operate the world's largest renewable energy cluster in Southern Ontario. Samsung is proud to be part of an endeavour that will bring not just clean energy to Ontario households but many new jobs. Samsung was selected by the Ontario Government for its rapidly expanding expertise in the alternative energy field, but also for the proven track record of constructing projects of similar scale from planning and financing through to execution. Samsung and its partners intend to take advantage of Ontario's talented workforce and hire locally.

Samsung C&T is an emerging global leader in new and renewable energy solutions with projects in Canada, the United States, Costa Rica, Korea, France, Italy, Greece, and Turkey.





# Samsung Renewable Energy and Pattern Energy

# Welcome You to the Final Public Meeting for the South Kent Wind Project

Saturday November 12, 2011

2:00pm to 5:00pm

Tilbury Knights of Columbus Hall, 22 Dupuis Avenue, Tilbury, ON

#### Purpose of this Final Public Meeting

#### Stakeholder Input:

An important aspect of the Renewable Energy Approval (REA) process is stakeholder input. This meeting provides you with an opportunity to:

- » Provide verbal or written comments on the REA supporting documents (such as the Design and Operations Report)
- » Raise concerns or issues regarding the proposed Project and the REA supporting documents
- » Ask any questions regarding the proposed Project and the REA supporting documents
- » Gain a greater understanding of the proposed Project, Samsung Renewable Energy and Pattern Energy

You can provide comments or concerns the following ways:

- » Fill out a comment sheet provided at this public meeting. If you provide your mailing address this can be used to add your information to the Project mailing list
- » Discuss with any of the Project representatives present at this meeting
- » Contact the Hatch or BowArk Energy representatives:

Kimberley Arnold, BSc, MES Hatch Ltd.

4342 Queen St., Suite 500 Niagara Falls, Ontario, L2E 7J7 Tel: 905-374-0701 Ext.5318

Fax: 905-374-1157

Email: karnold@hatch.ca

Keith Knudsen BowArk Energy Ltd. 915, 530 8th Avenue SW Calgary, Alberta T2P 3S8 Tel: 403-264-2259

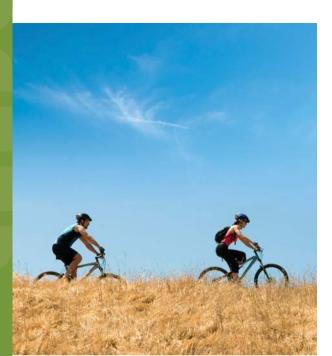
Fax.: 403-261-1708

Email: kknudsen@bowark.com

Please visit www.southkentwind.ca for more information







# We work with landowners to help them transform their land's renewable

local habitat and wildlife.

**Pattern Energy** 

operating projects that are built for lasting success.

resource into a steady revenue stream. We are strong supporters of the local communities we work in, and strive to be a good corporate citizenand neighbor. Skilled contractors and vendors help to build our projects, and we frequently join together with local development partners who bring expertise and knowledge of the area. At the end of this process are the customers who purchase the energy we produce. All are critical partners in our mission to provide consumers with clean, renewable energy.

Pattern is one of North America's leading independent wind and transmission companies. Our mission is to provide our customers with clean, renewable energy, which we seek to achieve by developing, constructing, owning and

Commitment to community is one of Pattern's core values. We are dedicated to building strong relationships with our landowners, communities, business partners, and customers. We are also committed to the environment, and we make the effort and take the time to understand and minimize our projects' impact on



Pattern Energy and BowArk Energy have a long history of developing projects together in Canada. BowArk Energy has been developing Projects for the past 8 years, and is currently acting as a development partner with Pattern on the South Kent Wind Project. BowArk is assisting in permitting activities and landowner relations as it relates to the Renewable Energy Approval Process.

Pattern Energy and Samsung Renewable Energy have retained Hatch Ltd. to undertake the REA process. Hatch is an Ontario-based consulting, engineering, environmental and management company with operations worldwide and a reputation for excellence acquired over 85 years of continuous service to its clients.









#### Samsung



Since the company began in 1938, we have brought advanced technology and product excellence to fields as diverse as resource development, textiles, plastics, finance, construction – even fashion. Increasingly, we have shifted our focus to alternative energy in line with global aspirations for a greener world. Samsung is embracing the green-growth paradigm by focusing on energy and the environment, natural resources, and industrial material.

Samsung is comprised of many companies, one of which is Samsung C&T. It is Samsung C&T's two business divisions – Trading & Investment Group and Engineering and Construction Group with its partners – that will be building and operating the Wind and Solar Power Projects here in Ontario. Samsung has logged many milestones over the years in preparation for such an opportunity. Among them, launching Korea's first solar energy project.

In a changing world, our company mission remains constant: To create superior products and services, thereby contributing to a better global society.

This vision has helped Samsung C&T emerge as a leading player in the new and alternative energy sector, offering solutions to customers worldwide through a network of over 100 offices in 44 countries.



#### Kepco

Kepco (Korea Electric Power Corporation) is South Korea's sole vertically integrated power utility, handling generation, transmission, distribution, and sales. It operates a total of 10 subsidiaries, six of which are directly involved in power generation. The company has a generation capacity of 64,500MW, making it one of the world's top power utilities. Kepco aims to lead the industry in low-carbon generation, high-efficiency transmission and distribution, and other green technologies. Kepco is building a global business infrastructure encompassing nuclear, hydro, renewable energy, and resource development as it pursues business opportunities around the world.





#### Why Renewable Energy

» The Green Energy and Green Economy Act (GEA) received Royal Assent in the Ontario Legislature on May 14, 2009. According to the Government of Ontario, this legislation is part of Ontario's plan to become a leading green economy in North America.

A component of GEA is the Feed-in-Tariff (FIT) program which was launched in Ontario on October 1, 2009. The purpose of the FIT program was to encourage use of renewable energy sources, and promote growth within the environmental industry. The intent of the FIT program is to:

- Create new jobs
- Boost economic activity and
- Further the development of renewable energy technology and expertise in Ontario, while helping to phase out coal-fired electricity generation by 2014

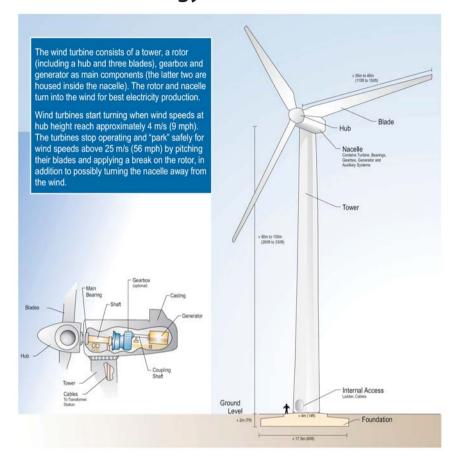
Pattern Energy, Samsung Renewable Energy and KEPCO aredeveloping the South Kent Wind Project in response to the initiatives established in GEA.

#### **Advantages of Wind**

There are numerous advantages to wind. These advantages include:

- » Wind is an inexhaustible resource
- » Turbines are quick to install and are low maintenance once in place
- » Benefits the environment by reducing dependence on fossil fuel based power generation
- » Is compatible with mixed land use; grazing, agriculture and hunting
- » Provides a steady income to farmers and property owners
- » Strengthens the local tax base, helping to improve municipal services, including; schools, police and fire departments
- » Produces energy with stable production costs, offering a hedge against other energy sources with volatile fuel markets

#### Wind Technology: How it Works



Wind, like water, can be harnessed to transform the kinetic energy into electrical energy. Wind turbines do this by having blades mounted on towers which are turned by the wind, causing them to turn a shaft that's attached to a generator. This creates an electrical current that is carried by cables to the power grid, which, in turn, transmits electricity to your home.





### **Project Location**

The Project is located south of Highway 401 between the Towns of Tilbury and Ridgetown to the west and east, respectively, within the Municipality of Chatham-Kent in southwestern Ontario.

### **Project Description**

The Project is described as a Class 4 Wind facility with a nameplate capacity of up to 270 MW consisting of approximately 130 wind turbines, as well as supporting infrastructure, including access roads, buried cables and overhead collector lines. A 34.1 km 230 kV transmission line and two (2) substations are required to step the voltage from 34.5kV to 230 kV to enable connection to the Chatham Switching Station (SS).

**REA Project Schedule** 

First Public Meeting – November 22, 2010 and November 23, 2010

Second Public Meeting – September 24, 2011

Final Public Meeting - November 12, 2011

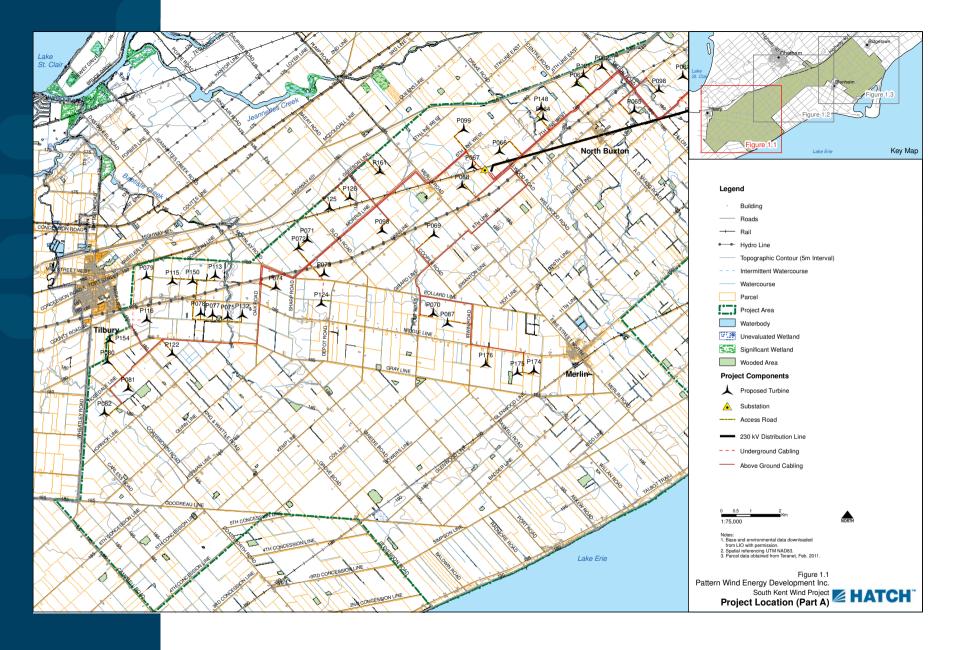
REA Received –Early 2012

Start of Construction – Mid-2012 (subject to receiving final REA)

Commercial Operation Date –2013

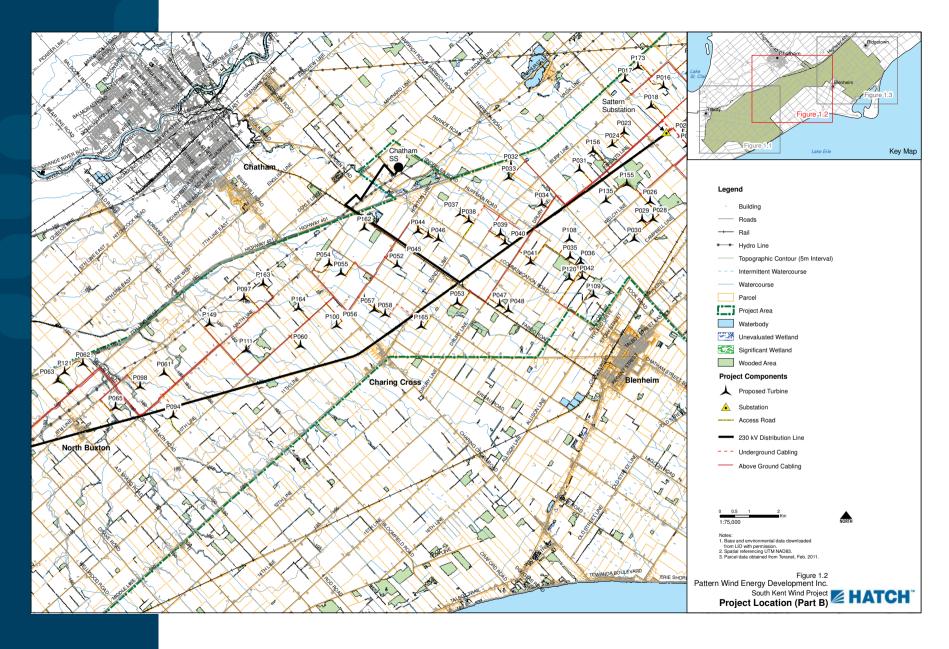






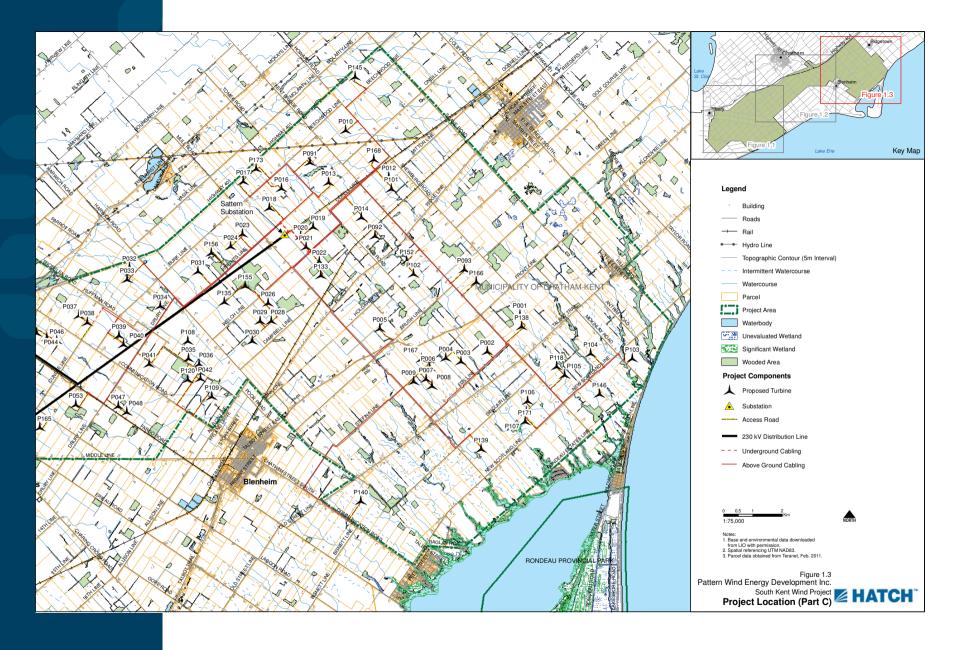
















### **Natural Features**

Roadside surveys were completed at each site, and if the Project is to be located within 120 m of a natural feature, individual site surveys were completed. These individual site surveys confirmed the boundaries of the feature and collected more detailed vegetation community information.

Each feature was assessed for significance based on criteria from the Ministry of Natural Resources Natural Heritage Reference Manual and Significant Wildlife Habitat Technical Guide.

A total of 86 significant natural features were identified on or within 120 m of the Project location. Results include:

- A total of 34 of the 42 significant woodlands were identified as being indirectly impacted by the Project.
   3 woodlands are located directly adjacent to proposed above or below ground cabling and 4 woodlands would have the above/below ground cabling installed within the woodland.
- » 5 significant wetlands within 120 m of the Project location were identified. No direct encroachment will occur within the significant wetlands.
- » 11 bat maternity roosts are present on and within 120 m of the Project location. No direct encroachment will occur within these significant natural features.
- 2 open country bird breeding habitats were identified on and within 120 m of the Project location.
   Underground cabling and access roads would occur within these habitats.
- » Fifteen significant woodland habitats for 3 bat species of concern (Eastern Small-footed Bat (Myotis leibii), Northern Long-eared Bat (Myotis septentrionalis), and Tricolour Bat (Perimyotis subflavus) are located within 120 m of wind turbines and associated infrastructure. Direct encroachment would occur only in one significant habitat.

» 8 animal movement corridors were identified on and within 120 m of the Project location. 7 are associated with watercourses and 1 associated with the vegetated corridor along the railway line. The 7 watercourse animal movement corridors are interrupted at various locations by municipal and farm access roads. While components of the transmission line (and service road) will be within the railway animal movement corridor, the transmission poles and the service road would temporarily limit but not prevent the movement of wildlife through this area.

### **Mitigation Measures**

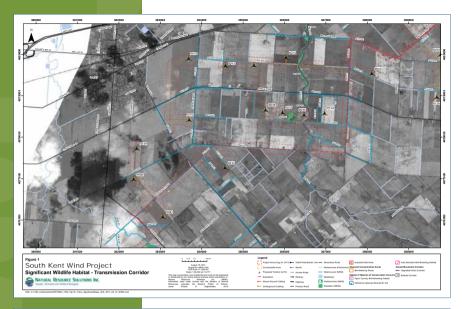
A variety of mitigation measures will be implemented throughout the Project. Examples of mitigation measures include:

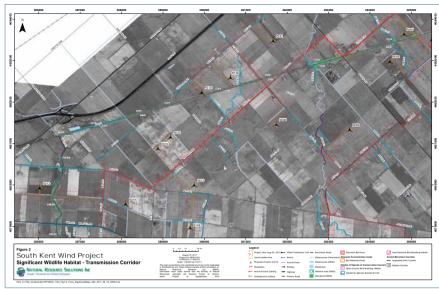
- » Clearly marked work areas, to limit impact of construction
- » Where possible, vegetation and earth moving activities to occur outside of the bird breeding season; otherwise an avian biologist will determine if nests are located in the Project footprint and if so, appropriate avoidance will be maintained until the birds leave the nest
- » Reduced speed on access roads
- » Daily monitoring for wildlife and establishment of wildlife encounter protocols
- » Erosion and sedimentation control measures (e.g. silt fence barriers, straw bale flow checks) will be in place to minimize and sediment into significant habitats
- » Post-construction monitoring of birds and bats in accordance with MNR requirements and guidelines will be completed. Should mortality be greater than stipulated levels, the Proponent will discuss mitigation measures with MNR and implement accordingly.

For more details on mitigation measures please see the Natural Heritage Environmental Impact Study.













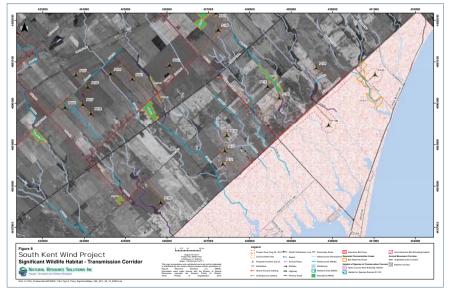
















### **Aquatic Environment**

Roadside surveys were completed at each site to either confirm the presence or absence of a water body. Individual site surveys were conducted at each location where a water body is within 120 m of a Project component.

The water bodies and associated habitat characteristics (including aquatic vegetation, substrates, water depths, temperatures, etc.) found within the Project area are typical of the southwestern Ontario landscape. An extensive system of drains has been established to facilitate land drainage for agricultural practices. These drains represent a large proportion of the water bodies found throughout the Project area, typically located alongside roads and agricultural fields. Additional permanent and intermittent streams are found as naturally vegetated tributaries that flow either northward to the Thames River and ultimately into Lake St. Clair or southward into Rondeau Bay or Lake Erie. A summary of water bodies is as follows:

- » A total of 367 water body observations were included in the report including 188 observations from the investigations carried out in 2010 and 179 in 2011.
- » Confirmation of the presence of 218 water body locations consisting of 139 different drains are within 120 m of the South Kent Wind Project. Additionally, 244 total crossing locations where water bodies are crossed by project infrastructure were documented. Of these, 162 crossings are attributed to aboveground cabling, 9 are access roads only, 9 are underground cabling only, and 69 are a crossing location that includes both access roads and underground cabling at the same location.

- » None of the documented water bodies are found within 30 m of a turbine location. A total of 19 water bodies were documented within 30 m of the project location, including measurements from access roads, cabling, and the extent of blade sweep area surrounding the turbine locations.
- » No lakes, lake trout lakes were identified within the Project area, however a total of 8 sites were found to have aquatic vegetation (i.e., watercress) indicative of groundwater seepage areas.
- » Essential habitat for fish and other aquatic organisms is provided in many of these streams year round and therefore careful consideration must be given in order to protect the streams from immediate or prolonged degradation.

### **Mitigation Measures**

A variety of mitigation measures will be implemented throughout the Project. Examples of mitigation measures include:

- » Erosion and sedimentation controls measures (e.g. silt fence barriers, straw bale flow checks) will be in place to minimize any sedimentation into nearby water bodies.
- » Stormwater management measures (e.g. site revegetation) to allow water to naturally percolate into the ground will be implemented to maintain natural and original drainage
- » Spill response measures (e.g. spill kits and emergency response plan) will be implemented to minimize the potential for spill adjacent to a water body

For more details on mitigation measures please see the Water Body Heritage Environmental Impact Study.





### Anticipated Construction Schedule

Activity	Start	Finish
REA Approval (Estimate)	Spring 2012	Spring 2012
Turbine Procurement, Fabrication & Delivery	Spring 2012	Spring 2013
Mobilize	Spring 2012	Summer 2012
Installation of Site Access Components	Summer 2012	Winter 2013
Safety and Security	Summer 2012	Fall 2013
Temporary Facilities	Summer 2012	Summer 2013
Power and Communication	Summer 2012	Summer 2013
Turbine Site Preparation	Summer 2012	Winter 2013
Foundations	Summer 2012	Spring 2013
Turbine Erection	Fall 2012	Spring 2013
Electrical Systems	Fall 2012	Spring 2013
Commissioning	Fall 2012	Summer 2013
Commercial Operation Date	Summer 2013	Summer 2013
Remediation and Demobilization	Summer 2013	Fall 2013

### **Project Construction**

Construction expected to occur from 7:00 am to 7:00 pm Monday through Saturday for the duration of construction. If required, the daily construction time could be extended to 11:00pm as per Municipal by-law.

### **Site Preparation**

- » Staking and surveying, clearing and grubbing, if required
- » Installation of security measures, e.g fencing
- » Preparation of construction staging areas

### **Construction of Facility**

- » Construction of access roads
- » Installation of foundations for turbines
- » Base preparation for substations
- » Wind turbine and substation installation
- » Installation of distribution and transmission lines
- » Testing and commissioning

### Site restoration

- » All construction material and temporary facilities will be removed and disposed of properly
- » Top soil will be backfilled where appropriate to achieve property drainage
- » Re-vegetation and hydro-seeding to occur, where needed

### **Traffic and Roads**

- » Only designated transportation routes will be followed
- » Proper signage for detours will be promptly displayed
- » Flagman and police escorts will be used as necessary

### Safety

- » Fencing and signs will be used to mark off construction zones
- » Spills will be handled by the procedures outlined in the Emergency Response Plan





### **Design and Operations**

### **Project Components**

Project Component	Number	Description
Wind Turbine	130	Siemens SWT-2.3-101
Substation	2	Sattern and Railbed substations – prefabricated building, transformer to be surrounded by 5 - 6 m tall sound barriers

### **Project Operations**

- » Real time monitoring of the Project will occur remotely to adequately ensure the performance and safety of the wind turbines.
- » Weekly and monthly maintenance activities are to occur throughout the life of the Project.



### Decommissioning

It is anticipated that the Project will have a useful lifetime of at least 20 years, which can be extended further with proper maintenance, component replacement and repowering. It is assumed that the Project will be decommissioned after the conclusion of its useful economic life.

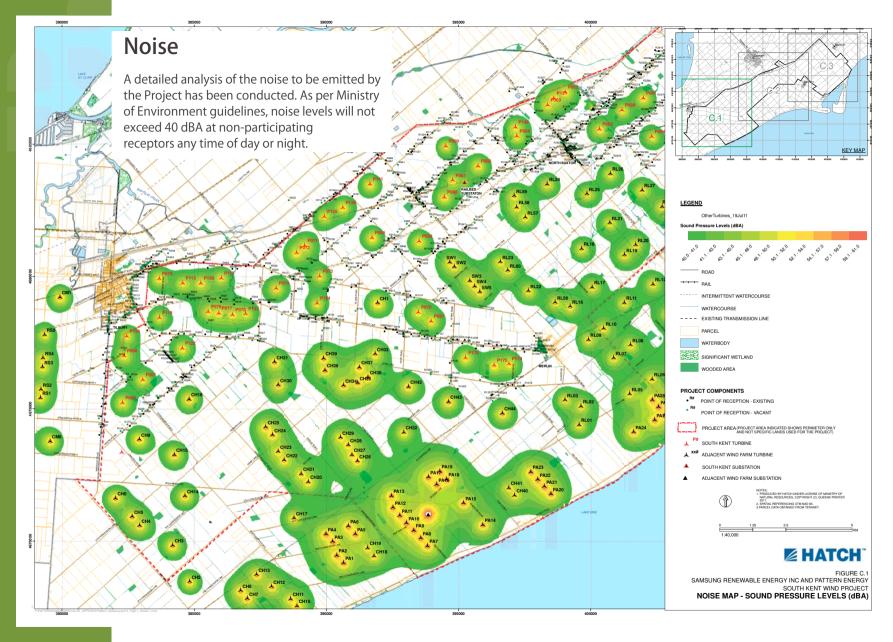


Activities involved in decommissioning include:

- » removal of the wind turbines and all electrical appurtenances for salvage
- » removal of foundations and any access roads not wanted for future farming purposes to a depth suitable for ploughing (approximately 1.0 m)
- » replacement of topsoil to a depth of surrounding undisturbed lands and plant with suitable ground cover dependant on time of year and in consultation with property owner

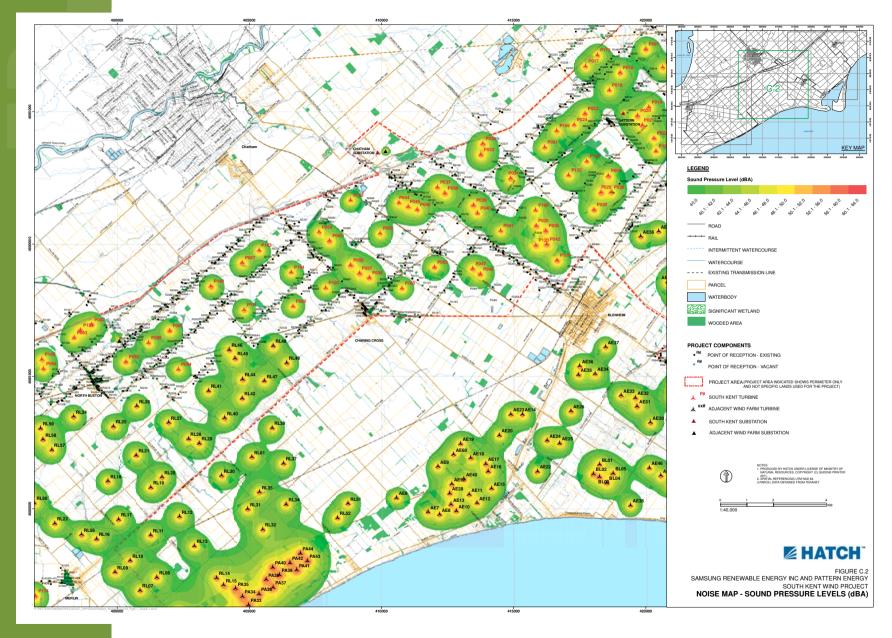






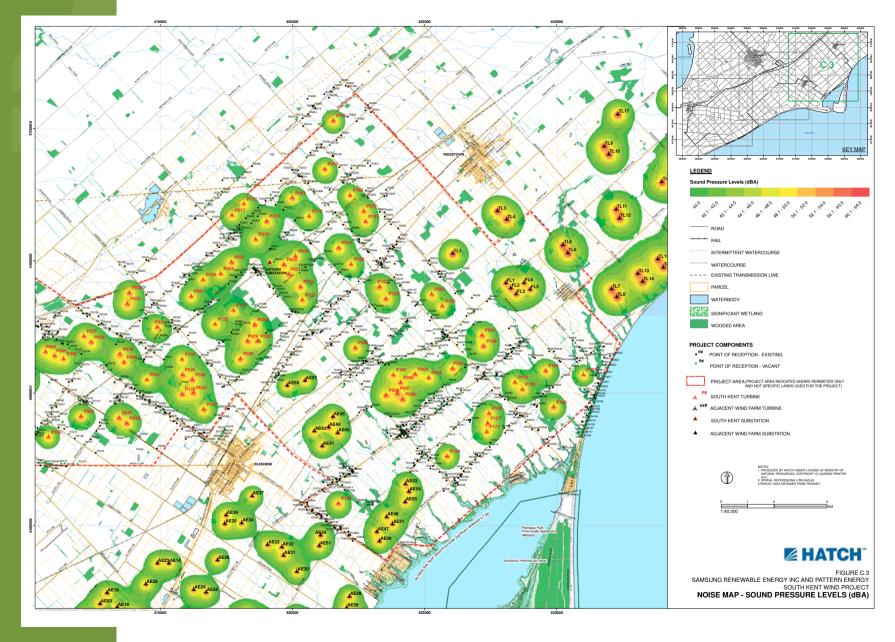
















### **Property Values**

"In the study area, where wind farms were clearly visible, there was no empirical evidence to indicate that rural residential properties realized lower sale prices than similar residential properties within the same area that were outside of the viewshed of a wind turbine."

Canning, G., and L. J. Simmons. (February 2010). Wind Energy Study Effect of Real Estate Values in the Municipality of Chatham-Kent. Canning Consultants Inc. & John Simmons Realty Services Ltd. Prepared for the Canadian Wind Energy Association.

"Research collected data on almost 7,500 sales of single family homes situated within 10 miles of 24 existing wind facilities in nine different U.S. states. The conclusions of the study are drawn from eight different hedonic pricing models, as well as both repeat sales and sales volume models".

The various analyses are strongly consistent in that none of the models uncovers conclusive evidence of the existence of any widespread property value impacts that might be present in communities surrounding wind energy facilities. Specifically, neither the view of the wind facilities nor the distance of the home to those facilities is found to have any consistent, measureable, and statistically significant effect on home sales prices.

Although the analysis cannot dismiss the possibility that individual homes or small numbers of homes have been or could be negatively impacted, it finds that if these impacts do exist, they are either too small and/or too infrequent to result in any widespread, statistically observable impact."

Hoen, B., Wiser, R., Cappers, P., Thayer. M., and G. Sethi. (December 2009). The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Hedonic Analysis. Ernest Orlando Lawrence Berkeley National Laboratory. Prepared for the Office of Energy Efficiency and Renewable Energy.







### **Community Benefits**

### Supports the local economy by:

- » Purchasing good and services during construction and operation
- » Significantly increasing revenue for all service businesses, i.e. local restaurants and hotels during construction and operations

### Significantly contributes to the tax base annually with approximately \$800,000/year, benefiting:

- » Local Government and Related Services
- » Lambton Kent School District

Through land lease agreements with landowners, the Project will provide additional income for farmers

### **Job Creation**

### Construction

### Job opportunities: up to 300 positions during peak construction periods

- » Subcontractors experienced in civil work (grading, excavation, and concrete), electrical work, and mechanical assembly
- » Construction managers, electricians, heavy equipment operators and general labourers for assembly & civil work

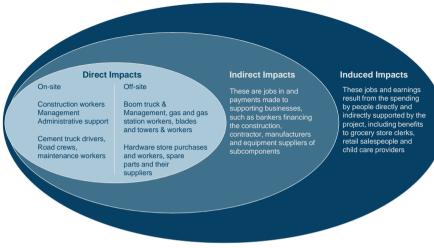
### Operation

» Maintenance personnel proficient in mechanics or electrical/ electronic technicians

### Manufacturing

- » This project is part of the Samsung Green Energy Investment Agreement, which is committed to the establishment of four manufacturing facilities in the Province of Ontario. The manufacturing facilities will create:
  - 900 or more jobs (from 4 manufacturing facilities)
  - 550 or more (steel industry etc.) (excluding construction, operation & maintenance jobs)

### Wind Energy's Economic Ripple Effect



Source: National Renewable Energy Lab







### Environmental Benefits of 270 MW of Wind Energy Compared to Coal-Fired Generation

### Carbon Dioxide Emissions Reduced

877,077 tonnes/year 157,172 car equivalent

### Coal

409,491 tonnes/year

### **Sulfur Dioxide**

3,940 tonnes/year

### **Nitrogen Oxides**

1,331 tonnes/year

### **Water Conserved**

1,840,610,359 litres/year 5,042,768 litres/day 56,031 people each day



Sources: Based on information from the Energy Information Administration, National Energy Technology Laboratory, and U.S. Geological Survey. Annual emission offsets based on 270 MW wind project offsetting coal-fired generation, using capacity factor for Chatham-Kent area and accounting for regular turbine maintenance. Water conserved compared to coal-fired generation (541 gallon/MWh), source American Wind Energy Association. People supplied figure based on USGS estimation of 80-100 gallons/day per capita water consumption, US Geological Survey, "Water Q&A: Water use at home," http://ga.water.usgs.gov/edu/qahome.html.





### Blowing Smoke: Correcting Ontario Anti-Wind Myths

### • Myth 1: Health impacts

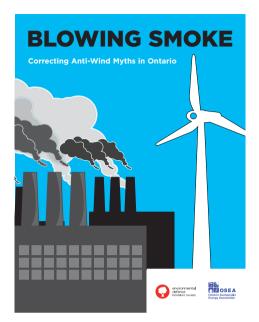
» Reality: Repeated studies around the world have found no scientific evidence of health impacts from wind power projects.

### Myth 2: Viability

» Reality: Wind power has been successfully used for decades and the world is rapidly scaling up its use because it works, particularly in light of climate change.

### • Myth 3: Economic & Environmental Benefits

» Reality: Wind power is creating thousands of jobs across Ontario and letting us reduce the use of harmful fossil fuels.



### Sierra Club: The Real Truth About Wind Energy

June 2011 report by the Sierra Club Canada

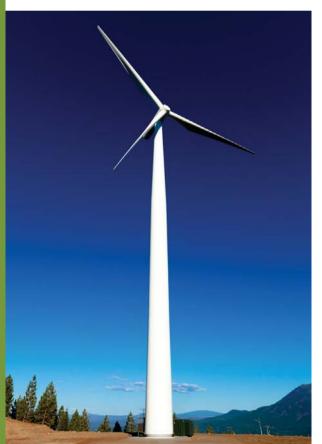
- " After a thorough review of the science, we are confident in saying there is no evidence of significant health effects that should prevent the further development and implementation of wind turbines, wind farms and wind energy."
- "The further development of wind energy as a growing portion of our energy supply will reduce direct carbon emissions, improve the quality of the air we breathe, and generally improve the health and well-being of Canadians, our families and the environment in which we live."
- "With a full review of available data, including that referenced by wind opposition groups, Sierra Club Canada adds its voice to the overwhelming majority of governmental, non-governmental, scientific and environmental groups in saying that a link between wind turbines and health concerns is unfounded."











### **Public Health and Safety**

- » Public health and safety will be considered during all stages of the Project (i.e. construction, operation and decommissioning).
- » To date, much study has been done on the effects of environmental noise on human health.
- A recent summary of scientific literature related to wind turbines and public health, as compiled by Ontario's Chief Medical Officer of Health, revealed the following:
  - "...while some people living near wind turbines report symptoms such as dizziness, headaches, and sleep disturbance, the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects. The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct health effects, although some people may find it annoving".

(The Potential Health Impact of Wind Turbines - Chief Medical Officer of Health Report, Dr. Arlene King May 2010)

### Additional information from the report includes:

- » The report includes an assessment of sound/noise, low frequency sound, infrasound, vibration, electric and magnetic fields, shadow flicker, ice throw and ice shed, and structural hazards
- » Ontario used the most conservative sound modelling available nationally and internationally, which is supported by experiences in the province and in other jurisdictions
- » Low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects
- » With regards to vibrations from wind turbines the Wind Turbine Sound and Health Effects, An Expert Panel Review states:
  - "The ground-borne vibrations from wind turbines are too weak to be detected by, or to affect, humans". It also states "there is nothing unique about the sounds or vibrations emitted by wind turbines.

(W. David Colby, M.D., Robert Dobie, M.D., Geoff Leventhall, Ph.D., David M. Lipscomb, Ph.D., Robert J. McCunney, M.D., Michael T. Seilo, Ph.D., Bo Søndergaard, M.Sc.)





### **Your Comments**

Comments or concerns can be provided in the following ways:

- 1. Completion of a comment sheet. Please deposit the completed sheet in the Comments Box provided at this meeting or complete at home and fax/e-mail. If you wish to receive future Project mailings, please ensure your complete mailing address is provided.
- 2. Identification of comments or concerns to any Pattern Energy, Samsung Renewable Energy, Bowark or Hatch representatives present at this Public Meeting.
- 3. Contact the representatives for the Project at the addresses provided below:

Kimberley Arnold, BSc, MES Manager – Environmental Services Hatch Ltd. 4342 Queen St., Suite 500, Niagara Falls, Ontario, L2E 7J7 Phone: 905-374-0701 Ext. 5318 Fax: 905-374-1157 karnold@hatch.ca

### **Keith Knudsen**

Project Manager BowArk Energy Ltd. 915, 530 8th Avenue SW, Calgary, Alberta T2P 3S8 Phone: 403-264-2259 Fax: 403-261-1708 kknudsen@bowark.com Please visit the South Kent Wind Project website at www.southkentwind.ca for more information on the Project and the Proponent.





### **Next Steps**

A consultation report, documenting all concerns and questions, will be produced and a complete package will be sent to the MOE for acceptance.

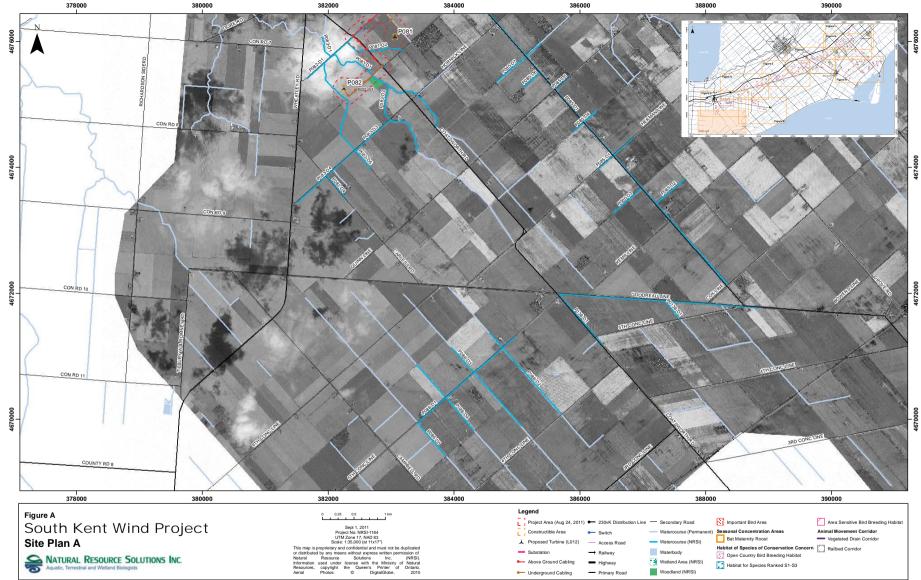
Following acceptance and posting on the Environmental Registry (www.ebr.gov.on.ca), a Notice of Posting will be published in the Chatham Daily News and the REA reports, including the Consultation Report, will become available for review on the Project website (www.southkentwind.ca) with any further comments to be sent to the Ministry of the Environment.

Approval can take up to six months after which the public has 15 days to request an appeal of the approval decision with the Ministry of the Environment

### Thank you for attending our Final Public Meeting.



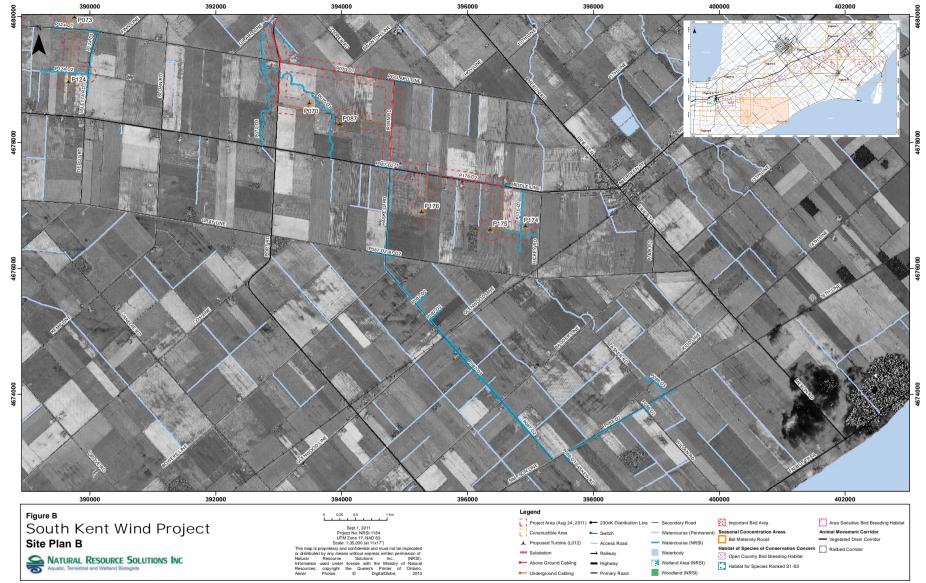








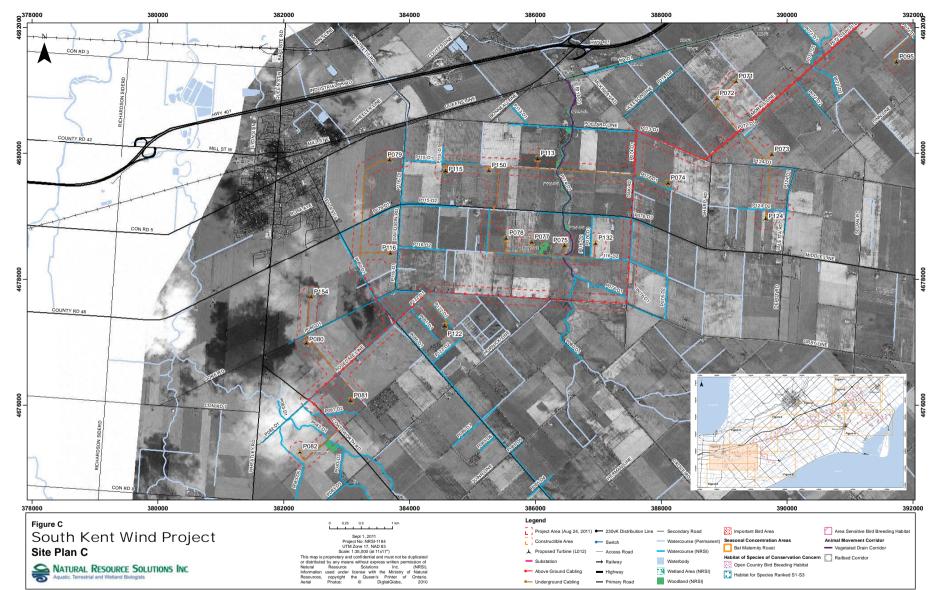




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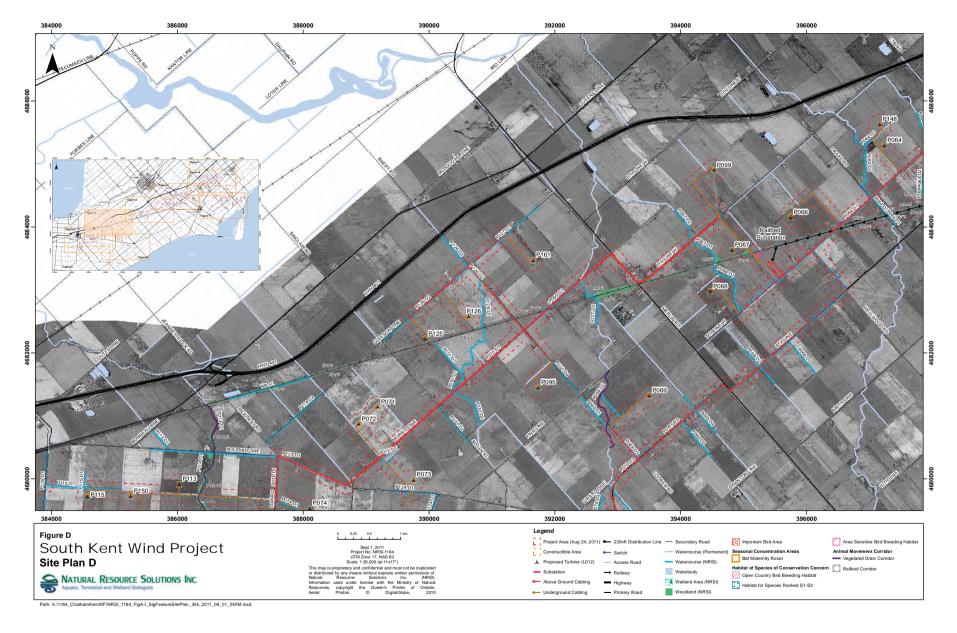


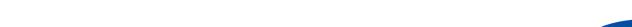


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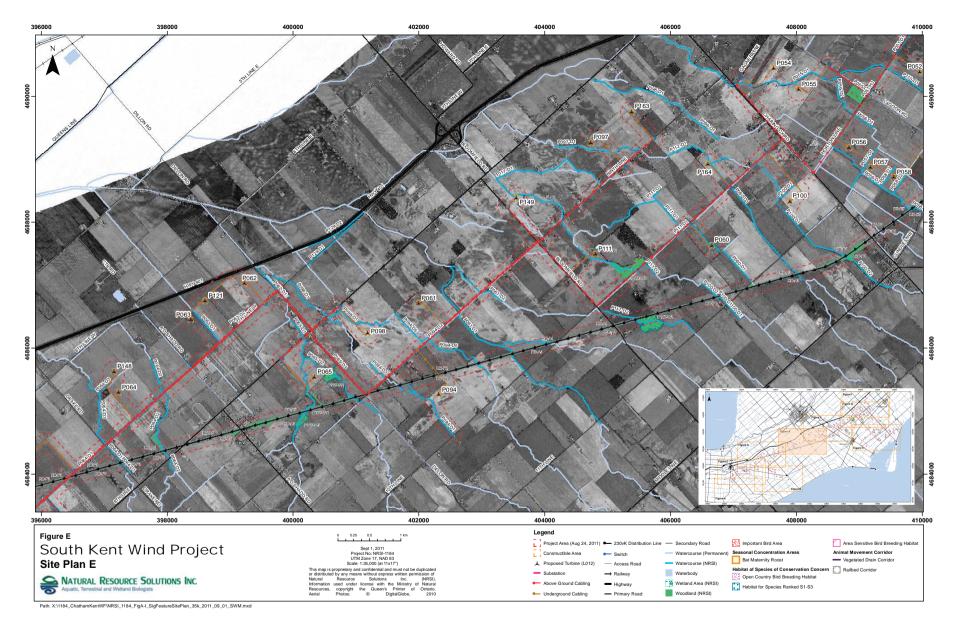






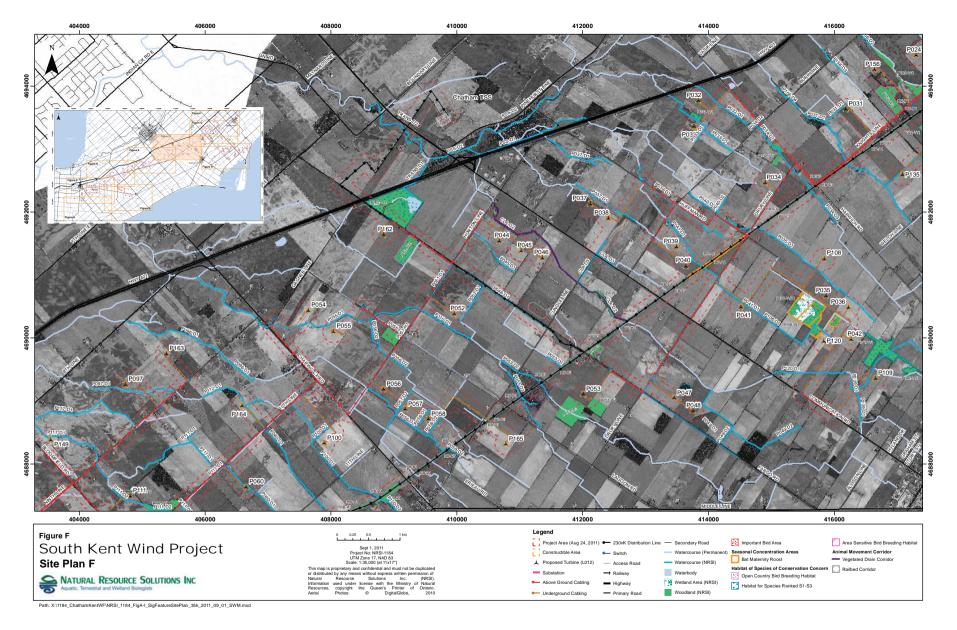








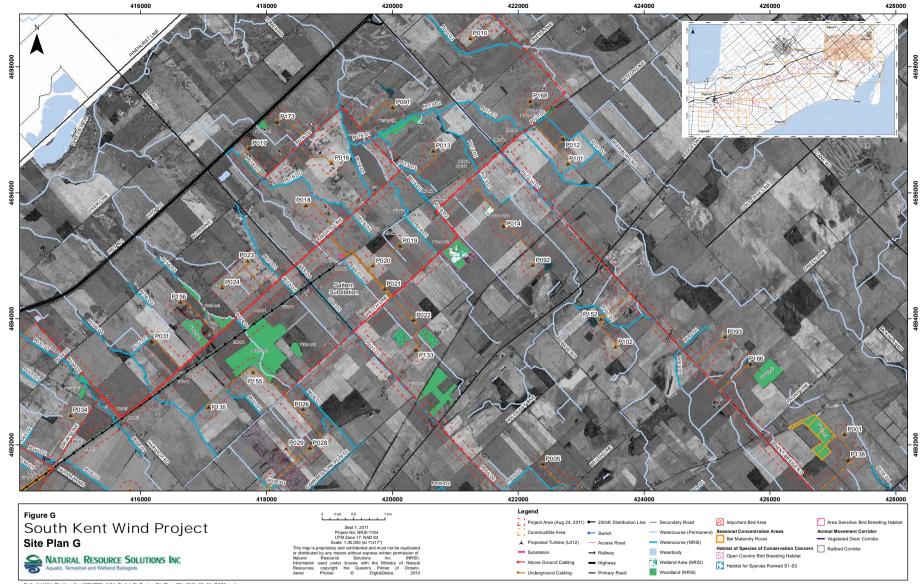






SAMSUNG RENEWABLE ENERGY INC.

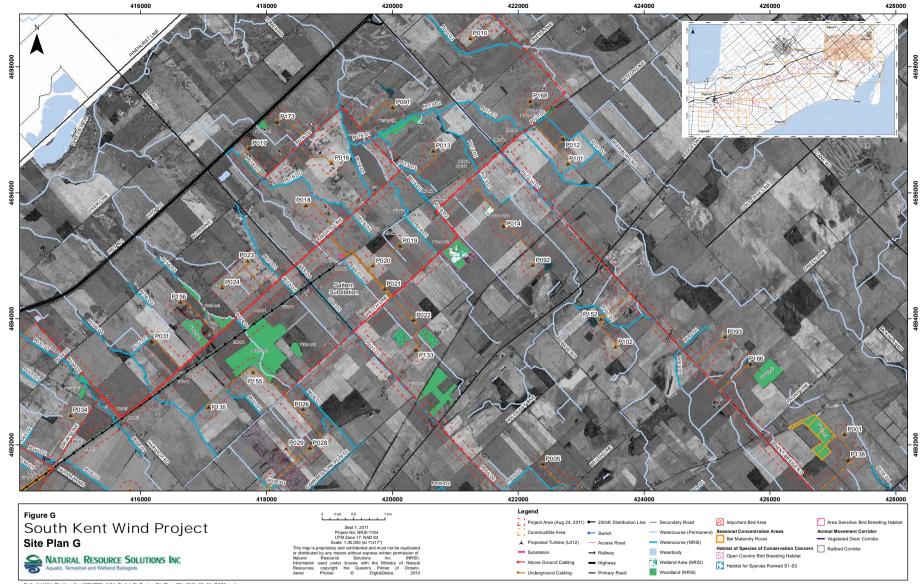








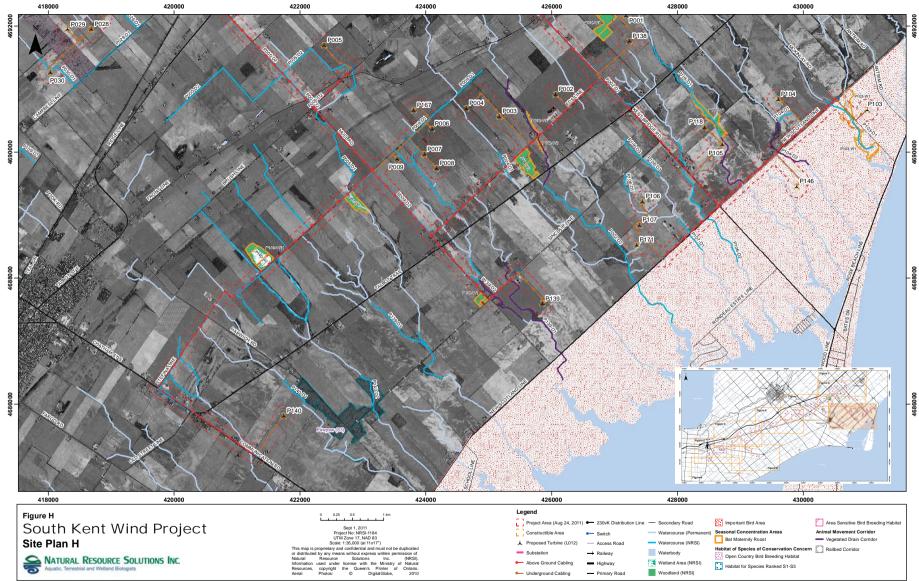








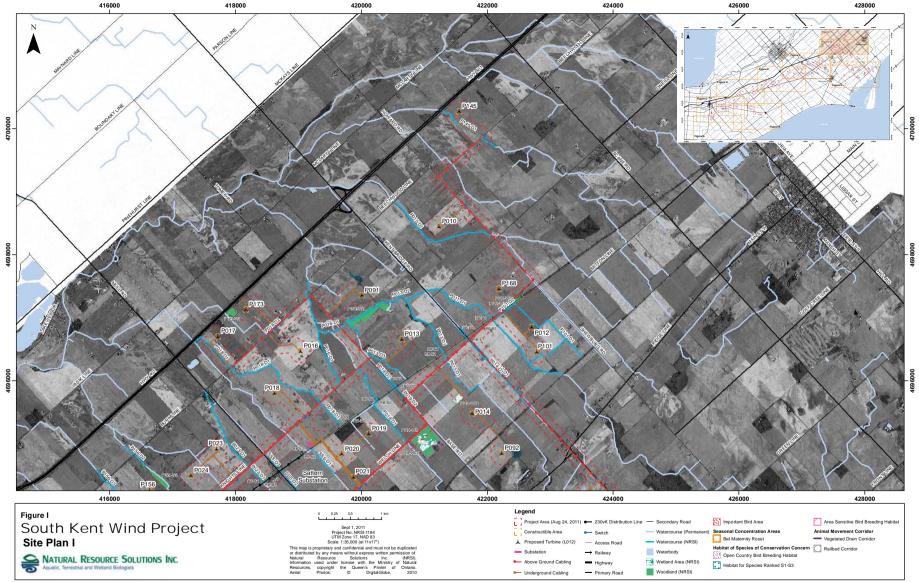




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## Please Sign In (PLEASE USE BLOCK LETTERS)

# South Kent Wind Project - Final Public Meeting

				Transition and a control
Name	S	Complete Mailing Address		Phone
	Street	AID	Postal Code	(Please include area code)
DOUG SMITH	SP. AWDOBUS LINE CHATHAM	CHAZHAM	N711 538	519-436-3371
Skewson Ma Donnes	Post RD.	Mercin	Not 100	5(9-808-2736
Robert Ivison	3905 Middle Line	Tilbary	NOP 210	519-682-1090
GARY ZAVITE	2255-6 Brock St.	2255-6 anous St 8 # 153 Tolland	1745 163	1745 163 416-858-5481
William Loubine	3980 middleting Tilbrura	1 Williams	Nop IWO	5-19,689,4926
Bryen Savisse	3950 middle line	A. Hours	10p 90c	579.642-2754
Cindy Bossagast		Blestuin	04 402 400	8-04-04-61G

\*Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review

### Please Sign In

# South Kent Wind Project - Final Public Meeting

(PLEASE USE BLOCK LETTERS)

Vame		Complete Mailing Address		Phone
	Street	City	Postal Code	(Please include area code)
Gery Moerman	RR2	Blenheim	NOP 1AO	NOP 140 519-676-2955
DAN ONEN	7807 8th LINE	CHATHAM	NJW. SIE	579-436-08-20
LAPRY & JOAN KERR	7782 9th LINE	CHATHAM	NTM 556	519-486-0612

\*Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review

## Please Sign In (PLEASE USE BLOCK LETTERS)

# South Kent Wind Project - Final Public Meeting

Name	J	Complete Mailing Address		Phone
	Street	City	Postal Code	(Please include area code)
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John Chill	A C	ann	nn	In the
My way moenner	RRY	Blenkein	NOP/40	676-8209
Gus Pet Front	RX#1 SISTEM	815 176 Chaing Coose	NOP 160	351-8693
MARICHA ABOK	7851 NINTH UNE	CHATITAL	N7H SJG	1818-4SC
BRIAN FLOOK	7851 NINTH CINE	CHATITAN	N7M SSTG	334-8189
Doug + FLOOK	6925 Eight Line	Chatham	N771516	
KEITH WEBSTER	8393 MIDDE LINE CHARING CROSC	CHARING GESC	No Pilo	351-5720
Carol Ivison	3844 Middle Line RR#1	1 Tilbury	NOP 200	682-3130.

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### Please Sign In

# South Kent Wind Project - Final Public Meeting

(PLEASE USE BLOCK LETTERS)

Date: Saturday, November 12, 2011				
		Complete Mailing Address		Phone
	Street	City	Postal Code	(Please include area code)
ANA CIVELLIN	1272 FOREST AVE	FOREST AVE ST. THE MAS	NSR-2K4	1464-189-615
		FALE ST N	MERLIN	5196273517
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Who I was	R. A. G. While		QMI QOA	790 IND 619-689-4597
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are	53 Ella St. S.	Tilbury	NOD 220	682-1257
				7448680

\*Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review





### South Kent Wind Project

### **Comment Sheet**

Final Public Meeting: Saturday November 12, 2011 (PLEASE USE BLOCK LETTERS)

1. Please describe where you reside in relation to the Project area?
OFATAAM.
CHATAAM.
2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?

Continued on back

3. Please provid	e any comments, q	uestions or	concerns	related to th	ne Project.	
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	ou like to be includ address below:	led on the P	Project ma	iling list, pl	ease provid	e your name
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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review.





Continued on back

### South Kent Wind Project

### Comment Sheet Final Public Meeting: Saturday November 12, 2011 (PLEASE USE BLOCK LETTERS)

1. Please describe where you reside in relation to the Project area?
We own 2 farms adjacent to turbine
We own 2 farms adjacent to turbine P149. We feel it does not meet
proper setback requirements
proper setback requirements  Doug + Deanne Flook.
R.R. G
Charlan Ontario N7M5
2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?
,

3. Please provide any comments, questions or concerns related to the Project.		
· · · · · · · · · · · · · · · · · · ·		
If you would you like to be included on the Project mailing list, please provide your na and full mailing address below:	ame	
Name:		
Mailing Address:		

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review.





### South Kent Wind Project

### Comment Sheet Final Public Meeting: Saturday November 12, 2011 (PLEASE USE BLOCK LETTERS)

1. Please describe where you reside in relation to the Project area?
RIGHT IN THE MIDDLE OF THE PROJECT!
· •
2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?
TOO RESIDENTIAL OF AN AREA AND EXCELLENT
TOO RESIDENTIAL OF AN AREA AND EXCELLENT FARM LAND!
Continued on back

3. Please provide any comments, questions or concerns related to the Project.					
PROSECT	DOES NOT	RESPECT	SETBACK	s /	
If you would you lik	e to be included	on the Projec	ct mailing list, p	olease provide	your name
and full mailing addr	ress below:				,
Name Maili	e: ng Address:				

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

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### South Kent Wind Project

### **Comment Sheet**

Final Public Meeting: Saturday November 12, 2011 (PLEASE USE BLOCK LETTERS)

1. Please describe where you reside in relation to the Project area?
Residence - 53 Ella St. S. Tilbury
Chris Morentette
2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?
I am greatly disappointed with the situation
of Po79. I don't understand why you
couldn't have started on the Aborth side
of Davidson Sd. Rd. I feel that you could
Stay further away from the town. I am
not against renewable energy but there
should be more consideration to location.
This is something that will be around for
20 + years. This could also hamper fiture
development in my wear
I would really like to see some consideration
Continued on back

3. Please provide an	y comments,	, questi	ons or co	ncerns relat	ed to the P	roject.	
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				-			
If you would you lil and full mailing add	ke to be incl ress below:	luded o	n the Pro	ject mailing	g list, pleas	e provide	your name
Nam	e:	Ch	ris /	Naver	fette		_
Mail	ing Address:						-
		Ti	bury	ON	NoF	210	_

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review.





### Samsung Renewable Energy and Pattern Energy

### Welcome You to the Final Public Meeting for the South Kent Wind Project

May 12, 2012

2:00pm to 5:00pm

Blenheim Golf Club 439 Chatham Street South, Blenheim, ON

### Purpose of this Public Meeting

To advise you of changes to the Project since the last Public Meeting in November of 2011

### Stakeholder Input:

An important aspect of the Renewable Energy Approval (REA) process is stakeholder input. This meeting provides you with an opportunity to:

- » Provide verbal or written comments on the REA supporting documents (such as the Design and Operations Report)
- » Raise concerns or issues regarding the proposed Project and the REA supporting documents
- » Ask any questions regarding the proposed Project and the REA supporting documents
- » Gain a greater understanding of the proposed Project, Samsung Renewable Energy and Pattern Energy

You can provide comments or concerns the following ways:

- » Fill out a comment sheet provided at this public meeting. If you provide your mailing address this can be used to add your information to the Project mailing list
- » Discuss with any of the Project representatives present at this meeting
- » Contact the Hatch or BowArk Energy representatives:

Kimberley Arnold, BSc, MES Hatch Ltd.

4342 Queen St., Suite 500 Niagara Falls, Ontario, L2E 7J7

Tel: 905-374-0701 Ext. 5318 Fax: 905-374-1157

Email: karnold@hatch.ca

Keith Knudsen BowArk Energy Ltd.

Suite 4301, 400 3rd Avenue SW Calgary, Alberta T2P 4H2

Tel: 403-264-2259 Fax.: 403-261-1708

Email: kknudsen@bowark.com

Please visit www.southkentwind.ca for more information







### **Pattern Energy**

Pattern is one of North America's leading independent wind and transmission companies. Our mission is to provide our customers with clean, renewable energy, which we seek to achieve by developing, constructing, owning and operating projects that are built for lasting success.

Commitment to community is one of Pattern's core values. We are dedicated to building strong relationships with our landowners, communities, business partners, and customers. We are also committed to the environment, and we make the effort and take the time to understand and minimize our projects' impact on local habitat and wildlife.

We work with landowners to help them transform their land's renewable resource into a steady revenue stream. We are strong supporters of the local communities we work in, and strive to be a good corporate citizenand neighbor. Skilled contractors and vendors help to build our projects, and we frequently join together with local development partners who bring expertise and knowledge of the area. At the end of this process are the customers who purchase the energy we produce. All are critical partners in our mission to provide consumers with clean, renewable energy.

### **BowArk Energy**

Pattern Energy and BowArk Energy have a long history of developing projects together in Canada. BowArk Energy has been developing Projects for the past 8 years, and is currently acting as a development partner with Pattern on the South Kent Wind Project. BowArk is assisting in permitting activities and landowner relations as it relates to the Renewable Energy Approval Process.

### Hatch Ltd.

Pattern Energy and Samsung Renewable Energy have retained Hatch Ltd. to undertake the REA process. Hatch is an Ontario–based consulting, engineering, environmental and management company with operations worldwide and a reputation for excellence acquired over 85 years of continuous service to its clients.







### Samsung



Since the company began in 1938, we have brought advanced technology and product excellence to fields as diverse as resource development, textiles, plastics, finance, construction – even fashion. Increasingly, we have shifted our focus to alternative energy in line with global aspirations for a greener world. Samsung is embracing the green-growth paradigm by focusing on energy and the environment, natural resources, and industrial material.

Samsung is comprised of many companies, one of which is Samsung C&T. It is Samsung C&T's two business divisions – Trading & Investment Group and Engineering and Construction Group with its partners – that will be building and operating the Wind and Solar Power Projects here in Ontario. Samsung has logged many milestones over the years in preparation for such an opportunity. Among them, launching Korea's first solar energy project.

In a changing world, our company mission remains constant: To create superior products and services, thereby contributing to a better global society.

This vision has helped Samsung C&T emerge as a leading player in the new and alternative energy sector, offering solutions to customers worldwide through a network of over 100 offices in 44 countries.

### Kepco

Kepco (Korea Electric Power Corporation) is South Korea's sole vertically integrated power utility, handling generation, transmission, distribution, and sales. It operates a total of 10 subsidiaries, six of which are directly involved in power generation. The company has a generation capacity of 64,500MW, making it one of the world's top power utilities. Kepco aims to lead the industry in low-carbon generation, high-efficiency transmission and distribution, and other green technologies. Kepco is building a global business infrastructure encompassing nuclear, hydro, renewable energy, and resource development as it pursues business opportunities around the world.







### Why Renewable Energy

» The Green Energy and Green Economy Act (GEA) received Royal Assent in the Ontario Legislature on May 14, 2009. According to the Government of Ontario, this legislation is part of Ontario's plan to become a leading green economy in North America.

A component of GEA is the Feed-in-Tariff (FIT) program which was launched in Ontario on October 1, 2009. The purpose of the FIT program was to encourage use of renewable energy sources, and promote growth within the environmental industry. The intent of the FIT program is to:

- Create new Jobs
- Boost economic activity and
- Further the development of renewable energy technology and expertise in Ontario, while helping to phase out coal-fired electricity generation by 2014

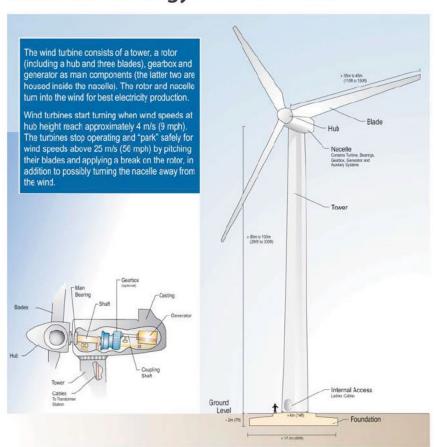
Pattern Energy, Samsung Renewable Energy and KEPCO aredeveloping the South Kent Wind Project in response to the initiatives established in GEA.

### **Advantages of Wind**

There are numerous advantages to wind. These advantages include:

- » Wind is an inexhaustible resource
- » Turbines are quick to install and are low maintenance once in place
- » Benefits the environment by reducing dependence on fossil fuel based power generation
- » Is compatible with mixed land use; grazing, agriculture and hunting
- » Provides a steady income to farmers and property owners
- » Strengthens the local tax base, helping to improve municipal services, including; schools, police and fire departments
- » Produces energy with stable production costs, offering a hedge against other energy sources with volatile fuel markets

### Wind Technology: How it Works



Wind, like water, can be harnessed to transform the kinetic energy into electrical energy. Wind turbines do this by having blades mounted on towers which are turned by the wind, causing them to turn a shaft that's attached to a generator. This creates an electrical current that is carried by cables to the power grid, which, in turn, transmits electricity to your home.

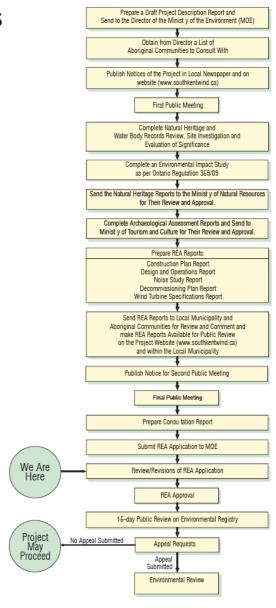




### Renewable Energy Approval (REA) Process

### **REA Process Overview**

- » The REA is issued under Ontario Regulation 359/09 (Renewable Energy Approvals under Part V.O.1 of the Act) under the Environmental Protection Act
- » The REA process is a stringent environmental approvals process that Pattern/Samsung needs to satisfy before building the project
- » The REA approval will specify how the project will be designed, built, operated and decommissioned so that the local community and environment are protected
- » The proposed South Kent Wind Project is considered to be a Class 4 wind facility, as defined under Ontario Regulation 359/09
- » Class 4 wind facilities are defined as have a name plate capacity of 50kW or greater which are not in direct contact with surface water, other than a wetland
- » The Class of the project determines the study and information requirements under the REA process
- » Additional approval and permitting requirements from agencies such as the Ministry of Natural Resources, Ministry of Tourism and Culture and the Lower Thames Valley Conservation Authority will also be addressed as part of the REA application
- » Permits and plans (e.g., Building Permit, Entrance Permit) will also be sought from the Municipality of Chatham Kent prior to Project construction







### **Project Location**

The Project is located south of Highway 401 between the Towns of Tilbury and Ridgetown to the west and east, respectively, within the Municipality of Chatham-Kent in southwestern Ontario.

### **Project Description**

The Project is described as a Class 4 Wind facility with a nameplate capacity of up to 270 MW consisting of 124 wind turbines, as well as supporting infrastructure, including access roads, construction and turnaround areas, buried and/or overhead collector/transmission lines. A 34 km 230 kV transmission line and two (2) substations which are required to enable step-up the voltage from 34.5kV to 230 kV to connect to the Chatham Switching Station (SS).

**REA Project Schedule** 

First Public Meeting – November 22, 2010 and November 23, 2010

Second Public Meeting – September 24, 2011

Final Public Meeting - November 12, 2011

REA Application – deemed complete – February 7, 2012

Public Meeting - Project Changes - May 12, 2012

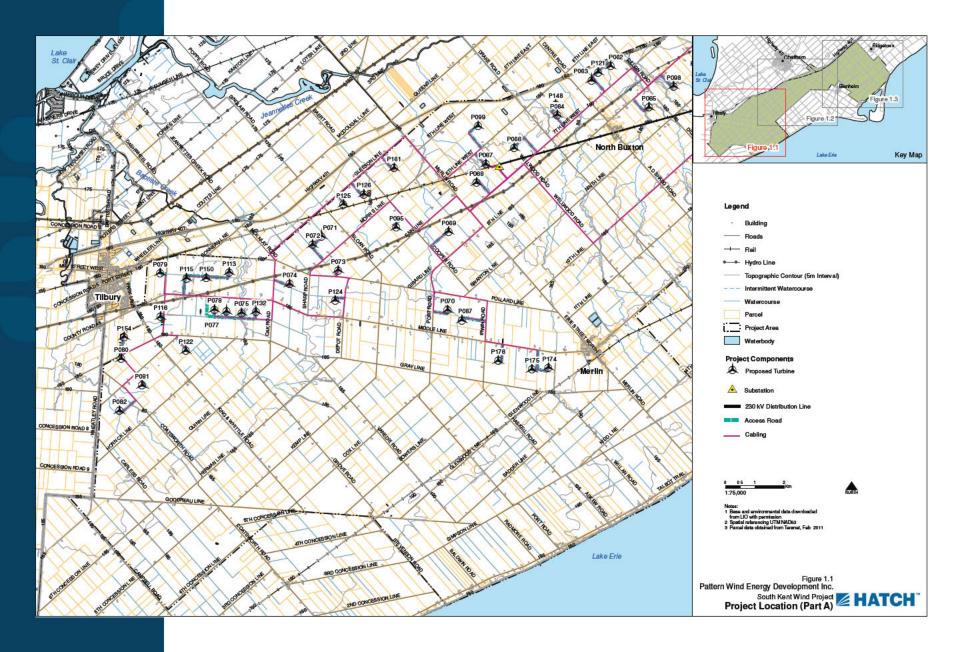
REA Received - Summer 2012

Start of Construction – Fall 2012 (subject to receiving final REA)

Commercial Operation Date - 2014

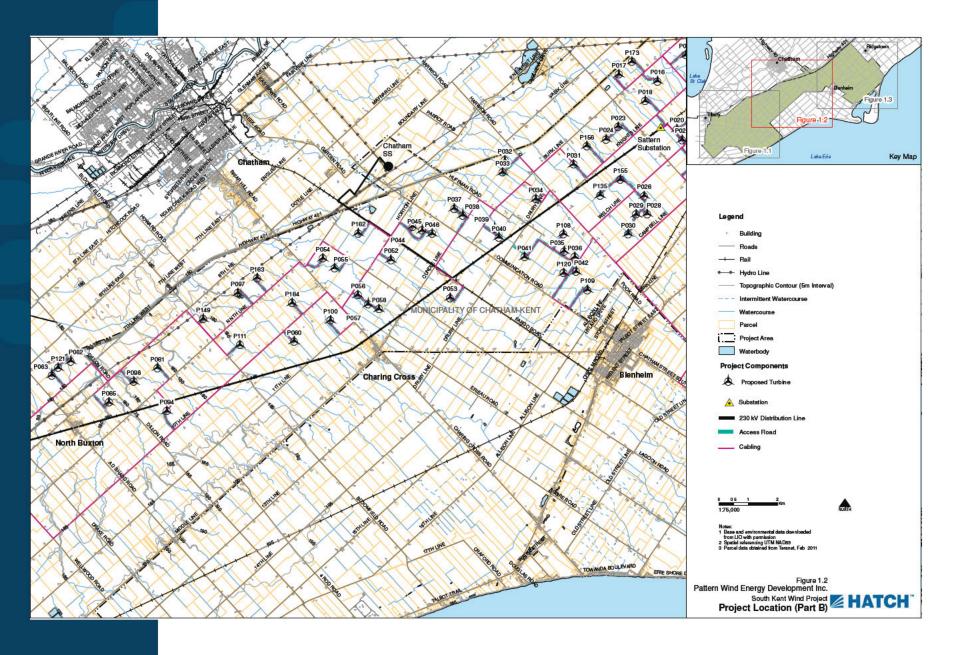






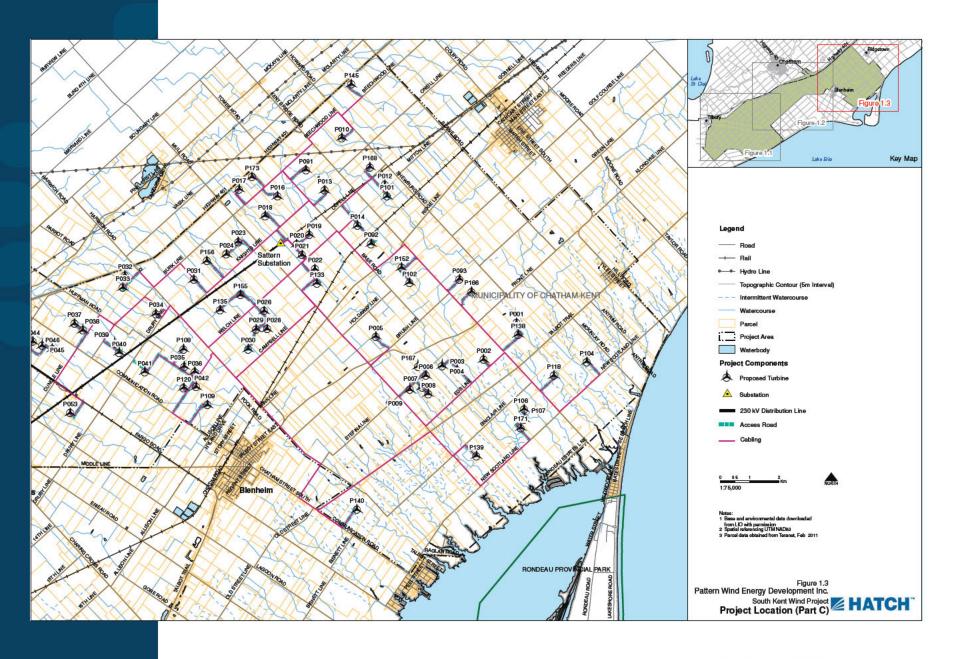
















# South Kent Wind Project

### **Natural Features**

South Kent Wind Project Natural Features roadside surveys were completed within the Project area, and where the Project is to be located within 120 m of a natural feature, individual site surveys were completed

Each feature was assessed for significance based on criteria from the Ministry of Natural Resources Natural Heritage Assessment Guide and Significant Wildlife Habitat Technical Guide. A total of 98 significant/generalized candidate significant natural features were identified on or within 120 m of the Project location. Results include:

- A total of 43 of the 49 significant woodlands were identified as being indirectly impacted by the Project.
   6 woodlands would have access roads and/or cabling installed within the woodland.
- » 1 Provincially Significant Wetland (PSW) and 5 assumed PSW within 120 m of the Project location were identified. No direct encroachment will occur within the wetlands.
- » 4 bat maternity roosts are present within 120 m of the Project location. No direct encroachment will occur within these significant natural features.
- » 1 open country bird breeding habitat was identified on and within 120 m of the Project location. Underground cabling and an access road would occur within this habitat.
- » 1 area-sensitive breeding bird habitat was identified on and within 120 m of the Project location. Underground cabling would occur within this habitat.
- » 9 significant woodland habitats for 3 bat species of concern (Eastern Small-footed Bat (Myotis leibii), Northern Long-eared Bat (Myotis septentrionalis), and Tricolour Bat (Perimyotis subflavus) are located within 120 m of wind turbines and associated infrastructure. Direct encroachment for cabling would be required within one of these features.

- » 8 significant animal movement corridors were identified on and within 120 m of the Project location. 7 are associated with watercourses and 1 is associated with the vegetated corridor along the railway line. All animal movement corridors are interrupted at various locations by municipal and farm access roads.
- » Several other generalized candidate significant wildlife habitats including turtle nesting habitat, bat maternity roosts, open country bird breeding habitat, area-sensitive bird breeding areas, as well as significant habitat for S1-S3 ranked bat species were also identified within 120 m of Project components.

### **Mitigation Measures**

A variety of mitigation measures will be implemented throughout the Project. Examples of mitigation measures include:

- » Clearly marked work areas, to limit impact of construction
- » Where possible, vegetation and earth moving activities to occur outside of the bird breeding season; otherwise an avian biologist will determine if nests are located in the Project footprint and if so, appropriate avoidance will be maintained until the birds leave the nest
- » Reduced speed on access roads
- » Monitoring for wildlife and establishment of wildlife encounter protocols
- » Erosion and sedimentation control measures (e.g. silt fence barriers, straw bale flow checks) will be in place to minimize sediment into significant habitats
- » Post-construction monitoring of birds and bats in accordance with MNR requirements and guidelines will be completed. Should mortality be greater than stipulated levels, the Proponent will discuss mitigation measures with MNR and implement accordingly.

For more details on mitigation measures please see the Natural Heritage Environmental Impact Study.





# South Kent Wind Project

### **Aquatic Environment**

Roadside surveys were completed at each site to either confirm the presence or absence of a water body. Individual site surveys were conducted at each location where a water body is within 120 m of a Project component.

The water bodies and associated habitat characteristics (including aquatic vegetation, substrates, water depths, temperatures, etc.) found within the Project area are typical of the southwestern Ontario landscape. An extensive system of drains has been established to facilitate land drainage for agricultural practices. These drains represent a large proportion of the water bodies found throughout the Project area, typically located alongside roads and agricultural fields. Additional permanent and intermittent streams are found as naturally vegetated tributaries that flow either northward to the Thames River and ultimately into Lake St. Clair or southward into Rondeau Bay or Lake Erie. A summary of water bodies is as follows:

- » Confirmation of the presence of 243 water bodies within the Project area. Additionally, 265 total crossing locations where water bodies are crossed by project infrastructure were documented. Of these, 189 crossings are attributed to cabling alone, 3 are access roads only, and 73 are a crossing location that includes both access roads and underground cabling at the same location.
- » None of the documented water bodies are found within 30 m of a turbine base.
- » No lakes, or lake trout lakes were identified within the Project area, however a total of 12 sites were found to have aquatic vegetation (i.e., watercress) indicative of groundwater seepage areas.

» Essential habitat for fish and other aquatic organisms is provided in many of these streams year round and therefore careful consideration must be given in order to protect the streams from immediate or prolonged degradation.

### **Mitigation Measures**

A variety of mitigation measures will be implemented throughout the Project. Examples of mitigation measures include:

- » Erosion and sedimentation controls measures (e.g. silt fence barriers, straw bale flow checks) will be in place to minimize any sedimentation into nearby water bodies.
- » Stormwater management measures (e.g. site revegetation) to allow water to naturally percolate into the ground will be implemented to maintain natural and original drainage
- » Spill response measures (e.g. spill kits and emergency response plan) will be implemented to minimize the potential for spill adjacent to a water body

For more details on mitigation measures please see the Water Body Heritage Environmental Impact Study.





# South Kent Wind Projec

### Anticipated Construction Schedule

Activity	Start	Finish
REA Approval (Estimate)	Summer 2012	Summer 2012
Turbine Procurement, Fabrication & Delivery	Summer 2012	Summer 2013
Mobilize	Fall 2012	Fall 2012
Installation of Site Access Components	Fall 2012	Winter 2013
Safety and Security	Fall 2012	Summer 2014
Temporary Facilities	Fall 2012	Winter 2014
Power and Communication	Fall 2012	Summer 2013
Turbine Site Preparation	Fall 2012	Winter 2013
Foundations	Fall 2012	Spring 2013
Turbine Erection	Summer 2013	Winter 2014
Electrical Systems	Fall 2012	Summer 2013
Commissioning	Fall 2013	Spring 2014
Commercial Operation Date	Spring 2014	Spring 2014
Remediation and Demobilization	Spring 2014	Summer 2014

### **Project Construction**

Construction expected to occur from 7:00 am to 7:00 pm Monday through Saturday for the duration of construction. If required, the daily construction time could be extended to 11:00 pm as per Municipal by-law.

### **Site Preparation**

- » Staking and surveying, clearing and grubbing, if required
- » Installation of security measures, e.g. fencing
- » Preparation of construction staging areas

### **Construction of Facility**

- » Construction of access roads
- » Installation of foundations for turbines
- » Base preparation for substations
- » Wind turbine and substation installation
- » Installation of distribution and transmission lines
- » Testing and commissioning

### Site restoration

- » All construction material and temporary facilities will be removed and disposed of properly
- » Top soil will be backfilled where appropriate to achieve property drainage
- » Re-vegetation and hydro-seeding to occur, where needed

### Traffic and Roads

- » Only designated transportation routes will be followed
- » Proper signage for detours will be promptly displayed
- » Flagman and police escorts will be used as necessary

### Safety

- » Fencing and signs will be used to mark off construction zones
- » Spills will be handled by the procedures outlined in the Emergency Response Plan





### **Design and Operations**

### **Project Components**

Project Component	Number	Description
Wind Turbine	124	Siemens SWT-2.3-101
Substation	2	Sattern and Railbed substations – prefabricated building, transformer to be surrounded by 7-9 m tall sound barriers

### **Project Operations**

- » Real time monitoring of the Project will occur remotely to adequately ensure the performance and safety of the wind turbines.
- » Weekly and monthly maintenance activities are to occur throughout the life of the Project.

### Decommissioning

It is anticipated that the Project will have a useful lifetime of at least 20 years, which can be extended further with proper maintenance, component replacement and repowering. It is assumed that the Project will be decommissioned after the conclusion of its useful economic life.

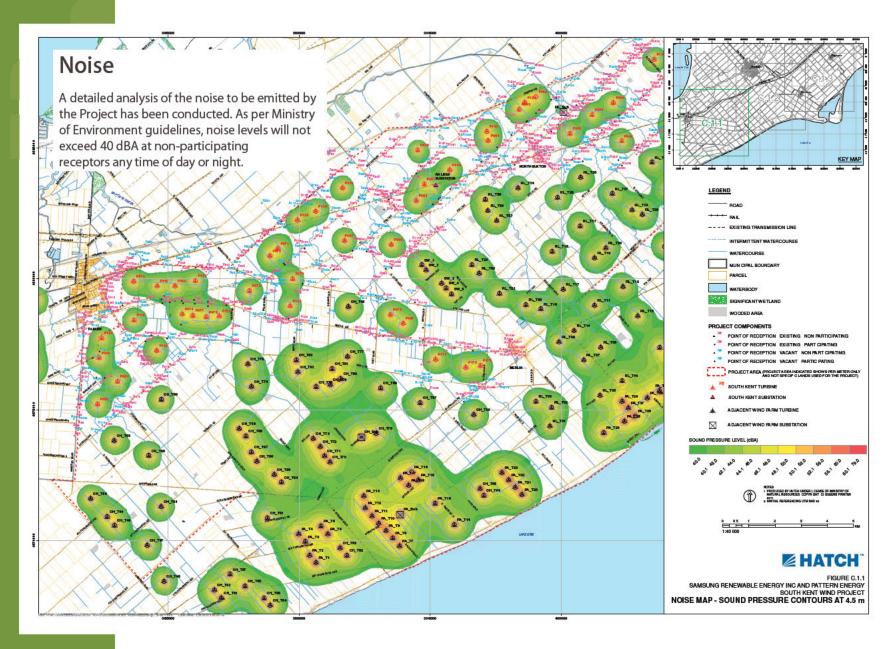


Activities involved in decommissioning include:

- » removal of the wind turbines and all electrical appurtenances for salvage
- » removal of foundations and any access roads not wanted for future farming purposes to a depth suitable for ploughing (approximately 1.0 m)
- » replacement of topsoil to a depth of surrounding undisturbed lands and plant with suitable ground cover dependant on time of year and in consultation with property owner

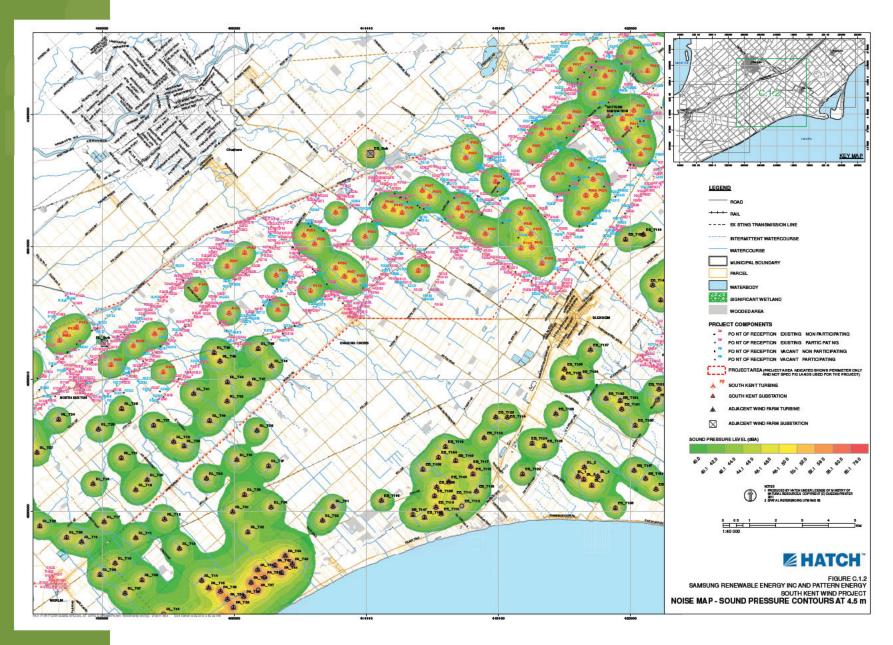






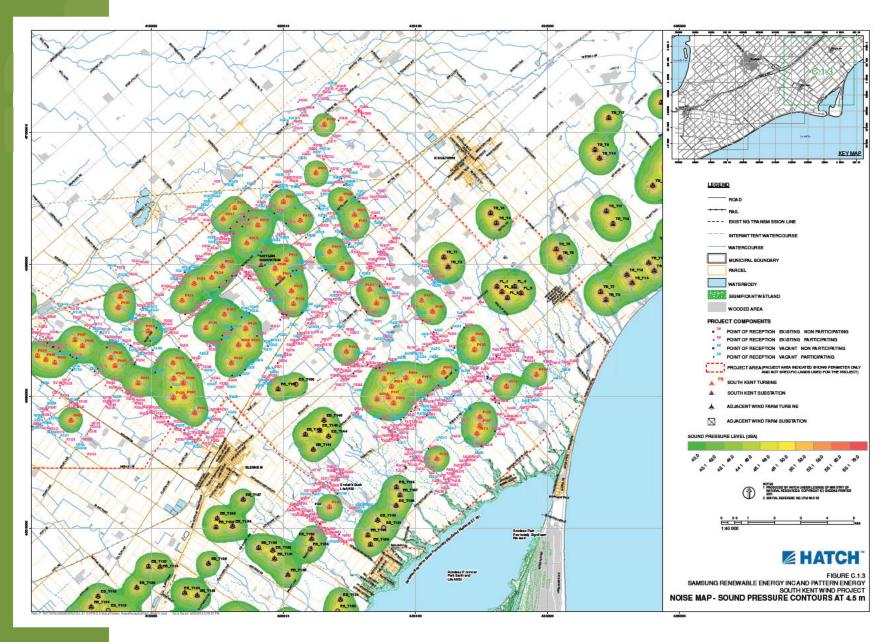
















### **Property Values**

"In the study area, where wind farms were clearly visible, there was no empirical evidence to indicate that rural residential properties realized lower sale prices than similar residential properties within the same area that were outside of the viewshed of a wind turbine."

Canning, G., and L. J. Simmons. (February 2010). Wind Energy Study Effect of Real Estate Values in the Municipality of Chatham-Kent. Canning Consultants Inc. & John Simmons Realty Services Ltd. Prepared for the Canadian Wind Energy Association.

"Research collected data on almost 7,500 sales of single family homes situated within 10 miles of 24 existing wind facilities in nine different U S. states. The conclusions of the study are drawn from eight different hedonic pricing models, as well as both repeat sales and sales volume models.

The various analyses are strongly consistent in that none of the models uncovers conclusive evidence of the existence of any widespread property value impacts that might be present in communities surrounding wind energy facilities. Specifically, neither the view of the wind facilities nor the distance of the home to those facilities is found to have any consistent, measureable, and statistically significant effect on home sales prices.

Although the analysis cannot dismiss the possibility that individual homes or small numbers of homes have been or could be negatively impacted, it finds that if these impacts do exist, they are either too small and/or too infrequent to result in any widespread, statistically observable impact."

Hoen, B., Wiser, R., Cappers, P., Thayer. M., and G. Sethi. (December 2009). The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Hedonic Analysis. Ernest Orlando Lawrence Berkeley National Laboratory. Prepared for the Office of Energy Efficiency and Renewable Energy.







### Community Benefits

### Supports the local economy by:

- » Purchasing good and services during construction and operation
- » Significantly increasing revenue for all service businesses, i.e. local restaurants and hotels during construction and operations

### Significantly contributes to the tax base annually with approximately \$800,000/year, benefiting:

- » Local Government and Related Services
- » Lambton Kent School District

Through land lease agreements with landowners, the Project will provide additional income for farmers

### **Job Creation**

### Construction

### Job opportunities: up to 300 positions during peak construction periods

- » Subcontractors experienced in civil work (grading, excavation, and concrete), electrical work, and mechanical assembly
- » Construction managers, electricians, heavy equipment operators and general labourers for assembly & civil work

### Operation

» Maintenance personnel proficient in mechanics or electrical/ electronic technicians

### Manufacturing

- » This project is part of the Samsung Green Energy Investment Agreement, which is committed to the establishment of four manufacturing facilities in the Province of Ontario. The manufacturing facilities will create:
  - 900 or more jobs (from 4 manufacturing facilities)
  - 550 or more (steel industry etc.)
     (excluding construction, operation & maintenance jobs)

### Wind Energy's Economic Ripple Effect

**Direct Impacts** Indirect Impacts Induced Impacts Off-site These jobs and earnings result from the spending Construction workers Boom truck & by people directly and supporting businesses, Management Management, gas and gas indirectly supported by the Administrative support station workers, blades the construction, project, including benefits and towers & workers to grocery store clerks, Cement truck drivers, and equipment suppliers of retail salespeople and Road crews, Hardware store purchases child care providers maintenance workers and workers, spare parts and their suppliers







# South Kent Wind Project

### Environmental Benefits of 270 MW of Wind Energy Compared to Coal-Fired Generation

### Carbon Dioxide Emissions Reduced

877,077 tonnes/year 157,172 car equivalent

### Coal

409,491 tonnes/year

### **Sulfur Dioxide**

3,940 tonnes/year

### **Nitrogen Oxides**

1,331 tonnes/year

### **Water Conserved**

1,840,610,359 litres/year 5,042,768 litres/day 14,800 people each day



Sources: Based on information from the Energy Information Administration, National Energy Technology Laboratory, and U.S. Geological Survey. Annual emission offsets based on 270 MW wind project offsetting coal-fired generation, using capacity factor for Chatham-Kent area and accounting for regular turbine maintenance. Water conserved compared to coal-fired generation (541 gallon/MWh), source American Wind Energy Association. People supplied figure based on USGS estimation of 80-100 gallons/day per capita water consumption, US Geological Survey, "Water Q&A: Water use at home," http://ga.water.usgs.gov/edu/qahome.html.





### Blowing Smoke: Correcting Ontario Anti-Wind Myths

### · Myth 1: Health impacts

» Reality: Repeated studies around the world have found no scientific evidence of health impacts from wind power projects.

### · Myth 2: Viability

» Reality: Wind power has been successfully used for decades and the world is rapidly scaling up its use because it works, particularly in light of climate change.

### Myth 3: Economic & Environmental Benefits

» Reality: Wind power is creating thousands of jobs across Ontario and letting us reduce the use of harmful fossil fuels.



### Sierra Club: The Real Truth About Wind Energy

June 2011 report by the Sierra Club Canada

- " After a thorough review of the science, we are confident in saying there is no evidence of significant health effects that should prevent the further development and implementation of wind turbines, wind farms and wind energy."
- "The further development of wind energy as a growing portion of our energy supply will reduce direct carbon emissions, improve the quality of the air we breathe, and generally improve the health and well-being of Canadians, our families and the environment in which we live."
- "With a full review of available data, including that referenced by wind opposition groups, Sierra Club Canada adds its voice to the overwhelming majority of governmental, non-governmental, scientific and environmental groups in saying that a link between wind turbines and health concerns is unfounded."

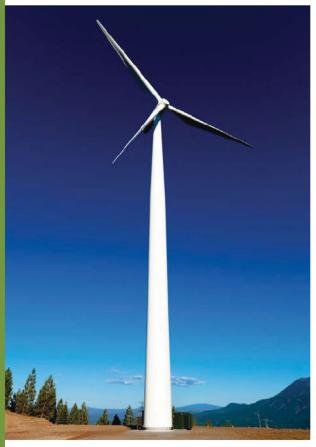






# South Kent Wind Projec





### **Health and Wind Power**



- » Public health and safety will be considered during all stages of the Project.
- » Many studies have been conducted world-wide to examine the relationship between wind turbines and possible human health effects.
- » In Ontario "Ontario doctors, nurses, and other health professionals support energy conservation combined with wind and solar power – to help us move away from coal"

Ontario College of Family Physicians, Registered Nurses Association of Ontario, Canadian Association of Physicians for the Environment, Physicians for Global Survival, the Asthma Society of Canada, and the Lung Association

- » In "The Potential Health Impact of Wind Turbines" (May 2010), Ontario's Chief Medical Officer of Health recently examined the scientific literature related to wind turbines and public health, considering potential effects, such as dizziness, headaches, and sleep disturbance. The report concluded that:
  - "...the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects. The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct health effects, although some people may find it annoying."

The report also concluded that low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, the report states that there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.

- » Overall, health and medical agencies agree that sound from wind turbines is not loud enough to cause hearing impairment and is not causally related to adverse effects.\*
- » Scientists and medical experts around the world continue to publish research in this area. Through our health consultants, Pattern is committed to keeping informed on this issue.

\*e.g., Chatham-Kent Public Health Unit, 2008; Minnesota Department of Health, 2009; Australian Government, National Health and Medical Research Council, 2010; Australian Government, 2011, Massachusetts Department of Environmental Protection (MassDEP) and Massachusetts Department of Public Health (MDPH), 2012





### **Your Comments**

Comments or concerns can be provided in the following ways:

- 1. Completion of a comment sheet. Please deposit the completed sheet in the Comments Box provided at this meeting or complete at home and fax/e-mail. If you wish to receive future Project mailings, please ensure your complete mailing address is provided.
- 2. Identification of comments or concerns to any Pattern Energy, Samsung Renewable Energy, Bowark or Hatch representatives present at this Public Meeting.
- 3. Contact the representatives for the Project at the addresses provided below:

**Kimberley Arnold**, BSc, MES Environmental Lead - Energy Hatch Ltd. 4342 Queen St., Suite 500, Niagara Falls, Ontario, L2E 7J7 Phone: 905-374-0701 Ext. 5318 Fax: 905-374-1157 karnold@hatch.ca

### Keith Knudsen

Project Manager BowArk Energy Ltd. Suite 4301, 400 3rd Avenue SW, Calgary, Alberta T2P 4H2 Phone: 403-264-2259 Fax: 403-261-1708 kknudsen@bowark.com Please visit the South Kent Wind Project website at www.southkentwind.ca for more information on the Project and the Proponent.





### **Next Steps**

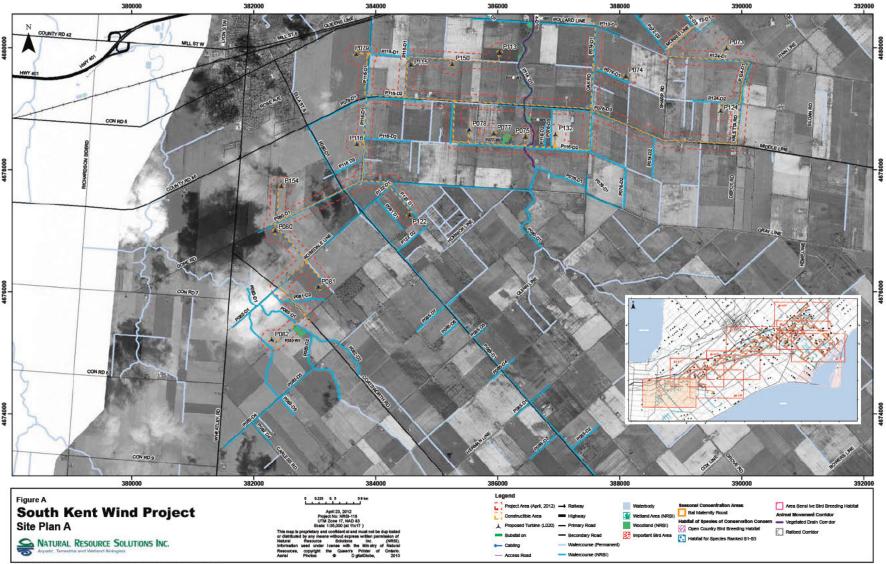
An addendum to the consultation report, documenting all concerns and questions from this meeting, and since the Final Public Meeting in November 2011, will be produced and sent to the MOE for acceptance. All other revised Project documents have already been provided to MOE.

The Project was deemed complete by the Ministry of the Environment in early February 2012. Once deemed complete, approval can take up to six months after which the public has 15 days to request an appeal of the approval decision with the Ministry of the Environment

Thank you for attending our Public Meeting.



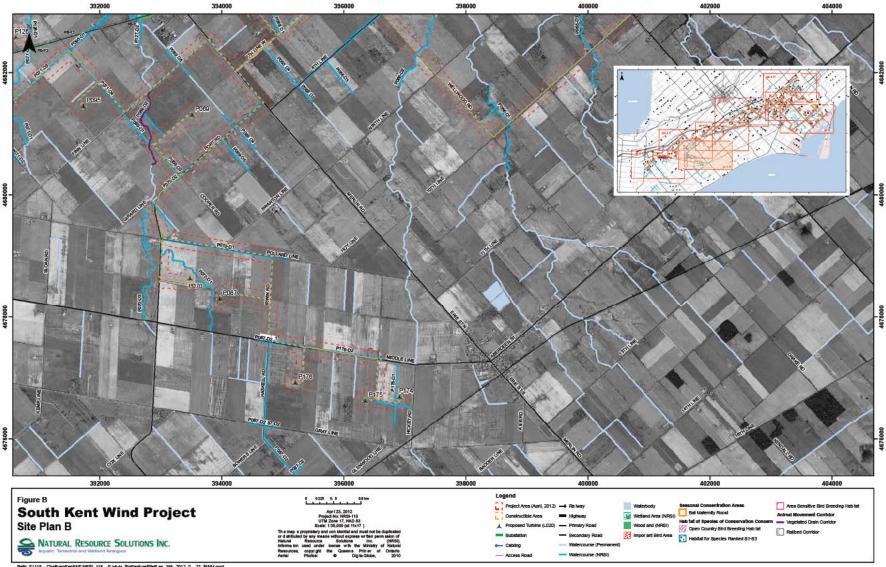




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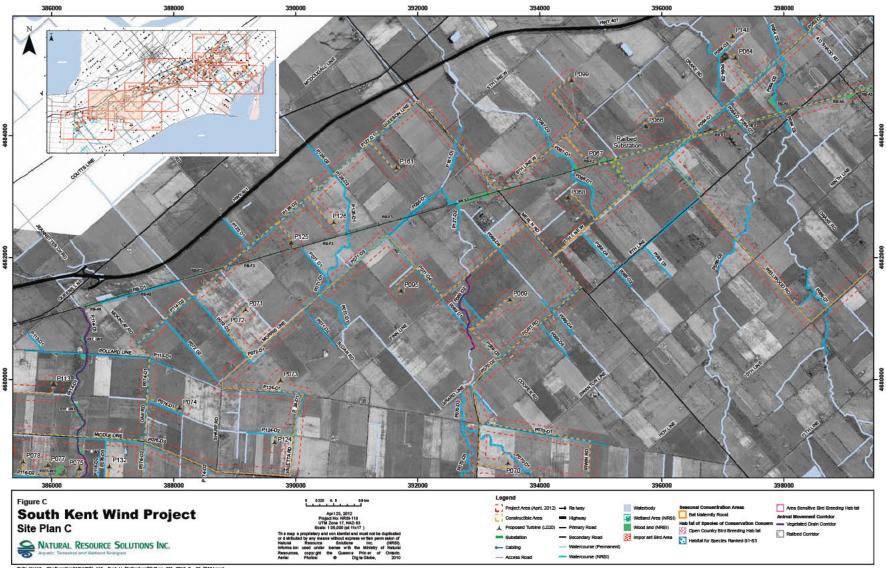




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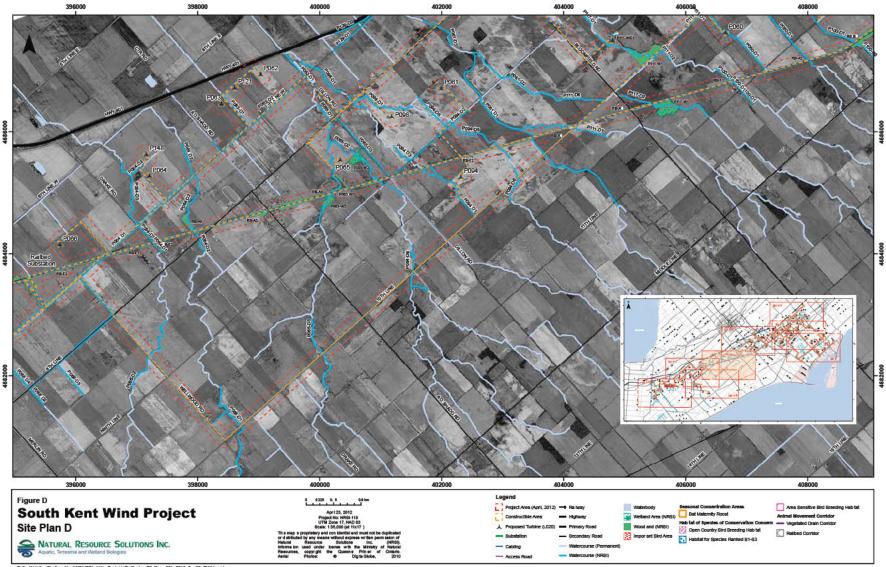




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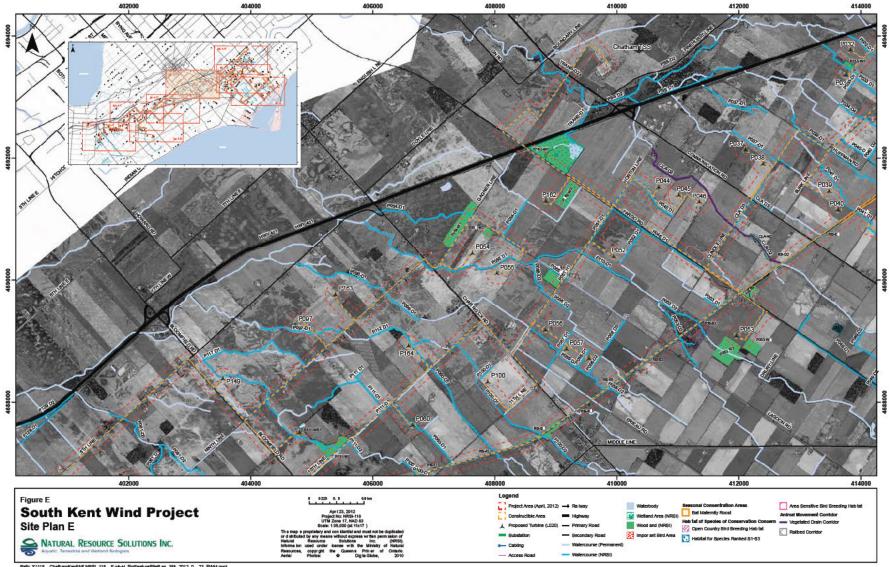




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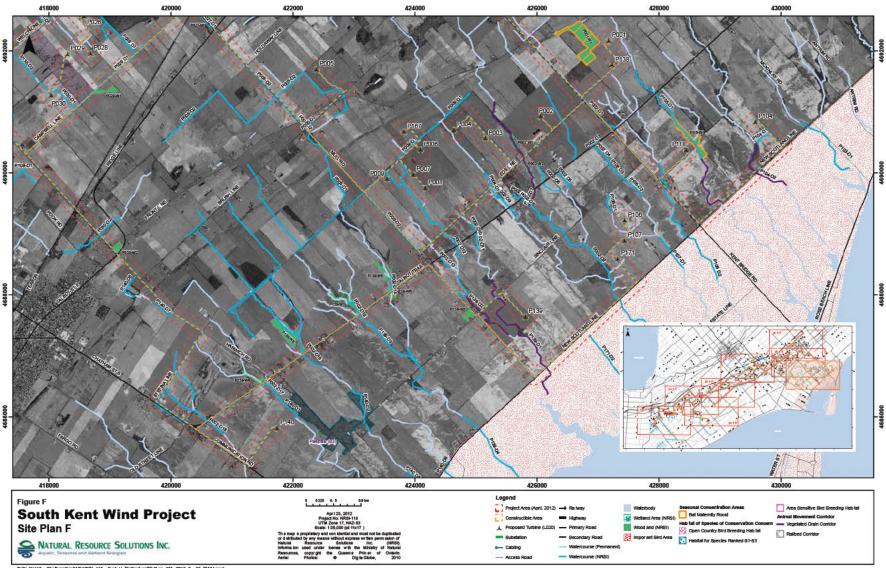




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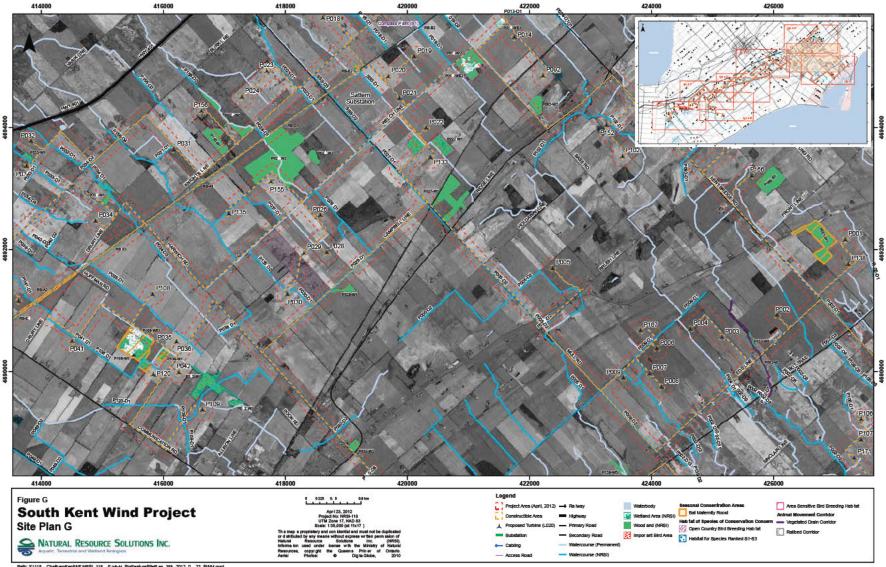




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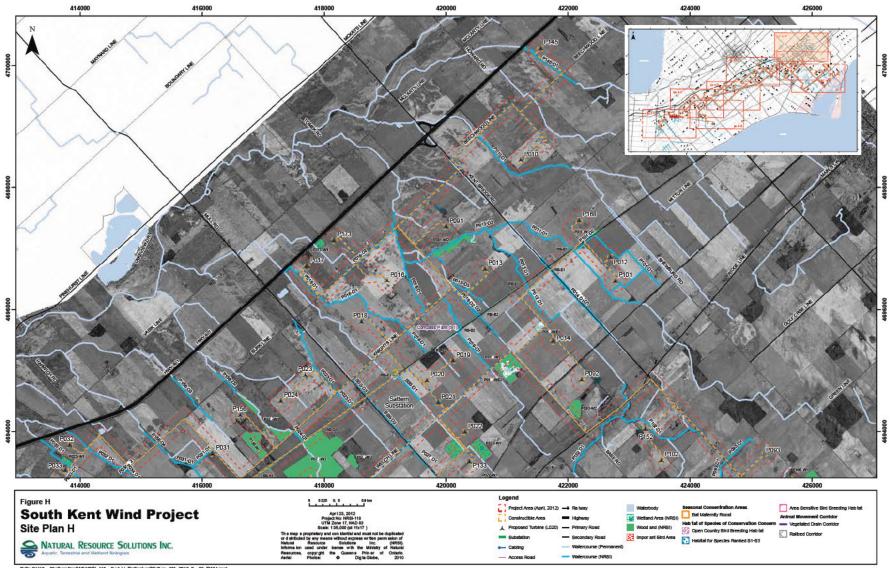




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### Please Sign In

# (PLEASE USE BLOCK LETTERS) South Kent Wind Project – Final Public Meeting

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\*Please note that all information provided on this form will become part of the formal record and will be published in Project reports that will be available for public review

South Kent Wind Project - Final Public Meeting

Date: Saturday, May 12, 2012

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South Kent Wind Project - Final Public Meeting

Date: Saturday, May 12, 2012

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Tomo Beth Ober	4082 Polland line	Line (1	NOPZLO	519-682-2055
Murray Moerman	10706 line BLenheim	BLenheim	Nob1 40	519-676-8209
Nin Elzman	372 Park Ave Chathen	Ave Cha	then town 540	519-394-2193
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Robinsto Wonne Conte	3774 Madde	Jehns	NOPZEC	519-682-9598
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South Kent Wind Project - Final Public Meeting

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# South Kent Wind Project - Final Public Meeting

Date: Saturday, May 12, 2012

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### South Kent Wind Project

### Comment Sheet Final Public Meeting: Saturday May 12, 2012 (PLEASE USE BLOCK LETTERS)

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WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

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### South Kent Wind Project

### Comment Sheet Final Public Meeting: Saturday May 12, 2012 (PLEASE USE BLOCK LETTERS)

1. Please describe where you reside in relation to the Project area? <u>///2? Bras</u>	<u>:</u> /\
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2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?	
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because of turbine close by.	
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	Name:	Guen Hreceriuh
•	Mailing Address:	11129 Brush Line
		Blenheim NOP IAO.
	Email Address:	gh. paint rider @ yahoo. con

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

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### South Kent Wind Project

### Comment Sheet Final Public Meeting: Saturday May 12, 2012 (PLEASE USE BLOCK LETTERS)

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### South Kent Wind Project

### **Comment Sheet**

Final Public Meeting: Saturday May 12, 2012 (PLEASE USE BLOCK LETTERS)

1. Please describe where you reside in relation to the Project area?
Figure A - waterway marked on Tot 23-22
MBMRS) 3774 Middle Line
- NRSI has new waterway marked
on farm that is not there
2. Please provide any relevant information related to the Project area which, in your opinion, should be considered in assessing the potential effects of the Project?

Continued on back

3. Please provide any comments, questions or concerns related to the Project and the Project changes.			
If you would you like to be in and full mailing address below	icluded on the Project mailing list, please provide your name v:		
Name:	Donna Cook		
Mailing Addres	ss: 3774 Middle Line		
	Pulbury ON NOPZLO		
Email Address:	dd. cook a hotmail. com		

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

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Continued on back

### South Kent Wind Project

### Comment Sheet Final Public Meeting: Saturday May 12, 2012 (PLEASE USE BLOCK LETTERS)

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If you would you like to be i and full mailing address belo	ncluded on the Project mailing list, please provide your name w:
Name:	John Jordan
Mailing Addre	ess: RR#6
	Chatham, ON N7M3JC
Email Address	:: reservations e jordan-house.com

WE WELCOME YOUR INPUT. PLEASE COMPLETE AND SUBMIT THIS COMMENT SHEET BEFORE LEAVING - THANK YOU

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Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project Consultation Report

### Appendix E Landowner Presentation











### Harvesting the Wind for Chatham-Kent

South Kent Wind July 19, 2011

### **Agenda**

- Introductions
- South Kent Wind Project Overview
- Renewable Energy Approval Process
- Community, Economic and Environmental Benefits
- Q & A





### Introductions





### **Pattern Energy**

### Financially strong, long-term developer, owner and operator of energy assets

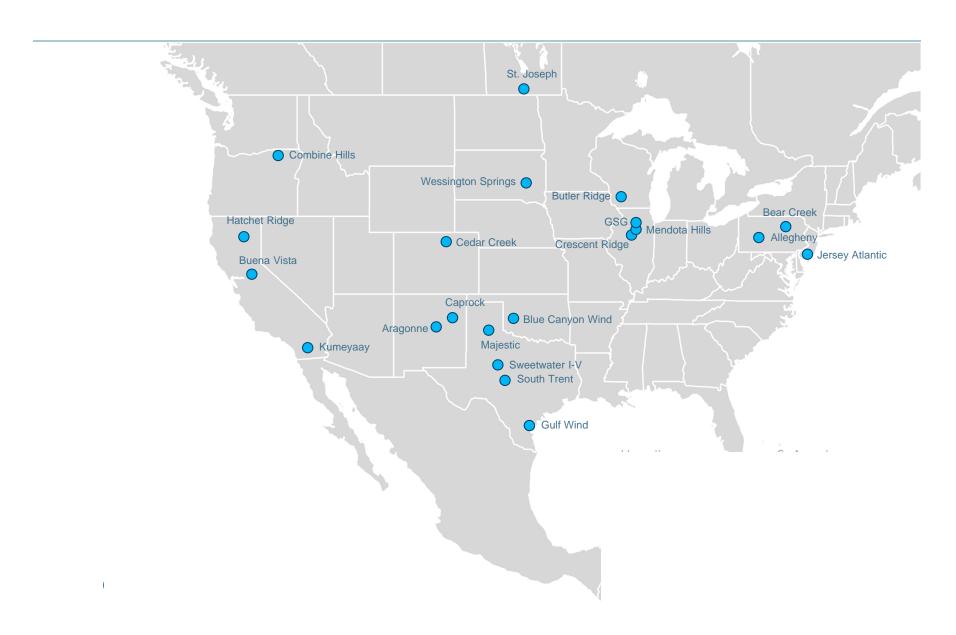
- One of the most experienced and best-capitalized development companies in the U.S. renewable energy and transmission industry
- 100-person team of dedicated professionals with proven track record of developing, constructing, financing, and placing into operation 2,500 MW of wind power
- Expertise & experience at all project stages: resource analysis, site development, finance, construction and operation
- Dedicated to delivering the highest values for our partners and the communities where we work
- Strong commitment to promoting environmental stewardship and corporate responsibility







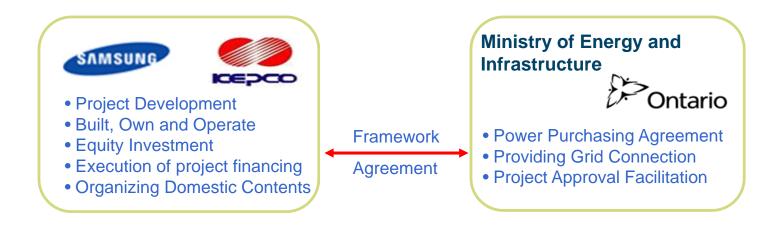
### **Projects the Pattern Team Brought To Operation**



### Korean Consortium: Samsung & KEPCO

### Co-Development 2.5GW Renewable Energy Cluster Project

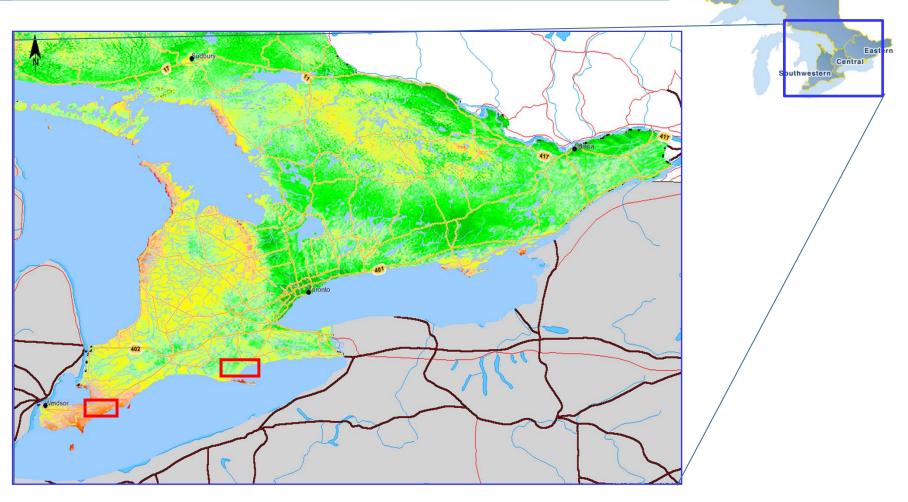
- Planned Capacity: 2.5 GW in 5 Phases [2,000 MW Wind and 500 MW Solar PV]
- 400 MW Wind and 100 MW Solar PV for each phase development
- Total Investment by Samsung and its partners: \$7 billion







### **Phase 1 Project Sites**



Northwest

Northeast





### **Purpose and Need**

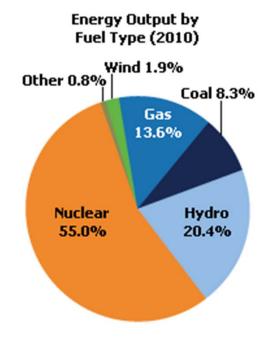


### Green Energy Act – Ontario Energy Targets

- 10,000 MW of new installed renewable energy by 2015, over and above 2003 levels
- 25,000 MW of new installed renewable energy by 2025, over and above 2003 levels
- 2025 generation mix of 40% Renewables, 35%
   Nuclear, 25% Natural Gas and Oil

### Increasing Wind Energy— Eliminating Coal

 Nanticoke and Lambton unit shutdowns in 2010 eliminated 2,000 MW of coal-fired generation







### **Creating Ontario Employment Opportunities**

### Intent of Green Energy Investment Act is to support the Green Energy Act by creating green-collar manufacturing jobs

- 16,000 total direct and indirect jobs created by the Green Energy Investment Agreement
- Manufacturing
  - Four manufacturing facilities for wind turbine and solar panel components
  - Ontario steel used for wind turbine towers
- Construction
  - Job opportunities for local residents
  - Subcontractors experienced in civil and electrical work
  - Construction managers, electricians, heavy equipment operators and general labourers for assembly & civil work
- Operation
  - Maintenance personnel proficient in mechanics or electrical/electronic technicians





### South Kent Wind Project Overview





### **South Kent Wind Project Overview**

- 270 MW wind energy generation project
- Power equivalent: approx. 73,000 Ontario homes
- Estimated \$16 million in property taxes generated over 20 year contract period
- 12 18 month construction period
- Up to 300 jobs during construction period
- Approximately 20 permanent jobs during operations
- Project area: approximately 46,000 acres
- Surface area affected during operations: typically less than 1% of total project area







\*Uses assumption from the American Wind Energy Association that one megawatt of installed wind energy capacity costs \$2 - 2.5 million US dollars.

### **Proposed Wind Turbines**

- Turbine Manufacturer: Siemens
- Number of Turbines: Approximately 125
- Rotor speed: 6 16 rpm
- Hub height: 99.5 m or 326 ft
- Blade length: 49 m or 161 ft
- Tower base diameter: 4.5 m or 15 ft
- Cut-in speed: 4 m/s or 9 mph
- Cut-out speed: 25 m/s or 56 mph
- 2.126 MW and 2.221 MW







### **South Kent Wind Project Timeline\***

Commence Environmental Consultant Site Visits

Project Description Report posted to public

Notice of Proposal

Public Information Session #1

Reports and Layout Available for Public Review

Public Information Session #2

Submission of REA Application

Start of Construction

**Commercial Operation Date** 

August 2010

October 2010

October 2010

November 2010

July 2011

September 2011

September 2011

First Quarter 2012

First Quarter 2013











# Renewable Energy Approval Process





# **Areas of Consideration**



The permit process will analyze and disclose any potential impacts from the project. Examples of resources considered include:

- Vegetation
- Wildlife, threatened & endangered species (animal or plant)
- Migratory Birds
- Important Bird Areas
- Cultural Resources
- First Nations Communities
- Noxious Weeds/Invasive Non Native Species
- Wetlands
- Floodplains

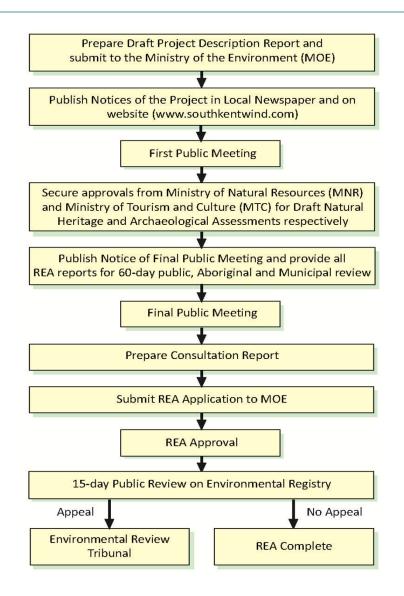
- Socioeconomic
- Sound Impacts
- Environmental Justice
- Air Quality
- Geology and Soil
- Recreation
- Transportation
- Visual Resources
- Water Resource Assessment
- Vegetation Restoration Plan





# **REA Approval Process Overview**







# Renewable Energy Approval Next Steps

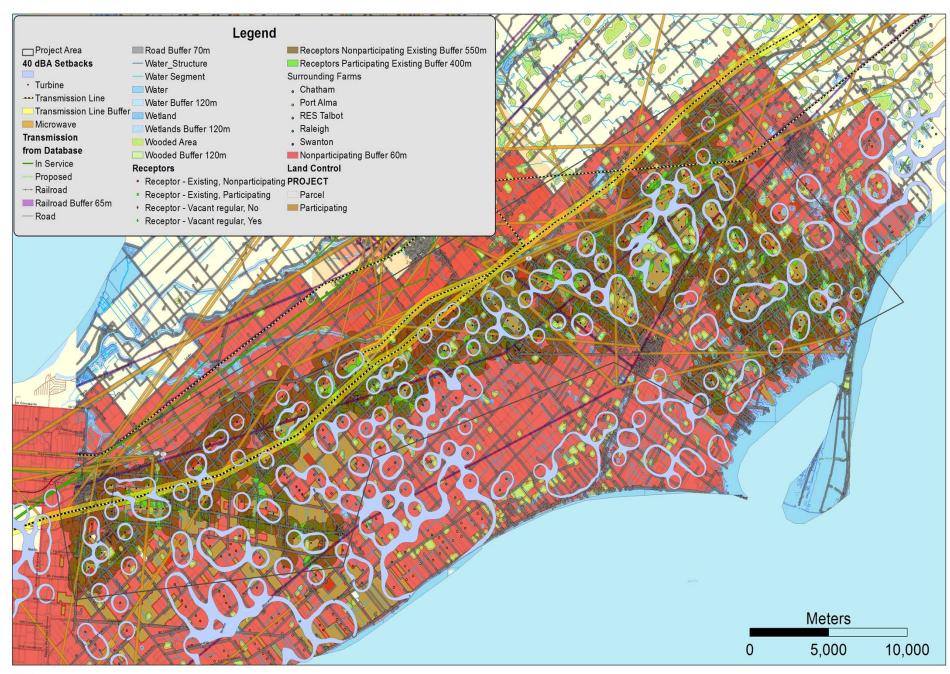


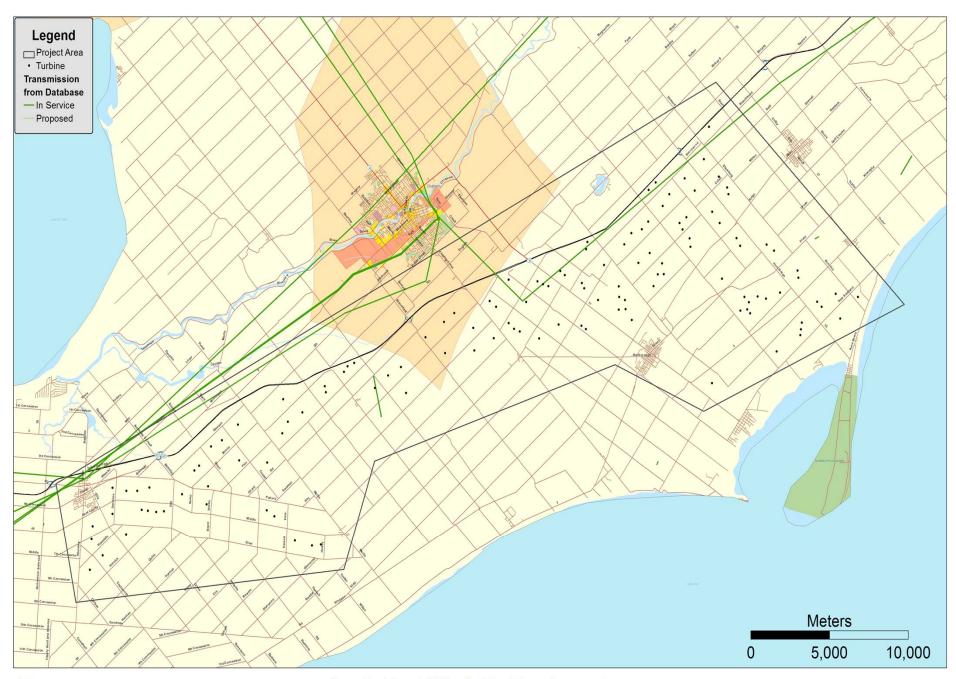
- On July 26, all reports will be available for public, Aboriginal and municipal consultation: www.southkentwind.ca
- Final public meeting to be held at the end of September
  - Formal notification will be sent to all property owners
  - Published in Chatham Daily News, Ridgetown Independent News, Blenheim News Tribune, and Tilbury Times
- Comments on the Project will be received until the final public meeting and included in the Consultation Report
- September is target for submitting the REA application to the Ministry of the Environment (MOE)
- Stage 3 and 4 Archaeological Assessments will be completed prior to construction











# Community, Economic and Environmental Benefits





# **Benefits of Wind Energy**

# Wind Energy...

- ✓ Is an inexhaustible resource,
- Reduces reliance on imported fuel,
- ✓ Benefits the environment and helps fight climate change,
- ✓ Is compatible with mixed land use: grazing, agriculture, and hunting,
- Creates job opportunities in local areas,
- Provides a steady income to farmers and property-owners,
- Strengthens the local tax base, helping to improve town services, including schools, police and fire departments,
- ✓ Provides more direct economic impacts than new fossil fuel plants,
- Produces energy with stable production costs, offering a hedge against other energy sources with volatile fuel markets.







# **Economic Benefits from 270 MW Wind Project**

- Supports local economy by:
  - Purchasing goods and services and significantly increasing revenue for service businesses.
  - Creating direct job opportunities with up to 300 during construction and up to 20 positions during operations.
  - Increasing business for construction subcontractors that employ local workers.
- Significantly contributes to tax base annually with estimated \$800,000 benefiting:
  - Municipality of Chatham-Kent
  - Lambton-Kent School District
- Community commitments for the life of the project







# **Environmental Benefits of 270 MW Wind Energy Compared to Coal-Fired Generation**

#### Carbon Dioxide Emissions Reduced

877,077 tonnes/year 157,172 car equivalent

#### **Sulfur Dioxide**

3,940 tonnes/year

#### **Nitrogen Oxides**

1,331 tonnes/year

#### **Water Conserved**

1,840,610,359 liters/year

5,042,768 liters/day

56,031 people each day







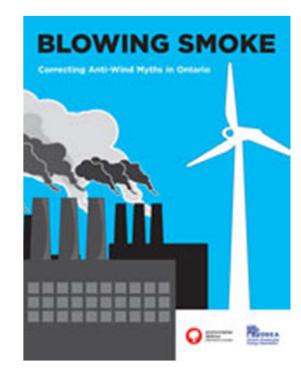
Sources: Based on information from the Energy Information Administration, National Energy Technology Laboratory, and U.S. Geological Survey. Annual emission offsets based on 270 MW wind project offsetting coal-fired generation, using capacity factor for Chatham-Kent area and accounting for regular turbine maintenance. Water conserved compared to coal-fired generation (541 gallon/MWh), source American Wind Energy Association. People supplied figure based on USGS estimation of 80-100 gallons/day per capita water consumption, US Geological Survey, "Water Q&A: Water use at home," http://ga.water.usgs.gov/edu/qahome.html.





# **Blowing Smoke: Correcting Ontario Anti-Wind Myths**

- Myth 1: Health impacts
- Reality: Repeated studies around the world have found no scientific evidence of health impacts from wind power projects.
- Myth 2: Viability
- Reality: Wind power has been successfully used for decades and the world is rapidly scaling up its use because it works, particularly in light of climate change.
- Myth 3: Economic & Environmental Benefits
- Reality: Wind power is creating thousands of jobs across Ontario and letting us reduce the use of harmful fossil fuels.



June 2011 report by
Environmental Defense and the
Ontario Sustainable Energy
Association





# Sierra Club: The Real Truth About Wind Energy

- "After a thorough review of the science, we are confident in saying there is no evidence of significant health effects that should prevent the further development and implementation of wind turbines, wind farms and wind energy."
- "The further development of wind energy as a growing portion of our energy supply will reduce direct carbon emissions, improve the quality of the air we breathe, and generally improve the health and well-being of Canadians, our families and the environment in which we live."
- "With a full review of available data, including that referenced by wind opposition groups, Sierra Club Canada adds its voice to the overwhelming majority of governmental, non-governmental, scientific and environmental groups in saying that a link between wind turbines and health concerns is unfounded."



June 2011 report by the Sierra Club Canada









Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project Consultation Report

# Appendix F **Correspondence with Agencies**





Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project Consultation Report

Agency Correspondence - MNR



#### Carson, Lisa

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:02 AM

To: Vukovics, Kathleen

Subject: FW: South Kent - Records Review Report

2010-11-08 South Kent WF - RR Comment Table .doc Attachments:

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Monday, November 08, 2010 5:00 PM

To: Arnold, Kimberley

Cc: Kim Sachtleben; Colin Edwards; Keith Knudsen; Marnie Dawson; B Edwards; Wherry, Kathryn; aryckman@nrsi.on.ca;

Christy Humphrey; Kevin Dance; Male, Sean; 335936; Simpson, Holly (MNR)

Subject: RE: South Kent - Records Review Report

Hi Kim,

Attached please find a table that outlines the MNR's comments on the records review report provided on November 2, 2010. Please consider incorporating these suggestions within the second draft of the report and identify how our suggestions have been incorporated within the fourth column of the table.

Please contact me if you have any questions.

Thanks, Heather

#### **Heather Riddell**

A/ Planning Ecologist MNR, Aylmer District (519) 773-4723

**From:** Arnold, Kimberley [mailto:KArnold@HatchEnergy.com]

**Sent:** November 2, 2010 2:35 PM To: Riddell, Heather (MNR)

Cc: Kim Sachtleben; Colin Edwards; Keith Knudsen; Marnie Dawson; B Edwards; Wherry, Kathryn; aryckman@nrsi.on.ca;

Christy Humphrey; Kevin Dance; Male, Sean; 335936 Subject: RE: South Kent - Records Review Report

Hello Heather,

Attached is the pdf version of the Natural Heritage Records Review Report which includes all of the appendices. Since it is 8MB please confirm that you have received this email and attachment.

Thanks, Kim.

Kimberley Arnold, B.Sc., M.E.S.

Manager - Environmental Services, Renewable Power

Hatch

Phone: 905.374.0701 Ext. 5318 Email: karnold@hatch.ca

From: Arnold, Kimberley

Sent: November 1, 2010 10:17 PM

To: Riddell, Heather (MNR)

Cc: Kim Sachtleben; Colin Edwards; Keith Knudsen; Marnie Dawson; B Edwards; Wherry, Kathryn; aryckman@nrsi.on.ca;

Christy Humphrey; Kevin Dance; Male, Sean; 335936

Subject: South Kent - Records Review Report

Hello Heather,

As discussed, please find attached the Natural Heritage Records Review Report for the South Kent Wind Project. This version is in Microsoft Word as the pdf version would have been too large to send via email. Also attached is Figure 1.

If you have any questions, please do not hesitate to contact me.

Looking forward to meeting with you on Wednesday. If you would like me to bring some paper copies of the Report or a pdf version on a disc, please let me know.

Thanks, Kim.

---

#### Kimberley Arnold, B.Sc., M.E.S.

Manager - Environmental Services, Renewable Power Hatch 4342 Queen Street Suite 500 Niagara Falls, Ontario, Canada L2E 7J7

Phone: 905.374.0701 Ext. 5318

Fax: 905.374.1157 Email: karnold@hatch.ca



Please consider the environment before printing my e-mail

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**Samsung-Pattern South Kent Wind Farm: Records Review Report (first draft)** 

Prepared by NRSI (for Hatch Ltd) Received by the MNR: November 2, 2010

\*\*\* Please consider making these revisions to the sections and figures identified and fill out the final column with a description of how MNR's comments/suggestions have been incorporated.

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
Figure 1	3	This map is too broad scale for comprehension.	Suggest using current map as a reference and adding a series of more detailed maps at a more "meaningful scale" such as - 1:50,000 or 10km x 10 km square grid	
2.0 REA requirements	4	Section 25 NHA – records review list of records to be searched and analysed	Add – provincial parks and conservation reserves.	
3.0	5	"The Aylmer District MNR office was asked, through an email dated October 5, 2010, to provide any information pertaining to natural features within, or adjacent to, the South Kent Wind Project Area. As of November 1, 2010, no reply was received."	On November 1, 2010, Catherine Jong of the Aylmer District office provided a response to the request made on October 5, 2010. Please consider updating this statement and the information accordingly.	
3.2	6	"Two (2) Provincially Significant Wetlands (PSW) have been identified slightly beyond this 120 m consultation zone"	Please provide a definition of the term "consultation zone" and/or consider using the term "setback" or "natural feature setback".	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
3.2 Wetlands	7	"Several non-provincially significant wetland habitats and/or unevaluated wetlands are found in the general vicinity of the South Kent Wind Project area"	Please avoid referring to wetlands as "non-provincially significant wetland". When referring to wetland statuses, please identify them as one of the following: unevaluated, locally significant or provincially significant. Please specify.	
3.3	7	"No specific information on valleylands is available through the MNR or associated databases".	The conservation authority (LTVCA) is the most appropriate reference for Valleyland mapping/data.	
3.4	7	"Available basemapping has identified the presence of wintering deer areas within 120 m of turbine no. P103".	Please provide more information on the source of information that identified the deer wintering area. Generally deer in this area don't tend to "yard up" like they do in more northern climes with deeper snow conditions.	
3.4 Wildlife Habitat	7	This section of the report currently lacks certain detail that is possible to discuss at the records review stage.  Appendix 1 could is currently not referenced in this section.	Recommend including discussion of 'candidate' significant wildlife habitat (SWH) as they relate to natural features identified through LIO mapping, such as:  - hedgerows as corridors	

Section	Page #	Current wording/topic	Suggested rewording or	Description of how
			comment(s) - rare vegetation community search - NHIC search for S1-S3, Special Concern Species (habitat is SWH)	changes were made
3.6 Significant Species	7-8	Entire section.	This section entitled "Significant Species" is currently a combination of natural heritage issues that are covered under both O. Reg. 359/09 and ESA 2007. Please report on both separately and avoid using the term "significant species" within the records review report.  There are: - Species of Conservation Concern (i.e. S1-S3 and SC) whose habitat must be considered as part of the NHA (habitat of species of conservation concern is considered SWH as per the SWHTG) - Endangered & Threatened species (SARO-listed) must be considered, but separately from the NHA (outside of O.Reg.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			359/09 but require consideration as per the Approvals and Permitting Requirements Document). It is appropriate to list SARO-listed species here and direct reviewers to a separate report/appendix to the NHA where ESA concerns are addressed.	
6.0	13	"These resources include the Ontario Breeding Bird Atlas (OBBA), <b>Bird Studies</b> <b>Canada mapping</b> "	Please provide more detail on the mapping obtained from Bird Studies Canada.	
6.2	13	"A review of Important Bird Areas (IBA) in the region of the province has revealed that the South Kent Wind Project overlaps with the Greater Rondeau Bay IBA (ON007)".	This could likely be included a record of Significant Wildlife Habitat within 120 m of the project location.	
7.0	15-23	This section currently considers Endangered, Threatened and Special Concern species and briefly mentions S1- S3 species.	Endangered and Threatened species can be mentioned as part of the records review; however, they should be dealt with under a separate cover. Suggested wording could include: "The following SAR species occurrences	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			were identified within the project area; however, they will be discussed in more detail under a separate cover/report".  S1-S3 species and Special Concern species can be discussed as part of the NHA, as their habitat is considered Significant Wildlife Habitat (SWH).	
7.1 Birds	16	"Bald Eagles…"	Please consider contacting Jody Allair with BSC as he likely possesses information on known BAEA nests in the area.	
7.1 Birds	18	" species considered provincially rare based on their provincial S-Rank and or"	Information on these species are particularly relevant to the NHA. Please elaborate.	
8.0 Existing Studies	24-71	Summarizes the methods and results of thirteen other ESR's.	This information is valuable as part of the NHA, only if it answers the following questions:  - How does this information relate to the NHA requirements of O.Reg. 359/09?	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			- What information	
			supports or	
			indicates the	
			presence of a	
			natural feature	
			(wildlife habitat)	
			within 120 m of	
			the project	
			location?	
			If it does not link	
			specifically to those	
			questions, then this level	
			of detail may not be	
			necessary as part of the	
			NHA.	
			Please specify the	
			(potential) natural feature	
			and its proximity to	
			proposed project activity.	
			It is not clear if the	
			previous study	
			locations/proposals are	
			meaningful units for	
			providing the details	
			needed to meet the NHA	
			requirements. We	
			suggest breaking the	
			South Kent WP proposal	
			up into numbered (e.g. 1-	
			6) grid squares (e.g.	
			1:50,000) that are used	
			consistently throughout	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
8.1.1 Spring Migration	26	Description of methods, purpose and coarse summary of results.	the NHA document.  Discussion within the records review should clearly link to the results of the site investigation and evaluation of significance; therefore, numbered grids might be a more appropriate way of organizing this information.  Describe how monitoring relates to wildlife habitat. Unfortunately, there are no criteria for bird migration corridors. Are surveys able to provide evidence of stopover/staging areas? Are there supplemental occurrence records which	changes were made
			can be added to the species lists generated from NHIC/OBBA, etc?	
Breeding Birds	27	Description of methods, purpose and coarse summary of results.	Where were they conducted? Within 120m of project location, or in similar habitat type(s)? Can this information relate to identification of SWH or why is it included in Records Review?	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
Winter Bird Surveys	28	Description of methods, purpose and coarse summary of results.	How can this information relate to identification of a natural feature (i.e. woodland, wetland, wildlife habitat) within 120m from project location?	
9.0 Summary of Records Review	72	Table	Great summary Table!	
Table 17	72	The South Kent Wind Project crosses several linear features, some of which have connectivity to woodland habitat; however, it is unknown whether these linear features are natural or anthropogenic without further site investigation.  No project components are proposed within a natural feature.	Great acknowledgement of hedgerows as potential natural features – remember the form (i.e. natural vs. anthropogenic) is not as important as the function for wildlife – especially in C-K which is a highly disturbed landscape.	
Table 17	72	e) Southern Wetland - No project components are proposed within 120m of known southern wetlands.	This may contradict the wording in section 3.2. Seeking clarification.	

Section	Page #	Current wording/topic	Suggested rewording or	Description of how
			comment(s)	changes were made
Table 17	72	g) Wildlife Habitat	Include Globally Important	
			Bird Area as wildlife	
			habitat within project	
			location. Also appropriate	
			to include hedgerows as	
			possible movement	
			corridors here.	

#### Carson, Lisa

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:04 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Wind Project - Site Investigation Report

**From:** Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Wednesday, December 08, 2010 5:15 PM

To: Wherry, Kathryn

Cc: Kim Sachtleben; Colin Edwards; Keith Knudsen; Marnie Dawson; Brian Edwards; Arnold, Kimberley; 335936;

Simpson, Holly (MNR)

Subject: RE: South Kent Wind Project - Site Investigation Report

Hi Kathryn,

We hope to have detailed comments on your records review report to you very soon. In the meantime, we thought it best to provide general comments regarding the site investigation report. Based on these general comments, we would like you to revise and re-submit your site investigation report for our review.

The South Kent project is large and spread out over a broad territory. Although it seems logical when dealing with such a large scale project to take a "landscape approach", the REA requirements clearly specify that a physical investigation within 120 m of the *project location* is required. This is a very important concept to keep in mind when organizing your report because:

- a) it needs to be completed for all project components, regardless of proximity to *natural features*
- b) the type, attributes, composition and function of the feature(s) are important in their relation/potential to be impacted by a particular project component

Therefore, to expedite the review of your report, please avoid duplication and describe the results of your site investigation, component by component. In the case of the turbines, it seems logical to lump together the associated infrastructure (i.e. access roads and cabling). If there are project components that are not within 120 m of any *natural feature*, please identify them (in a summary table?) and provide reference to the "zoomed in" figure.

The purpose of the site investigation is to identify, describe and map the boundaries of *natural features* located within 120 m of the *project location*. In your report you refer to "Other Habitats", but this is not a type of *natural feature*. I believe you are actually referring to Wildlife Habitat. When you map and describe these wildlife habitats, keep in mind the specific categories and criteria provided in the Significant Wildlife Habitat Technical Guide. Although it is not required at this stage to evaluate the significance of these habitats, it may be useful in your description and our review of your efforts.

If you have any questions, please feel free to contact me or Holly Simpson at 519-354-8210.

Thanks, Heather

From: Wherry, Kathryn [mailto:KWherry@hatch.ca]

**Sent:** November 26, 2010 2:38 PM

To: Riddell, Heather (MNR)

**Cc:** Kim Sachtleben; Colin Edwards; Keith Knudsen; Marnie Dawson; Brian Edwards; Arnold, Kimberley; 335936 **Subject:** South Kent Wind Project - Site Investigation Report

Hi Heather,

The Site Investigation Report is 95 MB in total so it has been uploaded to the NRSI ftp site for you to download as two files:

- South Kent NH Site Investigation Report (13 MB) which includes tables and figures; and
- South Kent NH Site Investigation Report Appendices (82MB).

The instructions for the ftp site are as follows:

The following is the link to NRSI's ftp site to access the main body and appendices to the report.

Please enter in the user name and password below

http://basswood.nrsi.on.ca:8080/index.php or this one if the first does not work http://basswood.nrsi.on.ca/epiware/index.php

**Username - South Kent** 

Password - kent2

Click on "Library" tab and you should see the "South Kent" folder on the left-hand side. Click this folder to see its contents appear to the right. You can download the files by right clicking and selecting download.

Please do not hesitate to contact me, if you have any problems with downloading or have any questions.

Cheers,

Kathryn

#### Kathryn Wherry B.E.S.

Senior Environmental Specialist - Environmental Services Group Hatch
4342 Queen Street, Suite 500
Niagara Falls, Ontario Canada L2E 7J7
Phone: 905-374-0701

Fax: 905-374-1157 E-Mail: kwherry@hatch.ca http://www.hatch.ca/

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#### Carson, Lisa

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:04 AM

To: Vukovics, Kathleen

Subject: FW: Comments on South Kent Records Review (second draft)

Attachments: 2010-12-20 South Kent WF - RR Comment Table .doc

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Monday, December 20, 2010 4:02 PM **To:** Arnold, Kimberley; Wherry, Kathryn

Cc: Simpson, Holly (MNR)

Subject: Comments on South Kent Records Review (second draft)

Hi Kim,

Attached please find the MNR's comments on the Records Review report for Samsung and Pattern Energy's South Kent Wind Project (second draft), which was submitted to the MNR on November 15, 2010.

Here is a summary of our general comments:

- We request that the terminology is revised to stay consistent with the terminology defined within Regulation 359/09 and as such.
  - Replace "natural heritage features" with "natural features"
  - o Replace "project area" with "project location", where appropriate
  - Replace "proposed development activities" with "project location"
  - o Refrain from use of the term "significant species"
- All information/discussion pertaining to Threatened and Endangered Species must be removed from the report and placed within a separate report
- Ensure that the bird and bat monitoring data relates to the identification of a natural feature (i.e. southern wetlands, wildlife habitat, woodland, etc.)

If you have any questions, please contact me.

Regards, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

Email: heather.riddell@ontario.ca

Samsung-Pattern South Kent Wind Farm: Records Review Report (second draft)

Prepared by NRSI (for Hatch Ltd)

Received by the MNR: November 15, 2010

\*\*\* Please consider making these revisions to the sections and figures identified and fill out the final column with a description of how MNR's comments/suggestions have been incorporated.

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
1.0 Introduction	1	"The project location (or project area), as defined by the REA regulations includes all areas within 120m of proposed development activities."	Terminology throughout the report needs to be consistent with terminology within O. Reg. 359/09. For instance, it is necessary to refer to the project layout within the report as "Project Location", as opposed to "Project Area" or "Project Site". Please note that the definition of "Project Location" within the Reg., it does not include all areas within 120 m of the proposed development areas.  As such, this statement needs to be revised, as well as all other statements within the report that make reference to the layout as a "Project Area".	
			One instance where the term "Project Area" may be appropriate to use is when addressing the following; however, if that is the intent of the use of the term "Project Area", then a clear definition of the term must be provided.  MNR encourages applicants to consider collecting and searching records for an area wider than the 120 m required by regulation to	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			accommodate any potential changes to project design or layout that may occur later in the project planning stages. This broader approach will reduce the potential for delays resulting from the need to undertake a second records review for a potentially larger or altered area, should the project layout change. Expanding the records review area also has relevance for wildlife habitat, which can include habitat components (e.g. bat hibernacula, bald eagle nest), which appear as points on a map. These habitats may be further than 120 metres from the project location, but will often have associated candidate or confirmed significant wildlife habitat (see Appendix D of SWHTG for a glossary of terms) which extends well beyond the point location itself. During the records review, applicants should identify habitat components and any associated candidate or confirmed significant wildlife habitat that may extend to or within 120 metres of the project location.	
1.0	1	"to conduct a records review in accordance with the Renewable Energy Approval (REA) regulations for a proposed"	Here and at various locations throughout the report, the Reg is referred to as "regulations". Pleased note that this project requires a NHA under Regulation 359/09, which is one regulation (i.e. not multiple regulations as implied). Please revise accordingly.	
3.0 MNR	7	"This information included records of bald eagle nests (Haliaeetus leucocepha), fisheries, and designated natural areas. Additional information pertaining to <b>natural</b> areas was provided by the Aylmer District	"Additional information pertaining to an ANSI (life science) located within 120 m of project location [arguably not pers. Comm. but rather] according to the Inventory Report (OMNR, 1988)."	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
		MNR office in emails dated November 9, 2010 (H. Simpson 2010, pers. comm.)."		
3.1	8	"Several Species at Risk and floral species of conservation concern"	The information required by the MNR outside of O. Reg. 359/09 must be provided and discussed within a separate APRD report. For the purpose of the MNR's confirmation required under Section 28 of the Reg., the NHA must only provide information required under Sections 25-27 of the Reg. As such, we request that any reference to species at risk (Endangered and Threatened) is removed from the NHA report; however, Special Concern species should be discussed within report.  It would be useful to provide a disclaimer within the introduction of this report, that the NHA report will not discuss Species at Risk. Information pertaining to Threatened or Endangered species will be submitted to the MNR within a separate report.	
3.1	8	"The access road turbine P140 is proposed immediately adjacent to the north end of this natural feature, without overlapping this community."	It would be useful to also provide a reference to the figure that illustrates the location of this feature.	
3.2 Wetlands	9	"Several unevaluated wetlands are found in the general vicinity of the South Kent Wind Project area. Available basemapping indicate that these natural features are at least 160 m from any proposed development	The MNR Aylmer District office does not recognize the term "Non-Provincially Significant Wetland". In Aylmer District, a wetland is one of the following: "Unevaluated Wetland", "Provincially Significant Wetland", "Locally	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
		activity, with the closest non-provincially significant wetland located approximately 160 m from the proposed access road to turbine no. P137."	Significant Wetland" or "Other Wetland". Please verify what is meant as "non-provincially significant wetland", as the previous statement implies that it is an "unevaluated wetland".  In our data layers and on NHIC, wetlands that did not score as a PSW based on OWES criteria, are referred to as "Other Wetlands", which is a term that comes from the OWES 3 <sup>rd</sup> edition Southern manual (in Appendix B, Page 177). The term "Locally Significant Wetland" is intended to be applied to evaluated wetlands by those municipalities that want to protect all of the evaluated wetlands. The OWES manual provides direction on applying the term; three aspects are to be considered: 1. groundwater discharge, 2. social value, 3. aboriginal value / cultural heritage. High scores in any of these aspects indicate a wetland that should be considered as locally significant in municipal planning.  Please avoid use of the term "Non-Provincially Significant Wetland" and revise the report accordingly.	
3.3	9	"No specific information on valleylands is available through the MNR or associated databases."	The conservation authority is the most useful source to obtain information on valleylands. Please verify if the CA was contacted for records on valleylands. Further to that, another option is to refer to the CA's mapping of hazard lands as a reference at the records review stage to identify potential valleylands within 120 m of the project location.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
3.4	10	"Development activities are not proposed to occur between known bald eagle nests and potential foraging habitats of Lake Erie."	"Development activities are not proposed to occur between known bald eagle nests and potential foraging habitats of Lake Erie, based on the records review. Site investigation will further verify the presence/absence of bald eagle nests within 120 m of the project location."	
3.4	10	"Available basemapping for the South Kent Wind Project has identified several linear features, including both hedgerows and drainage corridors, within the <b>project area</b> ."	As stated previously, the terms "project location" and "project area" are not synonymous and as such, this sentence as well as others referring to the layout as a "project area" must be revised for clarity.	
3.5	11	"Species associations within these features should be confirmed during the site investigation phase of this project."	Most importantly, wildlife habitat potential should be assessed within these woodlands during the site investigation.	
3.7	12	Entire section – Species at Risk	All information pertaining to Threatened and Endangered species must be removed from the NHA and placed within a separate report. As such, we request that the first paragraph is removed from the report and placed within the separate APRD document. The second paragraph could be more appropriately placed within the Introduction to clarify for all other reading it that E and T species were considered for this project; however, not discussed within this report.	
5.1	14	General comment (Example):  "One (1) significant woodland has been identified within 120 m of the proposed development activities."	In keeping with the terminology within the Regulation, we require that the term "proposed development activities" is changed to "project location" for clarity and consistency throughout the report.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
5.6 Municipal Summary	16	"A full review of the municipal mapping for all five (5) Townships overlapping the project area has <b>revealed up to 24 significant</b> woodlands are present within 120 m of proposed development activities of the South Kent Wind Project area."	"has identified 24 significant woodlands"  Section 3.5 (pg. 11) indicates that there are approximately 36 woodlots within 120m of project location, ranging in size from 2ha-54ha. Therefore there may be up to 36 significant woodlands located within 120 m of the project location. Please clarify.	
6.3 Ontario Herpetofaunal Atlas	18	Reference to Ontario Herpetofaunal Summary Atlas  " including several SAR were identified	FYI this resource is being updated and is available on-line http://www.ontarionature.org/protect/species/herpetofaunal_atlas.php As stated previously, information regarding	
		whose ranges potentially overlapped with the project site, including eastern spiny softshell (Apalone spinifera spinifera), eastern foxsnake, and eastern milksnake (Lampropeltis triangulum triangulum)."	Endangered or Threatened species must be removed from the records review report and placed within a separate report.	
6.4	18	"None of these species are considered to be SAR under the federal Species At Risk Act (SARA) or the Ontario Endangered Species Act (ESA)"	As stated, information like this (species/habitat protected under the ESA 2007, present or not) should be discussed within a separate report.	
7.0 Species of Conservation concern and SAR	19-26	Revised section discusses SC, S1-S3 species and E&T species separately.  "As identified above, several species of	Any information pertaining to Endangered or Threatened species must be removed from the NHA report.	
		conservation concern and SAR may potentially occur within or adjacent to the project area. Although these species are combined for the purposes of this section, Species At Risk (provincially Threatened or	Discussion pertaining to species of conservation concern (SC, S1-S3 species) is only relevant if related to an assessment for potential/candidate SWH within 120 m of the project location. As such, this information	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
		Endangered) will be addressed in more detail in an Approval and Permitting Requirements Document to address the Endangered Species Act (2007)."	would more appropriately be placed within the wildlife habitat section of the report.	
8 Existing Studies	27-76	Summaries of pre-construction bird and bat monitoring of former wind applications under previous EA process.	It may be appropriate to list the SC, S1-S3 species identified during these studies, or any other relevant natural features uncovered during these studies; however, it is not appropriate to place a summary of the results of each survey within this section. If the information gathered during these previous studies can be related to the site investigation or evaluation of significance, it would be better placed within those sections. If the information does not relate to the confirmation of a natural feature (i.e. a southern wetland, a wildlife habitat, a woodland, etc.) then it is not relevant to the NHA and should be removed from the report.	
			As for bats, please clarify how surveys undertaken during the swarming/migration period reveal anything about the location of bat maternal roosts/colonies. Please note MNR's procedures for surveying bat maternity colonies (Bat and Bat Habitats Guidelines for Wind Power Projects) specify survey period of June 1st to June 30th. If relying on information collected during the swarming period, please clarify how that relates to the identification of maternal colonies. If the information does not relate, then it should be removed from the	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			report.	
			If including information from previous studies within the site investigation, be sure to include:  information relating to each natural feature identified in the records review or in the site investigation, including:  type (e.g. woodland)  significance (if known)  attributes  composition  function;  dates and times of the beginning and completion of the site investigation;  duration of the site investigation;  weather conditions during the site investigation;  summary of methods (including locations of monitoring stations) used to make observations during the site investigation;  names and qualifications of any person conducting site investigation (if known); and field notes kept by the persons conducting site investigation (or reference to original study report in this case)	
Figures 1, 2 and 3		Title "Project Area and Natural Features	The title should be revised to "Project Location" and the red dashed line called "Project Area" should be changed to 120 m setback/ 120 m study area.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
8.0 Species at Risk Sections (8.1.3, 8.2.3, 8.3.3, etc.)	34-73	These sections currently contain discussion about Endangered and Threatened species	As stated previously, all information pertaining to Endangered or Threatened species must be removed from the NHA report and placed within a separate report.	

Jan 19, 2011. txt

From: Wherry, Kathryn

Tuesday, September 27, 2011 11:05 AM Sent:

Vukovics, Kathleen To:

FW: South Kent Site Investigation Report - MNR Comments 2011-01-19 South Kent SI - MNR Comment Table.doc; Template -Subject: Attachments:

Assessi ng SWH. doc

----Original Message----

From: Riddell, Heather (MNR) [mailto: Heather. Riddell@ontario.ca] Sent: Wednesday, January 19, 2011 9:06 AM

To: Arnold, Kimberley Cc: Simpson, Holly (MNR); Dixon, Rebecca (MNR); kim.sachtleben@patternenergy.com; Wherry, Kathryn;

m. dawson@samsungrenewabl eenergy. ca; b. edwards@samsungrenewabl eenergy. ca;

Andrew Ryckman; Keith Knudsen

Subject: South Kent Site Investigation Report - MNR Comments

Hi Kim,

Attached please find the MNR's comments on the Site Investigation Report for the South Kent Wind Farm, which was submitted in December 2010.

In addition to the attached detailed comments, we provide the following general comments on the report.

General Comments:

1. Please ensure that throughout the document the term "project location" is used as opposed to "project area", "project site", etc.
2. In several places throughout the report, beginning with P001 where it is stated that "Mapping indicates the access road and underground cabling will run within this woodland, along its eastern edge. It is anticipated that micrositing will locate these components adjacent to the woodlot edge within the corn field." Where statements like this are made, it should be clarified Where statements like this are made, it should be clarified and confirmed within the final report if in fact those features will be avoided, i.e. vegetation will not be removed, if that is the case. If it isn't the case, then that should be clarified as well and further considered within the EIS (if Evaluation of Significance confirms the feature to be significant). This includes the discussion about the Life Science ANSI on Page 107-108 in association with turbine P140.

Throughout the report it is stated "This proposed development activity 3. is found within 120 m of candidate significant wildlife habitat and will be examined in more detail during the evaluation of significance phase of this project." It is the MNR's expectation that the Site Investigation discuss the type and location of the Candidate SWH located within 120 m of the project location, if it was identified during the Site Investigation. Without that detail, we can only assume what Candidate habitat might be there, i.e. animal movement corridor, bat maternity roost (due to presence of snags in woodlands) and woodlands supporting amphibian breeding ponds due to the presence of vernal pools within the woodland. Please see the attached table, which provides a list of the types of SWH that should be assessed within 120 m of the project location and identify how those features were considered during

Page 1

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site investigation, by discussing the size and area of the habitat that may be present and that will later be discussed and confirmed within the Evaluation of Significance report. We recommend using this table as a guide for demonstrating the assessment of SWH - feel free to use it in the report, or instead apply it when discussing SWH in proximity to project components. Also, in addition to woodlands, the locations of Candidate SWH must be mapped within the Site Investigation report as per Section 26 of the Regulation (wildlife habitat is identified as a "natural feature" that requires mapping).

Regards,

Heather Riddell A/Planning Ecologist MNR, Aylmer District 519-773-4723

#### Table for Assessing Candidate SWH during Site Investigation and for Confirming SWH during Evaluation of Significance

#### **Assessment of Seasonal Concentration Areas**

	Summary of Characteristics	Location ID where Site		Assessment of Habitats, Species	
	of the SWH Type from SWH	Investigation Results (ELC,		Presence and Potential to Meet SWH	
	Criteria Schedule for	surveys, etc.) Match SWH	Map to View	Criteria (areas and sizes of habitat/#'s	Potential/Confirmed SWH within 120
Habitat	Ecoregion 7E	Criteria	Location ID	of individuals of species or diversity)	m of the project location
Waterfowl Stopover	CUM1 or CUT1 with sheet				
Areas (Terrestrial)	water from mid-March to				
	May.				
	<ul> <li>Aggregations of &gt;100</li> </ul>				
	individuals of listed species.				
	Agricultural fields not				
	considered SWH unless				
	utilized by Tundra Swan.				
Waterfowl Stopover and	MAM, SAS, SAM SAF,				
Staging Areas (Aquatic)	SWD ELC Codes present				
	Aquatic habitat with				
	invertebrates and				
	vegetation (food supply)				
	Aggregations of 100 or				
	more of listed individuals, or				
	extended use of the habitat				
Colonial Nesting Bird	Eroding banks, sandy hills,				
Breeding Habitat (Bank &	pits, steep slopes, rock				
Cliff Swallow)	faces, etc.				
,	Does not include man-				
	made structures or active				
	Mineral Aggregate				
	operation.				
	One ore more nesting sites				
	or >8 Cliff or >100 Bank				
	Swallows observed during				
	breeding season.				

Sharahird Migratary	Shorelines of lakes and		
Shorebird Migratory			
Stopover Areas	rivers.		
	3 or more listed species		
	and >1000 Shorebird Use		
	Days during spring or fall		
	migration period.		
Songbird Migratory	<ul> <li>Woodlands &gt;5 ha in size</li> </ul>		
Stopover Areas	and within 5km of Lake		
·	Erie.		
	Use of woodland by 35		
	migratory bird species		
	(considered above		
	average).		
Raptor Wintering Areas	Combination of fields and		
Trapier rimitering / meas	woodlands that provide		
	roosting, foraging and		
	resting habitat for wintering		
	raptors.		
	Sites greater than 20 ha		
	with a combination of		
	forests and upland.		
	Various species thresholds		
	including 10 or more		
	individuals of 2 or more		
	listed species or 1 or more		
	Short-eared Owls.		
Bat Hibernacula (Winter	<ul> <li>Roosts or Maternal</li> </ul>		
Roost & Maternal	Colonies have confirmed		
Colonies)	use by certain thresholds of		
	bat species.		
	<ul> <li>Maternal colonies</li> </ul>		
	potentially occur in tree		
	cavities, vegetation,		
	and often buildings		
	(buildings not considered		
	SWH).		

Butterfly Migratory	Rare habitats located within		
Route/Stopover Areas	5km of Lake Erie.		
Route/Gtopover Areas	<ul><li>&gt;10 ha in size with a</li></ul>		
	combination of field and		
	forest, and provide a		
	location for butterflies to		
	rest prior to migration.		
Snake Hibernaculum	Congregations of 5 or more		
	individuals or 2 or more		
	species near potential		
	hibernacula.		
	<ul> <li>Sites below frost line in</li> </ul>		
	burrows, rock crevices, old		
	wells, rock and log piles, old		
	building foundations,		
	ground hog and crayfish		
	burrows, etc.		
Colonial-Nesting Bird	Presence of 1 or more		
Breeding Habitat	active nests of any listed		
(Tree/Shrub)	species.		
Colonial-Nesting Bird	Presence of >100 nests		
Breeding Habitat	Herring Gulls and >75 nests		
(Ground)	Caspian or Common Terns.		
	<ul> <li>Any nesting colony of 1 or</li> </ul>		
	more Little Gull or Great		
	Black-backed Gull.		
Deer Wintering Areas	Canopy cover of 60% or		
	more conifer species		
Amphibian Breeding	Presence of a wetland, lake		
Habitat (woodland)	or pond within or within 120		
Tabitat (Woodiand)	metres of woodland.		
	Wetlands breeding pools		
	may be permanent,		
	seasonal, ephemeral, large		
	or small in size, located		
	within or adjacent to		

	woodland.  • One or more listed species with at least 20 individuals.		
Amphibian Breeding Habitat (Wetland)	<ul> <li>Wetlands and pools supporting high species diversity.</li> <li>Presence of breeding population of 2 or more of the listed species with at least 20 individuals.</li> </ul>		
Assessment of Rare V	Vegetation Communities		
List any rare vegetation communities that may have been found within 120 m of the project location (outlined in Appendix M of SWHTG)			

**Assessment of Specialized Wildlife Habitat** 

Waterfowl Nesting Areas	Fill in remainder of criteria – refer to SWH Criteria		
	Schedules		
Osprey Nesting, Foraging and Perching Habitat			
Woodland Raptor			
Nesting Habitat			
Turtle Nesting and Over-			
wintering areas			
Seeps and Springs			
Animal Movement			
Corridors			

#### **Assessment of Habitat of Species of Conservation Concern**

Marsh Bird Breeding Habitat			
Area-Sensitive Bird Breeding Habitat			
Open Country Bird Breeding Habitat			
Shrub/Early Successional Bird Breeding Habitat			
Special Concern S1 to S3 Species and Communities			

Samsung-Pattern South Kent Wind Farm: Site Investigation Report (December 2010

Prepared by NRSI (for Hatch Ltd)

Received by the MNR: November 15, 2010

\*\*\* Please consider making these revisions to the sections and figures identified and fill out the final column with a description of how MNR's comments/suggestions have been incorporated.

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
2.0	5-6	<ul><li>"4. the distance from the project location to the boundaries determined under clause (c) (p. 5)</li><li>a) the boundaries mentioned in clause 1(c)"</li></ul>	These sentences are difficult to follow when taken out of the context of the Regulation.  We suggest revising it to:  "The distance from the project location to the boundaries of natural features identified within 120 m."	
		"c) the distance mentioned in 1(d)" (p.6)		
4.0 Table 1	10-11	The proposed project location overlaps with the globally significant Rondeau Bay IBA P103 and associated infrastructure	When referring to the text in the section that details the results of the site investigation for P103 (and associated infrastructure), there is no mention of the IBA, nor any indication that any surveys were undertaken to assess the local usage as staging/breeding habitat for waterfowl. As per our general comments, it is possible this information was detailed within the Evaluation of Significance, and as such, we request that more detail is provided within the Site Investigation report to provide an assessment/discussion of Candidate SWH within 120 m of P103 and all other project components.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
		Wintering deer areas identified within 120m of turbine P103	Neither this feature, nor the IBA are mapped in the appendix, and have not been referenced in the text.	
5.0	13	"The results of these site investigations will be used to evaluate the potential significance of the natural features within the project area and identify candidate significant habitats that require further review in the evaluation of significance phase of the South Kent project."	We suggest rewording this to:  "The results of these site investigations will be used to identify and map the boundaries of natural features within 120m of the project location. Information collected at this stage, may be used to evaluate the significance of features in subsequent reports."	
5.1	13	In order to identify the presence and proximity of natural features (i.e. woodlands, fencerows, drains, and wetlands)	Fencerows and drains are not <i>natural features</i> (as defined by the REA reg). Please ensure that in addition to this statement, it is clarified that you are identifying/mapping drains and hedgerows as potential wildlife habitats/corridors (see p. 28), as opposed to referring to them as <i>natural features</i> .	
5.1	13	In instances where development activities were identified within 120 m of a natural feature, site-specific investigations were completed within these features to collect more detailed vegetation community information, including habitat composition, species association, and landform and ecological functions. Vegetation community classification was conducted using modified Ecological Land Classification (ELC) system	The Regulation requires a physical site investigation of area within at least 120 m from project location to identify natural features. This statement appears to imply that the site investigation was conducted only where natural features were already identified within 120 m of the project location. Please clarify through a revision to this paragraph or further explanation if the site investigation was conducted within a minimum area of 120 m of the project location. Also, please clarify if the ELC was conducted throughout the project area, or only within the woodlands.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
5.1	14	Site-specific vegetation community mapping of the South Kent project was used to further identify natural features, and candidate significant features	'Natural features' and 'candidate significant features' are considered synonymous and as such, please consider revising this statement.	
5	15	Table 2	REA requires information on times and duration of field investigations, if not included in this table, please include in the site-by-site details of the SI report.	
6.0	16	The detailed records review has confirmed that the landscape is dominated by agricultural fields, but also includes occasional candidate significant natural features including an ANSI, several woodlands, and a variety of wildlife habitats.	The ANSI is considered to be 'Provincially significant', not candidate. As well, many of the woodlands were identified as significant during the records review. Please revise accordingly.	
6.1	16	One (1) ANSI is known to be present within the South Kent project area. This natural feature, Sinclair's Bush, was examined by NRSI biologists during the site investigation phase of this project. In addition to being considered a candidate significant ANSI, this feature is also being considered a candidate significant natural feature for woodland properties and a variety of wildlife habitats	One (1) ANSI (Life Science) is known to be present within the South Kent project area. This natural feature, Sinclair's Bush, was examined by NRSI biologists during the site investigation phase of this project. In addition to being considered a provincially significant ANSI, this feature is also considered a significant woodland in the Chatham-Kent Official Plan, and may also contain candidate SWH.	
6.2	26	"woodland habitats"	Woodlands should be referred to as "woodlands" as opposed to "woodland habitats" to avoid confusion.	
6.3	26	No wetland habitats were identified by NRSI biologists during the site investigation within the South Kent project area.	No <b>wetlands</b> were identified by NRSI biologists during the site investigation within <b>120m of</b> the South Kent project <b>location</b> .	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
6.5	26	Entire Section  "The REA regulation requires that a separate report, Approval and Permitting Requirements Document, be prepared to address the requirements of the Endangered Species Act (2007)."	We request that this entire section is removed from the Site Investigation report and suggest that instead you provide an explanation of how/why Endangered and Threatened Species will be addressed within the introduction of this report, beyond the scope of the REA requirements.	
			Also, to clarify: It is not the REA regulation that requires a separate report; instead it is the MNR's Approvals and Permitting Requirements Document that outlines the requirement for additional information to be submitted to the MNR beyond the scope of the natural heritage assessment requirements outlined within the Regulation.	
6.6.3	28	Candidate significant habitats for species of conservation concern, including area sensitive bird habitat, open country bird habitat, and habitat for species with provincial SRanks of S1-S3	SARO listed Special Concern species are also included within this category of SWH investigations. Please revise accordingly.	
7.0	30	Specific information relating to natural features around the turbine locations, access roads and underground cabling, above ground cabling, substations, and transmission corridor	Specific information relating to natural features within 120m of the project location (i.e. turbine locations, access roads and underground cabling, above ground cabling, substations, transmission corridor, etc.)	
7.1	30	7.1 Site Investigation Results by Turbine	7.1 Site Investigation Results by Turbine and Associated Infrastructure	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
7.0	32	Mapping in the Appendix for P003 shows P003-H1 running adjacent to P004; however, the associated text on page 32 states "The fencerow P004-H1 is immediately adjacent to the proposed turbine, and portions of it appear to be proposed for removal for installation of the turbine construction area."	Please revisit the text and mapping to ensure that the component being discussed is appropriately mapped.	
7.1	32-33	P005	The mapping shows a drain in P005-H1; however, there is no mention of it in text. Please confirm if site investigation confirmed that the drain was not there, i.e. tiled over, etc.	
7.1	32-33	P006 Vs.	It appears from mapping that P003-H2 runs right into/along P009-D1; however, there is no mention of it in text. Please clarify as this may have relevance with respect to connectivity.	
	35-26	P010	This is a good example of linking drain and hedgerow as "added value" to corridor potential.	
7.1	37-38	P013	P013-H2 directly links the 2 woodlands – this provides excellent detail about distance from the project location to the natural features. This is a good example of what should be applied throughout the entire section.	
7.1	39	P014-W2 - Does not appear to be mapped within the Appendix.	A map of this woodland feature is needed within the Appendix.	
7.1	42	P022 P022-W2 - Fresh-Moist Shagbark Hickory Deciduous Forest (FODM9-4) This woodland includes three forest fragments that are located in close proximity	The MNR has concerns for the underground cabling proposed directly through Woodland P022-W2. As we are reviewing the Site Investigation Report in isolation and cannot see your rationale (presumably contained in the	

Section Pag	ge # Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
	to one another. The western two fragments are connected by a short, wide hedgerow. The community is dominated by shagbark hickory, bur oak, and silver maple in the canopy and subcanopy, with relatively few snags throughout. The understorey is dense vegetated with white elm and shagbark hickory saplings, and the groundcover is relatively sparse with avens sp. and zig-zag goldenrod (Solidago flexicaulis). Due to the presence of silver maple, it is presumed that this area may have been wetter historically, but due to the agricultural tile drainage in the surrounding area, it is now a moist forest which may potentially contain vernal pools.	While it may be true that P022-W2 is a remnant fragment of a larger contiguous woodland, the same can be said for most/all of the fragmented woodlands in South Kent. Please provide an explanation for why this distinction has been made within this example when each of the	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
7.1	47	P031 RB-A1 - mapping	The MNR requests better mapping of this area of the project location to include the woodland RB-A1.	
7.1	88	P103	There is no mention of surveys to investigate/confirm boundaries of the IBA or Wintering deer habitat mentioned in Table 1. As such, the MNR requests further detail within the discussion in this section of the report.	
7.1	104	P133	The MNR requests further clarification on why these two woodlands have been lumped together as a single feature.	
8.0	144-148	Table 3 – Distances between project location and natural feature has been provided for woodland, but has not been provided for other natural features (wildlife habitat, ANSI).	Within the columns that say "Yes", the distance between the project component and the natural feature should be provided and the boundaries of the identified natural feature should be mapped.	

#### Carson, Lisa

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:05 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent EOS - Wildlife Habitat

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Thursday, February 17, 2011 4:40 PM

To: Arnold, Kimberley

Cc: Simpson, Holly (MNR); Dixon, Rebecca (MNR); <a href="mailto:kim.sachtleben@patternenergy.com">kim.sachtleben@patternenergy.com</a>;

m.dawson@samsungrenewableenergy.ca; b.edwards@samsungrenewableenergy.ca; Andrew Ryckman; Keith Knudsen;

Wherry, Kathryn

Subject: South Kent EOS - Wildlife Habitat

Hi Kim,

I have been reviewing the Evaluation of Significance (EOS) for the South Kent Wind Project. While I prepare detailed comments, I thought that I would share a general comment that perhaps should be applied to the Site Investigation (SI) Report, as well as the EOS.

Specifically, within the sections that discuss Candidate Significant Wildlife Habitat (SWH), I have noted that much of the information is more suitable for the SI report as it confirms the presence/absence of Candidate SWH within 120 m of the project location. The purpose of the EOS is to evaluate the significance of natural features identified within 120 m of the project location during the Records Review (RR) and/or SI. Therefore, when it comes to SWH, the SI should discuss the presence/absence of Candidate SWH, while the EOS should confirm whether the Candidate SWH is or is not significant based on further evaluation. For instance, the diversity or abundance of species using a habitat could confirm its significance.

If not already accomplished at this point, I recommend pulling any specific discussions about Candidate SWH from the EOS and placing it with the SI report. And when revising the EOS, focus on confirming the significance of any Candidate SWH that was identified in or within 120 m of the project location during the RR and/or SI.

For example, page 54 of the EOS provides a discussion about Winter Deer Yards and confirms that there were no deer yards found within 120 m of the project location during site investigation. This information would be more appropriately placed within the SI report and the conclusion would be that the EOS does not need to discuss Winter Deer Yards because the SI confirmed that there were no Candidate Winter Deer Yards located within 120 m of the project location.

I intend to send more detailed comments by end of day tomorrow.

If you have any questions about this, please give me a call.

Regards, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

Email: heather.riddell@ontario.ca

#### Carson, Lisa

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:05 AM

To: Vukovics, Kathleen

Subject: FW: South Kent EOS Report (December 6, 2010) - MNR Comments

Attachments: 2011-02-22 South Kent EOS - MNR Comment Table.doc

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Tuesday, February 22, 2011 5:23 PM

To: Arnold, Kimberley

Cc: Simpson, Holly (MNR); Dixon, Rebecca (MNR); <a href="mailto:kim.sachtleben@patternenergy.com">kim.sachtleben@patternenergy.com</a>;

m.dawson@samsungrenewableenergy.ca; b.edwards@samsungrenewableenergy.ca; Andrew Ryckman; Keith Knudsen;

Wherry, Kathryn

Subject: South Kent EOS Report (December 6, 2010) - MNR Comments

Hi Kim,

Attached please find the MNR's comments on the Evaluation of Significance report prepared by NRSI for the South Kent Wind Project.

In addition, to the attached, we provide the following general comments:

- The MNR questions whether some woodlands that have been described as "riverine woodlands" could be considered Valleylands. A Valleyland is defined in the Regulation as occurring in a valley or other landform depression that has water flowing through or standing for some period of the year. Has NRSI considered whether these "riverine woodlands" should be considered Valleylands? Please provide written clarification/discussion within the Valleylands section of the report. This discussion could likely be had at both the Records Review and Site Investigation stages of the NHA process.
- For woodlands that are greater than 2 ha but deemed "not significant" due to their planting nature, please provide further discussion to clarify if these woodlands/plantations meet one of the following criteria:
  - (a) a plantation managed for production of nursery stock; or
  - (b) a plantation managed for tree products with an average rotation of less than 20 years (e.g. hybrid poplar or willow); or
    - (c) a plantation established and continuously managed for the sole purpose of complete removal at rotation, as demonstrated with documentation acceptable to the MNR, without a forest restoration objective; or
    - (d) a woodland dominated by the invasive non-native tree species buckthorn (Rhamnus species) or Norway maple (Acer platanoides); if native tree species cover less than 10% of the ground and are represented by less than 100 stems of any size per hectare.
- The MNR requests that the approximate distances from the project location to the natural features/significant natural features discussed within the EOS is clarified within either the SI or EOS report.

If you have any questions, please contact me.

Regards,

Heather

#### **Heather Riddell**

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South Kent Wind Energy Project – Samsung and Pattern Energy Prepared by: Natural Resource Solutions Inc. for Hatch Ltd. Submitted: December 6, 2010

Please consider making these revisions to the sections and figures/tables identified and fill out the final column with a description of how the MNR's comments/suggestions have been incorporated.

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
1.0	1	In accordance with Section 26 of the Renewable Energy Approval (REA) regulation, NRSI has already conducted a thorough records review and site investigation	"In accordance with Sections 25 <b>and 26</b> of the Renewable Energy Approval (REA) regulation"	
	1	of the project location, defined by the REA regulation includes all areas within 120 m of proposed development activities	The project location does not include the 120 m setback. The area in and within 120 m of the project location must be assessed as part of the NHA. Therefore, this should read:  NRSI has already conducted a thorough records review and site investigation of the area in and within 120 m of the project location. The project location, by definition is the part of land or structures in, on or over which the project is proposed.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
1.0	1	The project location (or project area), as defined by the REA regulation includes all areas within 120 m of the proposed development activities.	If you wish to define the "project area" as the project location plus the 120 m assessment area please clearly define that within the introduction of the report and use it consistently throughout the report. The definition of project location within the Regulation does not include the 120 m setback. Project area and project location should not be used synonymously unless clearly defined within the report.	changes were made
2.0	6	In accordance with Section 27 of the REA regulation, a Natural Heritage Evaluation of Significance is required to be undertaken on any natural feature identified within the limits of the project location.	In accordance with Section 27 of the REA regulation, an Evaluation of Significance is required to be undertaken on all natural features located in or within 120 m of the project location.	
2.0	6	The purpose of the Evaluation of Significance (EOS) is to identify which natural features warrant significant classification based on the review of background information and results of site specific field studies	The purpose of the Evaluation of Significance (EOS) is to determine, which natural features located in or within 120 m of the project location are significant and therefore, require an Environmental Impact Study (EIS), based on the review of	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			background information and results of site specific field studies	
5.0	13	This section currently summarizes the natural features that require Evaluation of Significance, including Wildlife Habitat; however, it does not identify specifically what types of Candidate SWH will be evaluated for significance.	This comment relates to our comments on the Site Investigation report, whereby we requested further discussion about how the project area was assessed for SWH, as well as more information about the specific types and locations of Candidate SWH located in or within 120 m of the project location.  It would be helpful if this section provided a clear list of all the types of Candidate SWH that will be evaluated within the Evaluation of Significance.	
6.0	19	In accordance with the REA regulation, NRSI biologists have completed a comprehensive records review and site investigations to confirm site-specific ecological functions of the South Kent Wind Project.	to confirm site-specific ecological functions, as well as identify and delineate the boundaries of all natural features located in or within 120 m of the project location for the South Kent Wind Project.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
6.1	19	ANSI features have typically been warranted a level of significance, either provincial or regional, based on previously completed site investigations (often by the MNR).	ANSI's and their significance are always confirmed by the MNR and as such, this section does not require further discussion about the criteria that identifies this feature as an ANSI. The records review revealed that this feature is an ANSI and no further discussion or consideration by NRSI biologists is required at this stage. However, it is still important to conduct site investigations of ANSI features to assist with the EIS.	
		NRSI biologists reviewed these general criteria, including representation, condition, other ecological considerations, and special features, to identify the significance of any ANSI feature within 120 m of the proposed development activities.	This should read:  Based on records review analysis, this feature is considered an ANSI by the MNR and therefore does not require further evaluation by NRSI biologists. This feature is located within 120 m of the project location and therefore will be considered within the EIS.	

Section	Page #	Current wording/topic	Suggested rewording or	Description of how
0.5.4. T. I.I. 5	00	T.I. 5	comment(s)	changes were made
6.5.1, Table 5	22	Table 5 currently summarizes the criteria for two types of Specialized Wildlife Habitat.	The Site Investigation report and perhaps this section of the report should discuss why other types of Specialized Wildlife Habitat have not been considered, such as Seeps and Springs, Foraging and Perching Habitat, and Waterfowl Nesting. In addition, please ensure you provide further discussion to justify why rare vegetation communities have not been found in or within	
7.1	26-27	Discusses the Evaluation of Significance for St. Clair's Bush ANSI NRSI agrees with the provincially significant status already attributed to this natural feature, and recommends that this feature be considered a significant natural feature.	120 m of the project location.  As previously commented, only the MNR can identify ANSI's. ANSI's are provincially significant and do not require a further Evaluation of Significance; however, the information obtained through site investigation can be used within the EIS.  The MNR has already determined this feature to be provincially significant; therefore, this statement does not seem	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
	27	NRSI biologists have identified a total of sixty-four (64) woodland habitats within the South Kent Wind Project.	NRSI biologists have identified a total of sixty-four (64) woodlands in or within 120 m of the project location for the South Kent Wind Project.  Please ensure this type of adjustment is made throughout the document.	changes were made
	30	P017-W1 A site investigation of this natural feature confirmed the presence of several large trees, fulfilling the uncommon characteristic criteria of 10 or more trees/ha greater than 50 cm diameter at breast height (dbh). Despite the present of several large trees, NRSI recommends that this not be considered a significant woodland as a result of not meeting a recommended minimum size threshold of 2 ha.	The NHRM states that if one criteria is met then the woodland is considered significant (despite the fact that is does not meet the size threshold); therefore, given the first statement, the MNR recommends that this feature is considered significant unless further clarification can be provided for the conclusion that this feature is not significant.	
	37	In spite of the size of this community, NRSI recommends that it be considered not significant due to the planted condition of this feature and limited benefit to other natural features.	The NHRM states that woodlands which meet a suggested minimum standard for any one of the criteria listed should be considered significant; therefore, based on size alone, this feature could	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			be significant, unless you are able to provide further information to prove that the woodland/plantation in discussion is one of the following:	
			(a) a plantation managed for production of nursery stock; or	
			(b) a plantation managed for tree products with an average rotation of less than 20 years (e.g. hybrid poplar or willow); or	
			(c) a plantation established and continuously managed for the sole purpose of complete removal at rotation, as demonstrated with documentation acceptable to the MNR, without a forest restoration objective; or	
			(d) a woodland dominated by the invasive non-native tree species buckthorn (Rhamnus species) or Norway maple (Acer	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			platanoides); if native tree species cover less than 10% of the ground and are represented by less than 100 stems of any size per hectare.  This comment should be	
			applied to any plantation that met the size criteria to be considered significant.	
		P114-W1  This woodland is an assumed movement corridor for numerous Species at Risk (SAR) including Eastern Foxsnake based on an observation of eastern foxsnake by NRSI biologists	Please remove information about locations of SAR observations from the NHA report. It is acceptable to say SAR; however, please remove reference to species occurrences, such as Eastern Foxsnake.  Also, it appears this woodland feature could be considered a Valleyland because it runs along a watercourse. Please provide clarification for why this feature was ruled out as being a Valleyland.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
	39	P139-W1 Despite the moderate size of this community, it contains no interior habitat, connectivity to other habitats, or uncommon characteristics. As a result, NRSI recommends that this woodland be considered not significant due to its young, planted nature and limited benefit to other natural features.	Based on size alone, this woodland is considered significant according to the NHRM; unless it meets the criteria provided above regarding plantations.	onange note made
7.5	53	Significant Habitat of Endangered and Threatened Species	The MNR requests that this section is removed from the NHA report entirely. All information regarding Threatened and Endangered species should be submitted in a separate report and not discussed in any detail within the NHA reports.	
		The REA regulation requires that a separate report, Approval and Permitting Requirements Document, be prepared to address the requirements of the Endangered Species Act (2007). As such, these species	This statement would be useful within the introduction of the report.	
7.6.1	54	"A candidate deer wintering area has been identified by the comprehensive records review completed for the South Kent Wind Project. This candidate SWH has been delineated by basemapping available from LIO, and is located in the southwest corner of the project area overlapping with turbine no. P103 and associated infrastructure."	Discussions about candidate SWH belong within the Site Investigation Report. As requested in MNR's comments on the Site Investigation, please incorporate this discussion	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			in support of the sections that state that there are Candidate SWH located within 120 m of project components.	
		NRSI has reviewed the natural habitats surrounding this turbine and compared with evaluation criteria in the SWHTG (OMNR 2000). This turbine is entirely surrounded by agricultural fields, with some wooded habitat present within 120 m of the west end of the access road, across McKinlay Road. No coniferous wooded habitats, or otherwise suitable deer wintering habitat, is present within 120 m of this turbine. As such, NRSI recommends that no significant deer wintering area is present within 120 m of turbine no. P103, and associated infrastructure.	The purpose of the Evaluation of Significance is to determine the significance of Candidate SWH located within 120 m of the project location. Therefore, this statement provides a good description of the site investigation work that was done to verify that no deer wintering areas are located within 120 m of the project location and as such, it would not require further discussion or consideration within the EOS.	
7.6.1	55	"Field studies within the South Kent Wind Project have identified several areas where shorebird activity was documented within the project area. The results of these field surveys have identified one (1) candidate SWH feature that is found within 120 m of the proposed development of the South Kent Wind Project."	Similar to above comment, this paragraph, which discusses these studies and the locations of candidate SWH should also be discussed within the Site Investigation Report to support the discussion about types and locations of Candidate SWH in	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			proximity to the project location, as requested in MNR's comments on the Site Investigation Report.	
7.6.1	55	Shorebird Migratory Stopover Areas:  "An area located in the northwest corner of the project area, overlapping with"	The location of this candidate SWH should be mapped and discussed within the Site Investigation report.	
7.6.1 Raptor Winter Feeding and Roosting Areas	56	Paragraph discusses the candidate SWH for raptor winter feeding and roosting.	This information needs to be discussed and mapped within the Site Investigation report.  The data used to evaluate the significance of this Candidate SWH is from 2006. Can NRSI discuss whether any additional or more recent data was obtained to support the conclusion that this Candidate SWH is considered to be not significant?	
7.6.1 Reptile Hibernacula	56-57	Discusses the locations and types of features that may indicate presence of Candidate SWH	The locations and this discussion should be provided within the Site Investigation Report.	
		One (1) large debris pile adjacent to Oak	It stated that there is no	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
		Road associated with the ditch P074-D1 is located in the vicinity of the location where the eastern foxsnake road mortality was found approximately 1.2 km from the location of the pile on Pollard Line.,. However, there is no indication that this snake or any other snakes may be using this pile for hibernation. Although all of the above habitats may provide snake hibernation sites, there is no indication that they meet the evaluation criteria for a significant wildlife habitat. As such, NRSI recommends that these locations be considered not significant for reptile hibernacula.	indication that this snake or any other snakes may be using this pile for hibernation; however, this conclusion is not tied to specific field surveys done at the appropriate time of year to make this conclusion.  Can NRSI please provide further clarification on why this conclusion was made?  Also, we request that the information about the Eastern Foxsnake road mortality is removed from the EOS report and placed within a separate report to be submitted to the MNR for review by the SAR Biologist.	
Bat Maternity Roosts/ Hibernacula	57-60	Entire section	Some of these paragraphs discuss Candidate SWH for bats and therefore belongs within the SI report.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
	59	This will result in designated significant bat habitat within 120 m of proposed development activities around turbines P001, P103, P104, P106, P118, and P140.	Please clarify the locations (woodland identifications codes) of the woodlands identified the significant bat habitat located within 120 m of the project location within the report and in mapping.	
	60+	Tallgrass Prairie, Savannahs, Rare Forest Types, Waterfowl Nesting Habitat,	As previously commented, these discussions belong within the SI report. The EOS should focus only on those natural features that were identified in or within 120 m of the project location during the SI. It appears many of these features do not require discussion within EOS because they were not found during SI.	
	63	Six (6) identified drains, including two which represent entire creek systems, did not contain water to support turtle overwintering habitat. These include P103-D1, P104-D1, P106-D2, P106-D1, P09-D1, and P004-D1. As a result, NRSI recommends that the eight (8) features (i.e., nine (9) identified drains) which contained water are considered significant wildlife habitat for overwintering turtles.	The MNR requests that the locations of these habitat features be provided in mapping.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
	63	Seeps and Springs section	This discussion is more suited for the SI report.	
	65	The second is a meadow community identified south of the rail bed, west of Fargo (P052-W3), which is 14.3 ha in size. Although not specifically confirmed within these fields, two indicator species, bobolink (Dolichonyx oryzivorus) and vesper sparrow (Pooecetes gramineus), were confirmed during breeding bird surveys within the project area through background review.	The reference to bobolink should be removed from the report and this information should be submitted to the MNR for further consideration in relation to the <i>Endangered Species Act</i> , 2007.	
	67	This habitat is identified above in Figure 2-8  – Ridgetown West - Significant Natural Features and in Appendix I - Significant Natural Features - Turbine Maps for urbine no. P013.	This type of information would be useful and is requested for all SWH located in or within 120 m of the project location, i.e. locations in mapping and references to mapping in the text.	
	69-70	Birds	This full section would be more suitable within the SI report, as previously commented.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
	76-78		All discussion about Candidate Animal Movement Corridors should be placed within the SI report.	-
8.1	79-99	Section 8.1 summarizes all significant natural features in association with project components	The Regulation requires that the distance from the project location is identified. It would be helpful if these distances were identified at the SI stage. For example, instead of saying "located within 120 m of the turbine", say "located 35 m away from the turbine".	
		P020 – A significant woodland (P019-W1) is located north of the proposed turbine.	A significant woodland (P019-W1) is located metres north of the proposed turbine.	
Table 9	101	Summarizes Component, Significant Features and EIS Required	The MNR requests that this table identify the approximate distance between the project component and the significant natural feature. This will help to provide a useful connection to the discussion that will occur within the EIS report. It will also satisfy the	

Section	Page #	Current wording/topic	Suggested rewording or	Description of how
			comment(s)	changes were made
			requirement of the SI to	
			identify the distances	
			between project	
			components and natural	
			features.	

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:06 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent - Workplan - MNR Comments

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Thursday, April 07, 2011 6:36 PM

To: Arnold, Kimberley

Cc: kim.sachtleben@patternenergy.com; Keith Knudsen; Andrew Ryckman; Wherry, Kathryn; Dixon, Rebecca (MNR)

Subject: South Kent - Workplan - MNR Comments

Hi Kim,

The MNR has reviewed NRSI's Memo: South Kent Wind Project – Natural Heritage Assessment Summary of Project Layout Modifications and Proposed 2011 Natural Heritage Assessment Program, dated March 18, 2011. We have reviewed the work program in detail, as well as the Evaluation of Significance (EoS) (submitted to MNR on Dec. 6, 2010, comments provided on Feb. 22, 2011) with a focus this time on the methodology that was utilized to determine significance of Candidate SWH. Further to our meeting on March 22, 2011, we provide the following in response to assist in ensuring that the Regulation requirements are met for assessing Candidate SWH during Site Investigation (SI) and determining the significance of Candidate SWH during EoS.

We are currently unable to provide detailed comments on whether the methodology proposed for SI and EoS studies are suitable without more information on the frequency, timing or type (transects, visual observation, roadside, etc.) of surveys for birds, amphibians, reptiles, etc. that are being conducted for SI and EoS. If NRSI is able to provide more detail on their proposed methodology, we will commit to reviewing those details as soon as possible. Having MNR review the detailed methodology will help to ensure that the Reg. requirements for SI and EoS will be met.

In the meantime, we provide the following general comments on the work program, as well as the approach that was used in the most recent EoS report submission:

- For the wildlife habitat that has been identified within agricultural drains, unless these sites are being managed under the Wetland Drain project, identifying an agricultural drain as SWH may not be appropriate, considering the drain is designed for agricultural use and the farmers could perform work (dredging, etc.) on the drain at any time. There are not many drains within the Municipality of Chatham-Kent that are currently being managed under wetland drain projects and as such, we suggest reconsidering the identification of these habitats as SWH within the EoS. These drains could still be identified as Candidate SWH during SI, but for the reasons described above, it is unlikely the drains will meet the criteria to be confirmed as SWH.
- Any EoS-type field work must be wildlife abundance and diversity specific for Candidate SWH. Any work being done this spring should be conducted using proper methodology. As mentioned above, this methodology should be reviewed by the MNR to ensure it is appropriate for determining significance based on species presence and abundance. In addition, methodology needs to be repeatable, in case further monitoring is required during or after construction, i.e. during operation, which would be determined and discussed within the Environmental Impact Study (EIS) and incorporated into the Environmental Effects Monitoring Plan.
- For some wildlife habitats discussed within the EoS, it is not yet clear what has been included. Mapped boundaries of Candidate SWH (natural feature by definition) is required during the SI stage. Habitats carried forward to EoS should have clearly defined boundary mapping with good descriptions of composition, attributes and function. Based on the SI and EoS reviewed by the MNR thus far, this is not evident, such as for shorebird habitat and waterfowl stopover habitats, etc. Please ensure that enough field work is completed to delineate the boundaries of Candidate SWH during SI, as well as provide a description of the composition, attributes and function of those mapped natural features.

We are also currently reviewing the EIS Sample Report, submitted to MNR on March 25, 2011 and intend to provide comments on it before the end of this week or early next.

If you have any questions, please contact me.

Best Regards,

Heather

## **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:06 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Sample EIS - General MNR Comments

**From:** Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Friday, April 29, 2011 4:25 PM

To: Arnold, Kimberley

Cc: Kim Sachtleben; Keith Knudsen; Colin Edwards; Wherry, Kathryn; Andrew Ryckman

Subject: South Kent Sample EIS - General MNR Comments

### Hi Kim,

As discussed during the meeting on April 13, 2011, the MNR has reviewed the Sample Environmental Impact Study (EIS) report for the South Kent Wind Project. We provide the following general comments on the report and request that you consider these comments while preparing a finalized first draft of the EIS report, along with the Natural Heritage Assessment (NHA) report. I have only reviewed the report up to Section 4.5.1.2.2 and hope to review the remainder of the document. If I have any further comments to share with you, I will be sure to do so by the end of next week. In the meantime, I wanted to provide the comments I have thus far.

#### **Table of Contents**

- Suggest that the Rare Vegetation Communities or Specialized Wildlife Habitat sections (4.4 and 4.4.1) are inserted under the Significant Wildlife Habitat section (4.5), as they are a type of SWH

## **Project Overview**

- The EIS should describe how the environmental effects monitoring plan and construction plan report address any negative environmental effects, as opposed to "describe the environmental effects monitoring plan for natural features", as stated in this section.

#### Table 1.1

- Under Wildlife Habitat, the Rondeau Bay IBA is referred to as a natural feature. For the purposes of the NHA, the term natural feature should be reserved for those features that are defined in the Regulation. As such, the IBA is important to mention but the wildlife habitat features within the IBA are what must be considered and discussed within the NHA.
- The description for use of the term "within" is difficult to follow. Please specify in the table the distance from the project component to the natural feature and if the mapping shows otherwise, provide an explanation for that within the table. It is currently unclear if the term "within" is also being used for project components that are actually within the natural feature, such as a turbine blade overlapping with a feature.

#### Table 1.3

- Please provide more specific information on the types of SWH. For instance, where the Significant Feature identifies "Habitat for Species of Conservation Concern" please summarize what the species is and provide the specific Feature ID for that feature, as was provided in the NHA report. Also, please summarize using the Feature IDs for woodlands and any other natural features discussed in the EOS.

## Section 4.1.2.4 Vegetation Removal

- This section discusses construction commencing in August and the phases of vegetation during that time. Given the change in project timelines, will the discussion within this section be altered?

### Section 4.3.2.4.1 Construction

This section states poles may be positioned to avoid impacting significant woodlands. It is the MNR's preference, that the EIS report addresses specific impacts to significant natural features located within the project location. Therefore, if possible, we would prefer that we know of the locations of where vegetation removal will be required prior to signing off on the EIS report. If the location of the poles are not determined in advance of NHA

completion and sign-off, then the MNR would request that if the positioning of poles results in the removal of vegetation from the woodland, then specific mitigation measures should be laid out in the EIS. In addition, there should be mention of the need for consultation with the MNR prior to vegetation removal in any of the woodlands.

- If vegetation is removed, replace an equivalent amount of area...
- Similar comments apply to section 4.4.1.1.1, 4.4.1.1.2 and 4.4.1.1.3 which discuss impacts and mitigation for rare vegetation communities (which also more appropriately falls within the Significant Wildlife habitat category, i.e. Section 4.5).

#### Section 4.3.2.4.3

- The MNR would request that this section also identify the need for consultation with the MNR if decommissioning activities result in direct impacts to the function of the significant woodlands.

#### Section 4.5 Significant Wildlife Habitat

The four broad categories of SWH are 1. Habitats of Seasonal Concentration of Animals, 2. Rare Vegetation Communities or Specialised Habitats for Wildlife, 3. Habitats of Species of Conservation Concern, and 4. Animal Movement Corridors. Please note and revise the introductory paragraph in this section accordingly. Also, as mentioned above, Rare Vegetation Communities should be discussed here, as opposed to being placed under the Significant Woodlands category within the EIS report.

### Section 4.5.1.1.1 Construction Phase (shorebird migratory stopover areas)

- The MNR requests consideration for appropriate timing windows to lessen the occurrence of avoidance. Has the proponent considered timing construction away from the core migration period for shorebirds?
- This section should contain more information on baseline monitoring. Additional monitoring should also be considered during construction to gain data on avoidance behaviour.

## Section 4.5.1.1.2 Operations Phase (shorebird migratory stopover areas)

- States that "turbines are to be placed at least 120 m away from woodlands wetlands, where possible, in order to minimize potential for impacts to bird movement to and from these areas" more specific information to support this needs to be provided. General statements like these should be backed up with tables outlining specific instances or references to other sections of the EIS where more specific discussion is provided.
- Discusses the abundance of suitable habitats within the shorebird migratory stopover area that avoidance will not be a significant impact; however, MNR suggests that avoidance behaviour be monitored during the migratory season, once the wind project is in operation.
- Discusses results from Erie Shores Wind Farm indicating that studies did not identify avoidance or mortality due to wind turbines with regards to Killdeer. The methodology used for these studies has not be provided, so it is difficult to determine if the studies done were sufficient to draw such inclusions. Regardless of results at other wind farms, if turbines are placed within 120 m of migratory stopover habitat, which could lead to avoidance behaviour, then the MNR would request that monitoring of behaviour within the feature before (baseline monitoring) and after construction (post-construction behavioural monitoring) occur.
- States that maintenance shutdown will be coordinates with high periods of shorebird migratory activity, where possible. Statements like these should be more specific with regards to timing and should link to results of surveys conducted for site investigation and evaluation of significance. For instance, will the migratory activity be monitored to determine when maintenance shutdown should occur?

### 4.5.1.1.3 Decommissioning Phase (shorebird migratory stopover areas)

 A statement should be provided which says that MNR will be consulted in advance of decommissioning to discuss details and obtain feedback.

## 4.5.1.2.2 Operations Phase (Bat Avoidance)

- Although placement of turbines within 120 m of significant bat maternity roost is not anticipated to cause any avoidance of bats from the feature, is behavioural monitoring proposed to verify this statement?

#### **General Comments**

- It would be helpful if the natural features were discussed in relation to the Feature ID codes provided within the NHA reports, especially as it pertains to SWH. It is difficult to determine what wildlife habitat is being discussed without specific ID codes; however, the linkage to mapping was quite useful.
- Shorebirds attributes, composition, and function needs to be provided during SI, so it's hard to understand what the impacts are to the feature each individual habitat needs to have a description at SI. Even the one's that you discount.

The MNR is currently working on a NHA and EIS template for natural heritage assessments. It is currently in draft; however, I pulled some guidance from the EIS section to assist you while you prepare the updated EIS for the South Kent project:

The study should provide a description of the existing or baseline environmental conditions. Such an assessment is required in order to determine a benchmark from which to identify and assess the potential negative environmental effects of the proposed project as required in subsequent sections of the EIS. As such, specific information should be included to support the identification and assessment of environmental effects.

Information to be provided should include but may not be limited to details on the following:

- analysis of surface and subsurface soils;
- · identification of local landform types;
- identification of catchment boundaries of any surfacewater features, including wetlands;
- · description of the water balance, depending on the types of features present;
- description of the infiltration capabilities of the site; and
- · description of natural features

### **Identifying Characteristics and Functions of Natural Features**

A clear description and analysis of each natural feature and the functioning of that feature is required. This may include the identification and analyses of:

- ecologically sensitive functions or functions that can be used as indicators to measure the efficacy of mitigation measures
- species that could serve as an indicator of habitat conditions (e.g. keystone or indicator species)
- key features or functions that contribute significantly to the importance or persistence of a natural feature
- ecological linkages and relationship with adjacent features

Some of the information in this section may be available from previous work (Records Review, Site Investigation and Evaluation of Significance). However, it is likely that some additional studies may be required.

Where features such as wetlands are being treated as significant, the assessment should be included in this section.

It is recommended that mapping be included as per. Section 1.3. Mapping would serve to identify the location of the natural features being assessed, the study boundaries, ecological linkages and natural processes, and other features considered to important (e.g. seeps and springs, rock piles, bluffs and cliffs).

Potential Negative Environmental Effects and Proposed Mitigation, Monitoring and Contingency Measures

A consideration and assessment of effects should be provided for each characteristic and function as identified in s. 5.4 (above). Negative environmental effects should include an assessment of direct on-site effects (e.g. encroachment, fragmentation or elimination of habitat, tree removal) as well as indirect effects (e.g. sediment transport downstream, diversion of water flows, ponding, changes in volume of surface runoff) associated with specific construction, operational and decommissioning activities. Effects should also be measurable and reportable. As such, t is essential that baseline data be established prior to construction as per sections 5.2 and 5.4 to determine a benchmark from which to measure the extent of impact of the development.

Details should include but may not be limited to a description of the following:

- identification of the timing, duration, frequency, and extent of the proposed activity and the potential impact(s) for the project lifecycle
- location and size of areas/features impacted
- type of impact (e.g. size, health, diversity, connectivity, functionality, resilience)
- short-term and long-term effects
- secondary effects (e.g. effects on adjacent natural features)
- identification of any expected residues or emissions
- severity of impact
- mitigation activities to be employed, including location, timing, duration and frequency
- location, nature and quantity of any on-site material to be used
- residual effects, including severity, duration and extent
- cumulative effects
- monitoring to be employed, including techniques, location(s), timing, duration, frequency, rationale and reporting
- specific contingency activities to be provided should the mitigation activities not perform as anticipated, including timing, design and operational considerations if applicable.

- threshold to employ contingency activities (should be reportable and measurable)
- how results of the monitoring plan will be reported, including format and frequency

Mapping can be helpful in describing and supporting mitigation measures, including the location and extent of specific construction activities, the extent and location of mappable mitigation measures such as buffers and fencing, and the distance between specific mitigation measures, natural features, and project construction. Mapping format would be similar to guidelines provided earlier in the NHA template (see sections 1.3 and 2.4).

Discussion of potential negative effects and mitigation and monitoring strategies can be supported with tables. While the information can be provided in various formats, two samples are provided below.

Sample Table. Proposed Mitigation Measures for Natural Features.

Feature Type/ID	Project phase and activity	Functions and Attributes	Predicted Negative Effects	Proposed Mitigation Measures	Performance Objectives	Net Effects
Woodland (WL04)						

Table x. Proposed Monitoring Plan for Natural Features.

Feature Type/ID	Project phase	Predicted Negative	Mitigation Strategy	Proposed Monitoring Plan			Contingency Measures	
	and activity	Effects		Methods	Location	Frequency	Rationale	

### **Summary of Impacts and Mitigation**

This section should provide an overview of the mitigation, monitoring and contingency measures to be employed for specific natural features.

Sample Table. Summary of Proposed Mitigation, Monitoring and Contingency Measures.

Feature	Proposed	Mitigation	Monitoring	Contingency	Threshold for
Type/ID	activities and potential negative environmental effects	Measures	Measures	Measures	Implementation

### **Environmental Effects Monitoring Plan – Design and Operations Report**

For projects subject to the Jan. 1, 2011 REA Regulation amendment, the Environmental Effects Monitoring Plan (EEMP) must be provided to the MNR with the NHA report submission. For projects not subject to the amendment, MNR highly recommends that the EEMP be provided as part of the NHA submission to identify any potential issues prior to the submission of the REA documents. Where the EEMP is not provided to MNR, the applicant must, at a minimum, indicate how the EEMP will address identified negative environmental effects through mitigation, monitoring and contingency measures.

#### **Construction Plan Report**

Within the EIS, the applicant must also indicate the specific mitigation and monitoring measures to be utilized during construction and installation of the development.

As mentioned above, I have not reviewed the report in its entirety, but will endevour to do so before the end of next week.

If you have any questions, please contact me.

Regards, Heather

## **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:06 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Site Investigation - General Comments

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Thursday, June 23, 2011 5:07 PM

To: Arnold, Kimberley

Cc: Kim Sachtleben; Colin Edwards; Wherry, Kathryn; aryckman@nrsi.on.ca; Marnie Dawson

Subject: South Kent Site Investigation - General Comments

Hi Kim,

We have been reviewing the South Kent Site Investigation report and have identified a few general comments that can be applied through the full report, including mapping and tables. Thought it best to share these comments now to give the team the opportunity to consider them ASAP and revise accordingly.

- 1. Table 5a This summary table has been really useful to connect the information provided in the text to the mapping provided in Appendix IV of turbine and components. Our general comments on this table include:
  - a. When a distance or the terms "adjacent" or "in" are provided in brackets, it would be helpful if it was specified what component that is in relation to, i.e. if it's adjacent to the turbine that is listed in the first column or to a road, underground or above-ground cabling associated to the turbine identified in the first column.
  - b. Under the "Habitats of Species of Conservation Concern" column, it would be helpful if the species being considered is listed in the table, so that it's clearly laid out which habitat is being considered.
- 2. Appendix IV It has been noted in the text that in some cases (e.g. P009, page 69) that even if a turbine isn't located within a candidate significant natural feature; it is possible that the construction activities (i.e. laydown area for a turbine) may result in the removal of vegetation from that feature. Though I haven't gotten far enough in the review to know whether those features are significant, I did notice that proposed laydown/construction areas have not been included as components in the project location mapping. Please note that laydown/construction areas are considered project components because they part of the overall project footprint. Please clarify if the mapping may need to be updated to include these areas or if I have misinterpreted something.

We will be providing more specific comments on the wildlife habitat sections tomorrow; however, I was hoping to speak with you and/or other members of the team about the requests/comments above and whether they are feasible to address or if simple clarification could be provided to help with our review.

Thanks,

Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:07 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Site Investigation Report - Detailed Comments - Part 1 **Attachments:** 2011-06-27 South Kent Site Investigation - MNR Comments.doc

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Monday, June 27, 2011 4:11 PM

To: Arnold, Kimberley

Cc: Kim Sachtleben; Colin Edwards; Wherry, Kathryn; <a href="mailto:arryckman@nrsi.on.ca">arryckman@nrsi.on.ca</a>; Marnie Dawson

Subject: South Kent Site Investigation Report - Detailed Comments - Part 1

Hi Kim,

MNR has reviewed through to and including Section 6.5.4 of the Site Investigation report for South Kent Wind Farm, submitted on June 16, 2011. Attached are detailed comments regarding wetlands and wildlife Habitat. I am free any time this week to discuss any questions you or the project team may have about these comments.

We have also been reviewing Section 7.0 of the report and inserting comments directly into the PDF. We will be finalizing and providing those comments within the PDF by the end of day tomorrow.

Regards, Heather

### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

South Kent Wind Project
Samsung and Pattern Energy
Review for Site Investigation Report Received on June 16, 2011
MNR Review Provided June 27, 2011

Ministry of Natural Resources (MNR) staff have reviewed Samsung and Pattern Energy's Site Investigation Report submitted on June 16, 2011. We provide the following comments that will require revisions to the report before we are able to provide confirmation under Section 28 of Regulation 359/09.

## **General Comments:**

At the site investigation stage, it is a requirement to provide the type, attributes, composition and function of all natural features located in or within 120 m of the project location. This requirement applies to all natural features, including wildlife habitat. A good example of where this type of information has been provided in the report is on Page 25, which describes the specific habitat features that were present to identify candidate significant wildlife habitat (SWH) for reptile hibernacula. The following wildlife habitat sections require further information about the attributes and composition of mapped habitat features: Waterfowl Stopover and Staging Areas, Raptor Winter Feeding and Roosting Areas, Amphibian Breeding Habitat, and Bat Maternity Roosts/Hibernacula.

Also, the sections for most of the wildlife habitat types require more information the specific criteria from the Significant Wildlife Habitat Technical Guide (SWHTG) that were applied to make any conclusions about candidate SWH.

The mapping for some wildlife habitats described in the report is relatively broad-scale. It is a requirement at the site investigation stage that feature-specific mapping of natural features, including wildlife habitat is provided. The Significant Wildlife Habitat Technical Guide outlines the feature-specific criteria that should be used to scale mapping down to a feature-specific level.

More detailed comments regarding candidate SWH are provided within the table below.

# **Section-specific Comments**

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
6.2 Wetlands	Page 21	There is reference to one wetland in LIO	It would be helpful at this stage to know the	
		that was considered not present during site	location of that wetland, i.e. near which turbine	
		investigation.	(or demonstrate in records review figures).	
		States that the boundaries of another	We are unable to locate the wetland in Figure 2-	
		wetland will be delineated and it can be	7 and suggest it may be helpful to identify which	
		seen in Figure 2-7.	turbine it is located near.	
6.2 Wetlands	Page 22	States that the wetland boundary will be	Natural feature boundary delineation is required	
		delineated during the evaluation of	during the site investigation stage and as such,	
		significance.	the wetland boundary should instead be	
			delineated in site investigation mapping.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
6.5.1 Seasonal	Page 23, Winter	Explains that this candidate significant	Mapping of the boundaries of natural features is	
Concentration Areas	Deer Yards	wildlife habitat (SWH) will be examined in	required at the site investigation stage and as	
		more detail during evaluation of significance	such, this candidate SWH should be	
		(EOS).	investigated and mapped through physical site	
			investigation at this stage.	
			If site investigation confirmed that no suitable	
			habitat features were present within 120 m of	
			the project location, i.e. coniferous wooded	
			habitats, then it is likely that this habitat does	
			not need to be carried forward to EOS. Further	
			discussion and clarification is required.	
6.5.1 Seasonal	Page 23 and	The mapping shows all areas within ~2 km	The discussion about the habitat on Page 23	
Concentration Areas	Figure 3-9,	of the Lake Erie shoreline as candidate	requires more consideration for the criteria that	
	Waterfowl Stopover and Staging Areas	SWH for waterfowl stopover and staging areas.	was applied from the SWHTG. The attributes and composition of this candidate SWH also	
	and Staging Areas	aleas.	needs to be discussed in greater detail.	
			nicode to be dicodeced in greater detail.	
			Also, mapping at the site investigation needs to	
			be scaled down to specific features that could	
			provide candidate waterfowl stopover and	
			staging areas, i.e. terrestrial and/or aquatic	
			habitats within the 2 km zone identified in	
			current mapping. The focus for this mapping	
			should be on any features within 120 m of project infrastructure.	
			project iiii dettale.	
			The feature-specific criteria in Appendix Q of	
			the SWHTG include optimal vegetation,	
			abundant cover, wetlands, etc. Also, the size	
			the area and quality of habitat could be	
			considered at the site investigation stage.	
			The EOS should then focus on discussions	
			regarding species abundance and diversity to	
			confirm the significance of these features.	
			commit the digimounds of those reatales.	

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
	Page 24, Shorebird	States that habitat does not meet provincial	This section provides discussion on numbers of	
	Migratory Stopover	criteria for being considered SWH.	shorebirds documented within the general area;	
	Areas		however, it is helpful and necessary to provide	
			more detail on the feature-specific criteria that	
			were considered from the SWHTG and why	
			these criteria were not met. This will help us	
			confirm that MNR criteria were applied to make	
			this conclusion.	
			For instance, feature-specific criteria outlined in	
			Section 4.4.6 of the SWHTG describe relatively	
			undisturbed shorelines that provide abundant	
			food as more significant sites. Also Section	
			8.3.6 of the SWHTG explains that many	
			significant sites have a long history of use.	
			Natural, permanent sites are also generally more significant than temporarily flooded areas.	
			more significant than temporarily nooded areas.	
			More discussion is required in this section in	
			relation to the SWHTG for us to confirm this	
			conclusion.	
	Page 25, Raptor	Identified one location for candidate raptor	There is no specific discussion about the	
	Winter Feeding and	winter feeding and roosting habitat	attributes and composition of this habitat	
	Roosting Areas		feature. For instance, sites near open fields	
			with adjacent woods could be considered more	
			significant. Also, sites with abundant prey and	
			perches are considered more significant. If the	
			hedgerow provides this candidate SWH, we	
			require detail on the habitat composition and attributes.	
6.5.1 Seasonal	Page 26,	States that P014-W1 contains amphibian	It doesn't appear as though P014-W1 maps	
	Amphibian	breeding habitat.	amphibian breeding habitat in Figure 3-9. The	
	Breeding Habitat		habitat in the SWHTG is described as	
	: : :g : ::		"Woodlands supporting amphibian breeding	
			ponds" and the feature-specific criteria outlined	
			in Appendix Q of the SWHTG outlines that more	

South Kent Wind Project Samsung and Pattern Energy Review for Site Investigation Report Received on June 16, 2011 MNR Review Provided June 27, 2011

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
			significant sites are woodlands with permanent	
			ponds or those containing water in most years	
			until at least July, woodlands with larger and/or	
			several ponds, diversity of submergent	
			vegetation, presence of shrubs and logs, etc.	
			This is the criteria that should be discussed	
			within the site investigation report, so that we	
			can confirm that appropriate criteria from the	
			SWHTG were applied.	
		Three features (P014-W1, P162-W1, P035-	Each habitat feature identified should clearly	
		WE1) were identified as candidate	indicate the composition and attributes that led	
		amphibian breeding habitat because there	to the conclusion that it was a candidate	
		was either a wetland, lake or pond within or	amphibian breeding habitat. For each of the	
		adjacent to a woodland.	three features, please clarify the habitat	
			features that were present (vernal pools, ponds,	
_			etc.) to conclude that it is candidate SWH.	
6.5.1 Seasonal	Page 26-27, Bat	Section describes that areas of bat	MNR's Bat Guidelines (2010) outline the	
Concentration Areas	Maternity	maternity colonies were identified using	requirement to map the boundaries of candidate	
	Roosts/Hibernacula	data on bat passes. All woodlands of at	SWH as per the SWHTG. The habitat features	
		least 0.5 ha in size were considered candidate SWH for bats.	associated with bats in this area include	
		Candidate SVVH for bats.	wetlands and woodlands with abundant snags	
			(i.e. cavity trees with greater than 25 cm DBH – 10 trees/ha). If there are no areas with a high	
			level of snag habitats, then is unlikely that the	
			habitat would be considered candidate SWH.	
			The section needs to be revised to include	
			discussion about specific habitat features within	
			120 m of the project location that would provide	
			candidate SWH for bats – the boundaries of the	
			habitat should be provided in mapping.	

South Kent Wind Project Samsung and Pattern Energy Review for Site Investigation Report Received on June 16, 2011 MNR Review Provided June 27, 2011

Section	Page #	Current wording/topic	Suggested rewording or comment(s)	Description of how changes were made
6.5.1 Seasonal	Page 28, Other	Section states that field work did not identify	These types of statements need to be	
Concentration Areas	Seasonal Concentration Areas	any candidate SWH for these seasonal concentration areas.	supported with specific reference to the criteria within the SWHTG for each type of candidate SWH. More detail is required.	
6.5.2 Rare Vegetation Communities and Specialized Wildlife Habitat	Page 28-29	States that NRSI has reviewed the rare vegetation communities list.	This section should be more specific about the criteria that were used and the list that was reviewed. The list of rare vegetation communities within Appendix M of the SWHTG contains a list of rare vegetation communities and all ELC communities assessed within 120 m of the project location should be checked against that list to verify whether any rare vegetation communities occur within the project area.	

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:07 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Site Investigation Report - Detailed Comments - Part 2 Attachments: 2011-06-16 South Kent SI - Report MNR Comments 2011-06-28.pdf

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Tuesday, June 28, 2011 4:48 PM

To: Arnold, Kimberley

Cc: aryckman@nrsi.on.ca; Kim Sachtleben; Colin Edwards; Marnie Dawson; Wherry, Kathryn

Subject: South Kent Site Investigation Report - Detailed Comments - Part 2

Hi Kim,

The Ministry of Natural Resources (MNR) has reviewed up to Turbine P040 within Section 7.0 of the South Kent Wind Project Site Investigation Report. We have inserted comments directly within the attached PDF (deleted the figures and remaining pages that are yet to be reviewed, to cut down on file size). Comments start on Page 27 of the report.

In addition to the comments provided within the attached report, we provide the following general comments:

# **Candidate Significant Wildlife Habitat**

- Most of the descriptions for each turbine end with a conclusion that the proposed development activity is found within 120 m of candidate significant wildlife habitat (SWH). We acknowledge that all drains and hedgerows located within 120 m of the project location have been identified as Animal Movement Corridor (candidate SWH) and can make that assumption (see additional comment below pertaining to drains and hedgerows). However, in some cases the type of candidate SWH is something different than Animal Movement Corridor but that has not always been clarified within the paragraph under each turbine or within the conclusion. For greater clarity and interpretation of the results of the site investigation, it would be helpful if the type of candidate SWH is clarified within the descriptive paragraph, or within the summary statement for each turbine within Section 7.0.
- Also, in some cases, the project components are located within a natural feature (candidate SWH), i.e. the proposed cabling or access road crosses a candidate Animal Movement Corridor. Therefore, the statement that this proponent is found within 120 m of candidate significant wildlife habitat does not clearly demonstrate that the component is proposed within the natural feature itself. For clarity, this should be corrected throughout Section 7.0. If a feature will not actually be touched (i.e. no vegetation removal will occur within the feature for the purpose of above ground cabling), that should also be clarified within these sections.
- In addition, not all drains and hedgerows should necessarily be considered candidate SWH (Animal Movement Corridor). As stated in the SWHTG, more significant corridors are connected to other significant natural features or they provide access to and from the most critical habitats. The dimensions of corridors should also be considered at the site investigation stage. We briefly reviewed the discussion on Animal Movement Corridors within the Evaluation of Significance report and noted that the discussion there addresses the fact that very few, if any, of the hedgerows meet the criteria to be considered significant and we suggest that this could have been determined at the site investigation stage and would lessen the amount of features that need to be considered during EOS. We understand it would be large undertaking to revise the report; however, we recommend that it would be of benefit in the future to minimize the amount of features requiring Evaluation of Significance if the features don't mean the criteria to be considered candidate SWH at the site investigation stage.

## Wetlands

Page 82 identifies P108-W1 as a woodland containing a wetland that is beyond 120 m from the project location.
However, the dominant species identified within this woodland indicate that this feature is likely swamp and
therefore wetland. It mentions that the groundcover suggests it is not a wetland and we request that the
groundcover species are identified. Also, please provide detail on any soil data that was obtained that suggested
that this feature is not wetland.

We will provide comments on the remaining components over the next few days, but they will instead be provided through tracked changes within a Microsoft Word version of the document.

Regards, Heather

# **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:07 AM

To: Vukovics, Kathleen

Subject: FW: South Kent Site Investigation Comments - Part 3 - P041 to P122

Attachments: 2011-07-04 South Kent Wind Project\_NH Site Investigation Report\_MNR Comments on

P041-P122 Inserted.doc

**From:** Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Monday, July 04, 2011 1:25 PM

**To:** Arnold, Kimberley; Andrew Ryckman; Tara Lessard; Wherry, Kathryn **Subject:** South Kent Site Investigation Comments - Part 3 - P041 to P122

#### Good Afternoon,

Further to our comments sent for Turbines P001 to P040, please see the attached document which contains tracked changes and comments on the discussion provided for turbines and associated infrastructure for P041 to P122. Please feel free to accept or reject any suggested changes. When changes are made in response to a comment, please insert responses directly into the report (i.e. explaining reason for the change that was/was not made, if necessary) and resubmit the report in tracked changes to help expedite additional review. We will be providing additional comments on remaining turbines by the end of the day.

### **Key Comments:**

- 1. As previously commented; the waterfowl stopover and staging area mapping needs to be scaled down to the specific features that contain candidate habitat.
- 2. P111-W1 was identified as a Silver Maple Mineral Deciduous Swamp. It is our experience that any communities identified as swamp types through Ecological Land Classification (ELC) are considered wetlands. District staff consider this feature a wetland, which would require it to be evaluated using the Wetland Characteristics and Ecological Functions Assessment tool within the Evaluation of Significance report.
- 3. To assist in providing clarity on the statements made at the end of each description, we have inserted in brackets the type of candidate SWH that was found within 120 m of the project components associated with each turbine. In several instances, we have requested clarity on the location of some of the habitat that has been listed in Table 5a. For instance, in some cases we were unable to find the location of amphibian breeding habitat, reptile hibernacula, etc., as well as information on or location of the S1-S3 species habitat that occurs within 120 m of the project location.

Please contact me if you have any questions. I am in the office today, but away on Tuesday to Thursday for training. I will have limited access to email during that time but will check voicemail regularly throughout the week, in case anyone needs to discuss particular comments.

If you'd like to set up a conference call for Friday (July 8<sup>th</sup>) when I'm back in the office, let me know. It may help to touch base on how things are coming along with regards to these comments and others we provided over the past couple weeks.

Regards, Heather

# **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8 (p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:07 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Site Investigation Report - Part 4 - Wetlands/Woodlands

**From:** Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Monday, July 04, 2011 6:29 PM

To: Arnold, Kimberley; Andrew Ryckman; Tara Lessard; Wherry, Kathryn

**Cc:** Fleischhauer, Andrea (MNR); Kim Sachtleben; Colin Edwards; Marnie Dawson **Subject:** South Kent Site Investigation Report - Part 4 - Wetlands/Woodlands

#### Good Afternoon,

The South Kent Site Investigation report, submitted on June 16<sup>th</sup> was recently reviewed by our wetland technical staff and they have identified numerous woodlands that, based on the species composition and ELC community codes, could be considered wetlands under the current 3<sup>rd</sup> edition *Ontario Wetland Evaluation System* (OWES) manual. If the woodland is comprised predominantly of moisture-loving or moisture-tolerant plants (i.e. wetness coefficient of -1 to -5), then it could have the potential to be designated as wetland under OWES. Wetness coefficients have been provided below (in brackets) beside each species and can be found on the MNR Biodiversity Explorer website under each species account.

Further consideration should be given to all Fresh-Moist deciduous forest types that are listed in the Woodland Site Investigation table (Appendix I) as they could be potential Swamp Wetland Communities based on further soil analysis and groundcover species composition. The report and ELC data cards do not provide sufficient detail regarding soil type/classification and as such, appear to be generalized as being FOD communities. We require further detail on the woodland communities listed below on species composition and soil analysis to verify whether or not these features are wetlands that require evaluation of significance using the Wetland Characteristics and Ecological Functions Assessment tool provided within the Natural Heritage Assessment Guide.

Woodland Map Code	MNR Comment
P001-W1 (FODM7-1)	This is thought to be an extension of the wetland community that is adjacent to this feature, as indicated in the report. The species listed for this community are all moisture-tolerant species, such as Gray dogwood (-2), Poison Ivy (-1) and White Elm (-2).
P002-W2 (FODM7-1)	This woodland is comprised of White Elm (-2), Red-osier Dogwood (-3), and Reed Canary Grass (-4), which are all species that suggest this woodland could be classified as a wetland.
P014-W1 (FODM9-2)	The report states that this community is dominated by Silver Maple (-3), with a White Elm (-2) dominated sub-canopy. Although drainage may be affecting this feature the vegetation would still suggest that it is functioning as a wetland. The high density of invasive species such as buckthorn or garlic does verify that there is a lack of seasonal flooding. We require more detail on this wetland (soils, etc.) to verify whether hydrology has been altered or whether there is in fact seasonal flooding.
P014-W2 (FODM7-1)	Based on the information provided this woodland is difficult to assess. It sounds very disturbed or potentially pastured, but does support a variety of moisture-loving plants, such as Reed Canary Grass (-4). Other species that have been included in the species list, such as Canada Goldenrod and White Oak are considered to have a strong preference for upland areas. Further information on the under-story of this community would be helpful and would complete the discussion on the composition of this feature.
P034-W1 (WODM5-2)	This woodland, although young, is dominated by White Elm (-2) and Silver Maple (-3) and should likely be considered a wetland.
P042-W1 (FODM7-1)	Every species listed for this community has some affinity for moisture and

	seasonal flooding. The report states that there is probably seasonal flooding and that it may support vernal pools, which suggest that this feature is a wetland.
P065-W3 (FODM9-3)	Based on the canopy composition we would consider this feature a wetland, such as White Elm (-2), Silver Maple (-3) and Bur Oak (+1) which has an affinity for drier conditions but can still act as a dominant tree in deciduous swamps. The classification could be clearer if the report included information on groundcover species composition.
P108-W1 (F0DM7-1)	As already mentioned, Silver Maple and White Elm are swamp indicator species. Green Ash (-3) is also commonly found in swamps, which strongly suggest that this feature is a wetland.
P140-W2 (FODM-10)	The presence of Buttonbush (-5) undoubtedly confirms that this feature is likely a wetland. In addition, the canopy is dominated by Green Ash (-3) and Silver Maple (-3), while the understory is dominated by red raspberry (-2) and red-osier dogwood (-3). We question the presence of White Oak within the woodland and we suggest it was possibly mis-identified as White Oak ( <i>Quercus alba</i> ) and is actually Swamp White Oak ( <i>Quercus bicolor</i> ), which has a wetness coefficient of -4.
CLA-W2 (FODM7-1)	For this feature, either the Hawthorn needs to be taken to species level or more groundcover species information is required in order to determine whether this woodland could be considered wetland. Based on the dominance of White Elm (-2) and Red Raspberry (-2), we would currently suggest that this woodland is a swamp, i.e. SWD4-2.

Here is a summary of the dominant species that suggest that the communities listed above could be wetlands, along with the Mineral Swamp ELC Codes that should be considered:

- Green Ash (-3) (SWD2-2)
- Silver Maple (-3) (SWD3-2)
- White Elm (-2) (SWD4-2)
- Manitoba Maple (-2) (SWD3-4)
- Red Maple (0) (SWD3-1)
- Bur Oak (+1) (SWD1-2)

As mentioned above, we request further detail within the site investigation report on the soil analysis and species composition for these features to verify whether they are wetlands or woodlands.

If you have any questions about these comments, please contact me.

Regards, Heather

### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:08 AM

To: Vukovics, Kathleen

Subject: FW: South Kent - Seasonal Concentration Areas - Follow Up

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Wednesday, July 13, 2011 4:11 PM

To: Tara Lessard

Cc: Andrew Ryckman; Wherry, Kathryn; Keith Knudsen; Colin Edwards; Arnold, Kimberley; Marnie Dawson; Fleischhauer,

Andrea (MNR)

Subject: South Kent - Seasonal Concentration Areas - Follow Up

Hi Tara,

As we discussed on the phone this afternoon, I had commented previously (Part 2 comments inserted into the PDF provided on June 28<sup>th</sup>) that for the Seasonal Concentration Areas, all types of habitat under this category need to be considered against the criteria within the Significant Wildlife Habitat Technical Guide (i.e. Appendix Q). I followed up with you today to clarify that comment and that it wasn't just meant in reference to those habitats summarized under "Other Seasonal Concentration Areas" on Page 28 of the report, but that it encompassed all habitats listed under that category in Appendix Q, including Landbird Migratory Stopover Areas.

Specifically, for Landbird Migratory Stopover Areas I first told you that because part of the project location occurs within 5 km of the Lake Erie shoreline, this type of habitat should be considered (as per the criteria in Appendix Q). I also said I would chat with John Boos about the size of woodlands that would be considered significant for this type of habitat but wasn't able to reach him. So for the sake of time, I spoke with another district that has dealt with this type of habitat and they said the main thing is to look for representative sites that could be considered significant in the project area. So, in Chatham-Kent, this would likely include the largest of the woodlands (i.e. those that meet the criteria for significance based on size) in the area and that may have multiple ELC communities in them and (preferably) have grassland/thicket/marsh/hayfield/etc. immediately adjacent to the woodland (would be part of the habitat).

For Turtle Nesting and Over-wintering Habitat, I mentioned to you that because the project location goes through these candidate SWH's, the Evaluation of Significance (EoS) will be looked at with greater scrutiny (i.e. we cannot allow flexibilities for features that occur *within* the project location, only for those *within* 120 m of the project location). Because few to no turtles were observed using those candidate habitats, it's hard to confirm whether or not this habitat should be deemed significant (as it has been for some of these features in the EoS). So, at this point, without the appropriate information, we would have to say that the project location would need to be revised to stay out of those habitats until surveys are completed to gain further information on evidence of use during the nesting season, use of the site by several species, etc. (see criteria in Appendix Q related to species presence, abundance and diversity). I have mentioned that if you can narrow down whether the appropriate habitat features are there based on criteria in Appendix Q, it is possible these habitats may not actually be candidate as indicated in the site investigation report. I would still like to chat with John Boos about this, but according to his voicemail, he is out of the office Thursday and Friday. So our further guidance might have to wait until Monday.

For waterfowl stopover and staging areas, you and I discussed the approach for narrowing down the habitat mapping to agricultural fields that may be flooded in that spring and that would likely be okay at this point for mapping candidate sites. Keep in mind though, that if any of the project components are proposed within that candidate habitat, we will again be looking closely to verify whether feature-specific survey work was completed within those habitat features to confirm whether or not they are significant.

If I've missed anything or have misrepresented our discussion in any way, please let me know.

Thanks and have a great night,

Heather

# **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:09 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Evaluation of Significance - MNR Comments (to Page 53) **Attachments:** 2011-07-19 South Kent EOS - Report - MNR comments inserted.doc

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Tuesday, July 19, 2011 4:52 PM

To: tlessard@nrsi.on.ca

Cc: Andrew Ryckman; Wherry, Kathryn; Keith Knudsen; <a href="mailto:colin.edwards@patternenergy.com">colin.edwards@patternenergy.com</a>; Arnold, Kimberley;

m.dawson@samsungrenewableenergy.ca; Fleischhauer, Andrea (MNR)

**Subject:** South Kent Evaluation of Significance - MNR Comments (to Page 53)

Hi Tara,

Attached is the Word Version of the Evaluation of Significance (EOS) report with inserted comments and tracked changes provided for up to Page 53 (full/complete comments end at community P064-W1).

#### General comments so far:

- The full summary of the records review is likely not required at this stage and can be removed, as the EOS mainly needs to focus on only on the natural features that are being carried forward and evaluated for significance (as determined at the site investigation stage). Also, we request that, once finalized, the update summary table from the SI report is provided in place of the summary table currently provided in the EOS report.
- There are two communities (P005-W1 and P047-W1) that are evaluated for significance; however, they are not listed in the site investigation summary and it is unclear if they occur within 120 m of the project location or if they were discussed previously within the Site Investigation report.
- Some of the communities evaluated for significance as woodlands may not actually meet the definition of a
  woodland, as they are described as meadow or shrub/thicket communities and clarification is required for those
  communities as to how they meet the definition of woodland.
- Within the woodland EOS summaries, it sometimes states that a natural feature is adjacent to or within 120 m of a project component but based on mapping it appears that the component is proposed within the natural feature being discussed and clarification is required in those cases.

As always, if you have any questions, please give me a call.

Regards, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:09 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent EIS Review (June 17, 2011 Version)

Attachments: 2011-07-20 South Kent EIS Report - MNR Comments inserted doc

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Wednesday, July 20, 2011 6:01 PM

**To:** Arnold, Kimberley

**Cc:** <u>tlessard@nrsi.on.ca</u>; Andrew Ryckman; Wherry, Kathryn; Keith Knudsen; <u>colin.edwards@patternenergy.com</u>; m.dawson@samsungrenewableenergy.ca; Fleischhauer, Andrea (MNR); Cameron, Amy (MNR); Kim Sachtleben

Subject: South Kent EIS Review (June 17, 2011 Version)

Hi Kim,

Attached is a Word Version that contains the Ministry of Natural Resources' comments on the South Kent Environmental Impact Study (EIS) report that was submitted on June 17, 2011. We look forward to further discussing these comments with you and the project team tomorrow afternoon and are here for guidance whenever needed as you work through revisions.

The following is a general summary of our comments:

- The EIS is currently missing the feature-specific details needed to identify potential impacts to and mitigation measures for all significant natural features located within 120 m of the project location. We have inserted tables throughout the report as a recommendation for providing those specific details.
- As mentioned in previous discussions/conference calls, it appears as though the complete project location, including construction areas, laydown areas, and disturbed areas as described in the text of the EIS, has not been identified in mapping or considered when discussing impacts to significant natural features. For example, a wind turbine may be proposed within 90 m of a significant natural feature; however, construction may occur within 50 m of the woodland. As such, the constructible area would need to be mapped to within 50 m of the woodland to identify the full project footprint and determine the extent of potential impacts (during construction and operation).
- As per MNR comments on the site investigation and evaluation of significance reports (to be provided shortly), there are a number of wildlife habitats types that still need to be addressed (e.g. landbird migratory stopover area, butterfly migratory stopover areas, etc.). Depending on what revisions are made to those documents, if the project is proposed within significant wildlife habitat (SWH), a full EOS must be provided before we can provide confirmation. If a component is proposed adjacent to SWH, the option is to assume significance and agree to pre- and post-construction monitoring within the EIS to address potential behaviour avoidance concerns. Any pre-construction monitoring plans that are prepared to improve upon existing baseline information should be included within the EIS. If these types of plans are required, pending comments and revisions to the site investigation and evaluation of significance reports, they will need to be provided within the updated EIS.

If you have any questions, please contact me.

Regards, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014 Email: heather.riddell@ontario.ca

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:10 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Evaluation of Signifiance - MNR Comments (remainder of report)

Attachments: 2011-07-20 South Kent EOS - Report - MNR comments inserted.doc

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Wednesday, July 20, 2011 6:35 PM

To: tlessard@nrsi.on.ca

**Cc:** Andrew Ryckman; Wherry, Kathryn; Keith Knudsen; <a href="mailto:colin.edwards@patternenergy.com">colin.edwards@patternenergy.com</a>; Arnold, Kimberley; <a href="mailto:m.dawson@samsungrenewableenergy.ca">m.dawson@samsungrenewableenergy.ca</a>; Fleischhauer, Andrea (MNR); Cameron, Amy (MNR); Boos, John (MNR)

Subject: South Kent Evaluation of Signifiance - MNR Comments (remainder of report)

Hi Tara,

Attached is the Word Version of the Evaluation of Significance report with inserted MNR comments and tracked changes provided for the remainder of the report.

General comment on EOS of wildlife habitats:

Further detail is required on the methodology that was followed to evaluate several of the habitat types for significance. We require more detail because we need to determine that the methodology followed was appropriate to confirm significance, especially where project components are proposed within the habitat. If adjacent to a habitat, there is an option to commit to further pre- and post-construction monitoring within the EIS. However, if a component is directly in the habitat we need to have all the necessary information to determine the impacts and mitigation for constructing within the feature before we are able to provide confirmation on the NHA and EIS.

We look forward to discussing these comments tomorrow afternoon.

Regards, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:10 AM

To: Vukovics, Kathleen

**Subject:** FW: SKWP - Pre-construction Monitoring Program

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Friday, July 22, 2011 3:37 PM

To: Tara Lessard

Cc: Arnold, Kimberley; Wherry, Kathryn; Andrew Ryckman (AGR); 335936; Fleischhauer, Andrea (MNR)

Subject: RE: SKWP - Pre-construction Monitoring Program

Hi Tara,

We reviewed the monitoring plans proposed in the attachment you provided. The studies proposed for the habitats listed seem reasonable and repeatable, so we have no additional comments on the methodology.

Please note the following comments and consider them as they relate to the features identified for this additional preconstruction monitoring (and potential post-construction monitoring):

- The studies for these habitats will need to be repeated if the proponent is developing within the habitat or if turbines will be operating adjacent (within 120 m) of the bat maternity or open country bird breeding habitat. The Area Sensitive Bird Woodland habitat does not need monitoring if a turbine is proposed adjacent to that feature but will be if any components are proposed within those features.
- For the purpose of the EOS, you will be treating these habitats as significant until pre-construction studies are completed. Therefore, Hatch will need to provide some general mitigation for these habitats in the EIS and commit to three years of post-construction monitoring (repeat studies), especially if components are being developed within the habitats or within 120 m of turbines (bat and open country breeding bird habitat). Since some sites could end up not being significant based on pre-construction studies, we recommend including a footnote within the EIS that the proponent will discuss further monitoring and effects mitigation with MNR, once pre-construction studies are complete.

Let me know if you have any questions.

Thanks, Heather **Heather Riddell** Ministry of Natural Resources 519-773-4723

From: Tara Lessard [mailto:tlessard@nrsi.on.ca]

**Sent:** July 22, 2011 2:48 PM **To:** Riddell, Heather (MNR)

Cc: 'Arnold, Kimberley'; 'Wherry, Kathryn'; Andrew Ryckman (AGR); '335936'

Subject: Fwd: SKWP - Pre-construction Monitoring Program

Hi Heather,

Here is what we came up with for the pre-construction monitoring program and commitments that will be incorporated in to the EIS.

Please review and let me know if you think any changes should be made.

Thanks,

# Tara



(f) 519.725.2575

(e) tlessard@nrsi.on.ca

www.nrsi.on.ca

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:10 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Site Investigation Report - Remaining MNR Comments **Attachments:** 2011-07-26 South Kent SI Report - remaining MNR comments inserted.docx

**From:** Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Tuesday, July 26, 2011 12:15 PM

To: tlessard@nrsi.on.ca

Cc: Andrew Ryckman; Arnold, Kimberley; Wherry, Kathryn; Kim Sachtleben; colin.edwards@patternenergy.com;

m.dawson@samsungrenewableenergy.ca; Tait, Maryjo (MNR); Fleischhauer, Andrea (MNR); Graham, Brad (MNR); Keith

Knudsen

Subject: South Kent Site Investigation Report - Remaining MNR Comments

Hi Tara,

We reviewed the updated South Kent Site Investigation Report that was submitted to MNR on July 21, 2011. The approach to our attached response (Word version of report with tracked changes and inserted comments), as discussed on the phone with you yesterday, was to remove the inserted comments that have been appropriately addressed and clarify, as well as highlight the sections that still require attention.

Here's a summary of some of the main points we discussed as you and I went through the report yesterday afternoon, over the phone:

- Section 6.5, Plants Compass Plant was observed in the RB communities. Commonly when an s-ranked (S1-S3) species is identified within a feature, the entire feature is considered habitat for that species. Since compass plant was observed within RB-E2 and RB-B2 we would suggest that the full contiguous uninterrupted feature that contains compass plant would be considered candidate SWH. We discussed that perhaps the section of the RB community between Base Road and Mull Road (along the railbed) should likely be considered compass plant habitat, carried forward to the EOS (since portions of that habitat fall within 120 m of the project location) and then likely to the EIS, where any vegetation removal required to construct the cabling proposed within that feature should discuss mitigation, i.e. monitoring to ensure there are no compass plants removed during construction, etc.
- **Section 6.5, Mammals** General locations of s-ranked bat species are depicted in Figures 3-6, 3-7 and 3-9; however, it would be helpful if this section listed the woodland communities that these habitats are contained within, i.e. provide the community identification codes.
- **Section 7.0, General** Where a project component (i.e. cabling) is proposed within a feature, the summary statement for the turbine description should specify that the development activity is proposed in and within 120 m of the natural feature. That suggested changed has been inserted, where necessary, within the attached Word document. As such, this suggested edit needs only to be accepted.
- **Section 7.0, P140** Wetland 140-WE1 should be discussed within the P140 description of Section 7.0 for clarity, since that wetland feature occurs within 120 m of the project location.
- **Section 7.0** Turbine no. P145 is provided in mapping and listed in Table 6a; however, it is still not discussed under the detailed turbine section (Section 6.0 Site Investigation Around Project Components). A discussion about this component and the natural features within 120 m of it must be provided.
- **Section 7.0, P165** The comments provided for this section have still not been addressed. For P165, there is a long vegetation strip (as shown in aerial imagery) that is located within 120 m of the proposed access road. It has not been identified as a candidate animal movement corridor like all other hedgerows in the project area and as such, we requested clarification on why it was not mapped. If it no longer exists, please specify.
- Section 7.0, P166 The comments for this section have still not been addressed. There is a hedgerow and wooded feature (triangular shape) visible within 120 m of the proposed turbine and they appear to be connected to P166-W1 (significant woodland) and as such, we request discussion and mapping of these features if they still exist, especially because it appears as though the turbine is overlapping with the wooded feature and vegetation removal may be required.

- Section 7.0, P173 The comments for this section have still not been addressed. Mapping shows a wooded area within 120 m of turbine no. P173. Please provide a discussion for this woodland. If this feature was not investigated in the field, alternative site investigation (roadside observations) may be employed to meet the requirements of Section 26 of O. Reg. 359/09 as was done for other communities for which access to the land was not obtained.
- **Section 7.3, Substations** Over the phone yesterday, we discussed the PSS substation and I requested clarification on where a substation already exists there that the cabling is connecting to. If not, and an additional substation will be constructed, or any development activity is required to upgrade the current substation, then its location should be included in mapping as part of the project location and it should be discussed with further detail within the report.
- **Section 8.0, Table 6a and 6b** As discussed, there are a few locations highlighted in the table where additional information has been provided. We did not review the table for any other accuracy at this time but noted that some information was missed in a few rows.

If anything is missing from that summary (based on our discussion yesterday), please let me know.

Other than those additional comments, the comments provided previously on Section 6.5 Wildlife Habitat have been appropriately addressed. We also noted that the mapping for waterfowl habitat has been scaled down and the text has been revised accordingly, a discussion regarding landbird migratory stopover area has been provided, and the "other seasonal concentration areas" have also been discussed. We also note that the discussion in these sections more directly links to the criteria within the SWHTG, so we are able to confirm that the criteria has been applied appropriately.

We also noted updates to the mapping, as requested.

We still need time to have a wetland technical staff person review and approve the wetland discussion within Sections 6.2 and 7.0 and should be able to provide a response tomorrow morning. In the meantime, I will be reviewing the changes to the Evaluation of Significance report and Maryjo has been reviewing the EIS report.

If you have any questions, please feel free to give me a call.

Regards, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:12 AM

To: Vukovics, Kathleen

Subject: FW: South Kent EIS - Partial MNR Comments

Attachments: 2011-07-25 Revised EIS Report South Kent - MNR Comments.doc

From: Tait, Maryjo (MNR) [mailto:Maryjo.Tait@ontario.ca]

**Sent:** Friday, July 29, 2011 4:05 PM

To: Wherry, Kathryn

**Cc:** Andrew Ryckman; Arnold, Kimberley; Wherry, Kathryn; Keith Knudsen; <u>colin.edwards@patternenergy.com</u>; m.dawson@samsungrenewableenergy.ca; Kim Sachtleben; Fleischhauer, Andrea (MNR); Riddell, Heather (MNR); Tara

Lessard

Subject: South Kent EIS - Partial MNR Comments

Hi Kathryn,

The MNR has reviewed the most recent submission of the South Kent Environmental Impact Study (submitted Monday July 25th) and attached is the report with partial MNR comments inserted. We recognize there are changes to the EIS forthcoming based on the revisions to the SI/EOS, and therefore the attached includes MNR comments until the wetlands section of the EIS.

The high level comments are:

- Based on revisions to the SI/EOS, changes are required to the EIS
- More information/clarification is required regarding the construction of the project components
- More information/clarification is required regarding the specifics of the features, and the potential negative environmental effects to the significant natural features
- Comments on wetlands, significant wildlife habitat, and the remainder of the EIS will be provided next week.

Please let me know if you have any questions. Our office will be closed on Monday.

Thanks, and have a great long weekend, Maryjo

## Maryjo Tait

Renewable Energy Assistant Planner – Aylmer District Ministry of Natural Resources 615 John Street North Aylmer, ON N5H 2S8

Phone: (519) 773-4786 email: maryio.tait@ontario.ca

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:10 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent EOS Report - Remaining MNR Comments 2011-07-29 South Kent EOS - Remaining MNR Comments.doc

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Friday, July 29, 2011 12:47 PM

To: Tara Lessard

**Cc:** Andrew Ryckman; Arnold, Kimberley; Wherry, Kathryn; Keith Knudsen; <u>colin.edwards@patternenergy.com</u>; m.dawson@samsungrenewableenergy.ca; Kim Sachtleben; Tait, Maryjo (MNR); Fleischhauer, Andrea (MNR)

Subject: South Kent EOS Report - Remaining MNR Comments

Hi Tara,

We reviewed the most recent submission of the South Kent Evaluation of Significance (EOS) report (submitted Friday, July 22<sup>nd</sup>) and attached is the report with MNR comments inserted.

As we discussed over the phone today, technical staff have not yet reviewed the Wetland Sections. We will try to provide comments on those sections by Tuesday (all wetland staff are on holiday today and Monday is a civic holiday).

The comments we have inserted so far are relatively minor and as such, we don't suspect much more work is required to address them. The items that still need to be included in the EOS report based on comments on Site Investigation report include:

- Evaluation of the additional woodlands that were not yet addressed/mapped within the Site Investigation report.
- Additional evaluation of wetlands, pending consideration of site investigation wetland comments sent to NRSI yesterday.
- Updated mapping based on recent discussions and comments on the Site Investigation report.
- Clarification on community P140-W2 please clarify if the cabling runs through that feature because current mapping shows the cabling going through the wetland P140-WE1, i.e. mapping may need to be refined to align with the text in the report (report says the cabling is adjacent to these features).

If you have any questions, feel free to give me a call.

Thanks, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:10 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent - Additions to the Records Review Report

**From:** Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Wednesday, August 03, 2011 11:20 AM

To: Tara Lessard

Cc: Andrew Ryckman (AGR); Wherry, Kathryn; Arnold, Kimberley; 335936

Subject: RE: South Kent - Additions to the Records Review Report

Hi Tara.

The MNR reviewed the South Kent Records Review report that was re-submitted on July 19, 2011 and we provide the following comments in response:

- Section 4.0, The Crown in the Right of Canada This section that was recently added to the report states that records pertaining to existing studies for nearby or overlapping wind projects were obtained from Environment Canada, Canadian Wildlife Service and Natural Resources Canada; however, it does not specify the reports that were obtained from these agencies. Section 25 of O. Reg. 359/09 requires proponents to provide a summary of the records searched. As such, would it be possible to provide the names of the reports that are being referenced in this paragraph, i.e. which reports and for which projects? If that information is provided elsewhere in the report, a statement referencing different sections of the report that contain this information would suffice.
- 7.5 Other This section addresses our previous comments provided on the records review report.

In future, we recommend you consider the following suggestions for records review reports. These recommendations will help you provide greater clarity throughout the Natural Heritage Assessment (NHA) reporting process.

- Particular attention should be paid to the criteria within the Significant Wildlife Habitat Technical Guide, as the records review report could be the place where several types of wildlife habitat could be discussed as candidate, i.e. large woodlands (identified through Land Information Ontario wooded area layers) that occur within 5 km of the Lake Erie shoreline could be considered candidate Landbird Migratory Stopover Areas. It is also possible at this stage to rule out certain habitats types within the general project area, if those habitat types don't apply to the general area (i.e. if not within 5 km of Lake Erie, then Landbird Migratory Stopover Areas are unlikely).
- For large projects like this one, it is very helpful to map and give unique identifiers (codes like the ones you use from Site Investigation through to the EIS) to all natural features (including wildlife habitats) identified through records review. This helps us track the features throughout the NHA process.

Please give me a call if you have any questions.

Thanks, Heather

### **Heather Riddell**

Ministry of Natural Resources 519-773-4723

**From:** Tara Lessard [mailto:tlessard@nrsi.on.ca]

**Sent:** July 19, 2011 11:16 AM **To:** Riddell, Heather (MNR)

**Cc:** Andrew Ryckman (AGR); Wherry, Kathryn; Arnold, Kimberley; 335936 **Subject:** Re: South Kent - Additions to the Records Review Report

Hi Heather,

I'm not sure if you had a chance to review the original version of the Records Review Report that I sent, including the additional information in Section 4.0 - The Crown in the Right of Canada (page 12), and Section 7.5 - Other (page 18).

To this email I have attached a new version of the report (with tracked changes) which includes a few more changes since that other version. The original version of the report that I sent had included three transmission line alternatives that were originally proposed for the project. Since the Records Review Report was submitted, a transmission line has been decided upon, so, the wording and the mapping have been updated to reflect these changes.

If these changes look appropriate, I can re-pdf the final version of the report and add it to the shareware site.

Thanks,

Tara



On 7/14/2011 11:53 AM, Riddell, Heather (MNR) wrote: Hi Tara,

I still need to have a quick look at the changes, which I can do first thing tomorrow so that you can finalize that report.

Cheers, Heather Heather Riddell A/Planning Ecologist MNR, Aylmer District 519-773-4723

From: Tara Lessard [mailto:tlessard@nrsi.on.ca]

**Sent:** Thu 7/14/2011 10:27 AM **To:** Riddell, Heather (MNR)

Cc: Andrew Ryckman (AGR); 'Wherry, Kathryn'; 'Arnold, Kimberley'; '335936'

Subject: Re: South Kent - Additions to the Records Review Report

Hi Heather,

Can I confirm that the changes I made to the Records Review Report (described below) are suitable? And are there any additional changes that need to be made? If everything looks okay, I can pdf a final version of the

report and add it to the shareware site.

Thanks,

Tara



On 7/5/2011 12:21 PM, Tara Lessard wrote: Hi Heather,

As discussed, I have added a few items to the records review report: Section 4.0 - The Crown in the Right of Canada (page 12), and Section 7.5 - Other (page 18). I have attached the word version of the report for your review.

If these additions look suitable, I can re-pdf the final version of the report and add it to the shareware site.

Thanks,

### Tara

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www.nrsi.on.ca

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:12 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent EIS - Remaining MNR comments

Attachments: 2011-08-03 EIS Review Wetlands and SWH - MNR Comments July 25, 2011 revised EIS.doc

From: Tait, Maryjo (MNR) [mailto:Maryjo.Tait@ontario.ca]

**Sent:** Friday, August 05, 2011 2:51 PM

To: Wherry, Kathryn

Cc: Andrew Ryckman; Arnold, Kimberley; Keith Knudsen; colin.edwards@patternenergy.com;

m.dawson@samsungrenewableenergy.ca; Kim Sachtleben; Fleischhauer, Andrea (MNR); Riddell, Heather (MNR); Tara

Lessard; Cameron, Amy (MNR); Tait, Maryjo (MNR) **Subject:** South Kent EIS - Remaining MNR comments

Hi Kathryn,

The MNR has reviewed the most recent submission of the South Kent Environmental Impact Study (submitted Monday July 25th) and attached is the report with the remainder of the MNR comments inserted, on the wildlife habitat section of the EIS.

The high level comments are:

- Some items from the SI/EOS have changed/been added, so the EIS requires revisions to account for those changes.
- Clarification is required on the distances between project components and the significant natural features specifically the report should clearly identify when project components are proposed "in" features and when they are proposed "within 120 m" of features. Feature-specific mitigation needs to be identified (i.e. for open country bird breeding habitat north of Campbell line, a 5.5 m ROW will be through the feature, which will include the entire construction footprint, and the proposed access road and cabling. Heavy machinery will not travel outside of the ROW during construction, operation, or decommissioning. The edges of the 5.5 m ROW will be fenced with silt fencing, which will be monitored daily during construction, and remain in place until...etc.)
- Clarification is required on some of the details of the preconstruction surveying and post construction behavioural monitoring for habitats where a turbine is proposed within 120 metres (bat and bird habitat).
- More information/clarification is required regarding the specifics of the features, and the potential negative environmental effects to the significant natural features
- Overall the language needs to be firmed up, and the specific mitigation needs to be clarified. For example, this includes removal of phrases such as "where possible" and "if required."

As feature specific and site specific mitigation is not provided in the EIS, and due to the mapping and text it is unclear as to which project components are proposed within or within 120 metres of which features, the MNR may have additional comments on the mitigation proposed for all significant natural features. When more details have been incorporated into the EIS, we will be able to provide a more focused review of the specific mitigation measures proposed.

Please let me know if you have any questions.

Thanks, and have a great day, Maryjo

### Maryjo Tait

Renewable Energy Assistant Planner – Aylmer District Ministry of Natural Resources 615 John Street North Aylmer, ON N5H 2S8 Phone: (519) 773-4786

email: maryjo.tait@ontario.ca

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:11 AM

To: Vukovics, Kathleen

Subject: FW: South Kent - Wetland Pictures

**From:** Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Monday, August 08, 2011 10:59 AM

To: Tara Lessard

Cc: Andrew Ryckman (AGR); Wherry, Kathryn; Arnold, Kimberley; Carson, Lisa; 335936

Subject: RE: South Kent - Wetland Pictures

#### Hi Tara,

Thank you for providing us with the updated version of the South Kent Evaluation of Significance report. The only additional comments we have regarding wetlands are as follows:

- Section 5.2 needs to be updated to include the added wetland as this section currently mentions that there are only two wetlands identified within 120 m of project components and there are now five identified wetlands within 120 m of the project location.
- Table 10 Under the Flood Attenuation row for P111-WE1 it still states that the wetland is Riverine; however, under Site Type it is identified as Palustrine. As such, the Flood Attenuation row needs to be revised.
- In the species rarity row it is indicated that there is significant habitat for S-ranked bat species for two of the wetland communities. The table should identify the species and its status (i.e. SC).

We have no additional comments regarding wetlands and look forward to receiving the updated mapping and potential revisions to the report that may come with that mapping.

Thanks, Heather

## **Heather Riddell**

Ministry of Natural Resources 519-773-4723

From: Tara Lessard [mailto:tlessard@nrsi.on.ca]

**Sent:** August 4, 2011 3:02 PM **To:** Riddell, Heather (MNR)

Cc: Andrew Ryckman (AGR); Wherry, Kathryn; Arnold, Kimberley; Carson, Lisa; 335936

Subject: Re: South Kent - Wetland Pictures

## Hi Heather,

The Evaluation of Significance Report has been re-uploaded to the shareware site. This revised version includes the additional wetland information that we discussed. Some of the distance from Project components may need to be refined based on the revised layout mapping (i.e. with the changes to the cabling route and the substation locations).

Please let me know if you have any questions. Thanks,

Tara



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On 8/3/2011 2:04 PM, Tara Lessard wrote: Hi Heather.

Yes, the mapping will be refined to show the precise locations of project components and their distances from natural features. The above ground cabling route won't be going through wetlands/woodlands, and the mapping will reflect this.

Thanks,

Tara



(e) tlessard@nrsi.on.ca

www.nrsi.on.ca

On 8/3/2011 11:29 AM, Riddell, Heather (MNR) wrote: Hi Tara,

Will the mapping also be refined to show the precise locations of project components and their distances from natural features? As we discussed, some areas show cabling going through natural features (including a wetland) when they are reported (in text) to be adjacent to those features.

Thanks, Heather

**Heather Riddell**Ministry of Natural Resources
519-773-4723

From: Tara Lessard [mailto:tlessard@nrsi.on.ca]

**Sent:** August 3, 2011 9:44 AM **To:** Riddell, Heather (MNR)

Cc: Andrew Ryckman (AGR); Wherry, Kathryn; Arnold, Kimberley; Carson, Lisa; 335936

**Subject:** [Possible SPAM]:Re: South Kent - Wetland Pictures

Hi Heather.

We incorporated the changes into the wetland section of the Site Investigation Report and I uploaded the

revised report to the shareware site for your review.

The mapping will also be updated to include the additional wetland boundaries that we spoke about yesterday (i.e. calling P014-W1 a wetland in its entirety, and using MNR mapped boundaries for P014-W2 and P108-W1). Once the maps have been revised, I will upload them to the shareware site as well.

Thanks,

Tara



www.nrsi.on.ca
On 8/3/2011 9:09 AM, Riddell, Heather (MNR) wrote:

Cheers, Heather

Thanks Tara.

**Heather Riddell**Ministry of Natural Resources
519-773-4723

From: Tara Lessard [mailto:tlessard@nrsi.on.ca]

**Sent:** August 2, 2011 3:47 PM **To:** Riddell, Heather (MNR)

Cc: Andrew Ryckman (AGR); 'Wherry, Kathryn'; 'Arnold, Kimberley'; 'Carson, Lisa'; '335936'

Subject: Re: South Kent - Wetland Pictures

Hi Heather,

Thank you for your comments. As per our phone discussion, we will revise the wording in the SIR and the EOS and we will update the wetland boundary mapping accordingly.

Tara



On 8/2/2011 2:43 PM, Riddell, Heather (MNR) wrote: Hi Tara,

Wetland technical staff had a look at the photos and here is the response.

## South Kent Wetland Comments - Based on photos provided on July 29, 2011

**P014-W1** – A portion of the woodlot does appear to be higher and drier such as in photos 3, 7, and 8 which show drier species such as buckthorn. However some of the other photos appear to be wet and there is mention in the site investigation report of vernal pools and seasonal flooding in this woodlot which would justify some sort of wetland inclusion. Upon a closer look at the photos it appears that the south-west of the woodlot could be drier than the north-east section.

**P014-W2** – The photo set for this woodland shows that it was probably pastured extensively in the past which would cause an initial re-colonization of the groundcover layer by invasive or advantageous species. However, almost all the photos in the set show wetland species. Specifically photo 4 shows ash trees, sedges and bare soil (which indicates seasonal flooding as it's an area too wet for most plants to germinate and grow). Similarly photo 7 shows a very similar habitat type as in photo 4 along with some Silver Maple. In addition, photo 2 shows a sedge/grass area that appears to be very wet based on the surrounding silver maples. The pond that was initially mapped by the consultants as being wetland is a dug pond and probably a water source for whatever animals were pastured in the woodlot historically. Special consideration is given to these ponds if the wetland vegetation is there and if the feature functions as a wetland by storing water and slowly releasing it or if it is an area where breeding amphibians congregate or it provides some other significant biological function. Based on the photos, the mapping we provided is probably incorrect and underestimated as the retiring and succession of the property has caused it to become more obviously wet floristically.

**P108-W1** - Although it may not appear as being a wetland, most of the photos here would suggest a wetland inclusion should be considered. As a reminder, the coefficients of wetness for the following species are: poison ivy (-1), jack-in-the-pulpit (-2), jewelweed or spotted touch me not (-3), silver maple (-3), green ash (-3). It is agreed that some of the photos show drier conditions based on the species present such as in photo 5. However, although the density of vegetation would indicate that if there is seasonal flooding here that it would not exist to a period of time that plant species could not successfully germinate, but many of the species in the photos have an affinity for higher levels of soil moisture which indicate the presence of Wetland. If the photos of the aforementioned species in this community were taken in the southerly portion of the woodlot where the inclusion was mapped then there is no need to adjust the boundaries. If however, much of the woodlot represents a combination of wet species then the inclusion should be expanded regardless if the mapped boundary falls within the 120m setback.

**P140-W2** – Agreed that the balance of this woodlot is wet and agree with the consultants boundaries.

Give me a call anytime this afternoon so we can chat about this.

Thanks, Heather

**Heather Riddell**Ministry of Natural Resources
519-773-4723

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:11 AM

To: Vukovics, Kathleen

**Subject:** FW: South Kent Mapping - Woodlands

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

**Sent:** Friday, August 19, 2011 11:37 AM

To: Wherry, Kathryn; Andrew Ryckman; Arnold, Kimberley; Keith Knudsen; colin.edwards@patternenergy.com;

m.dawson@samsungrenewableenergy.ca; Kim Sachtleben; Tara Lessard Cc: Cameron, Amy (MNR); Fleischhauer, Andrea (MNR); Tait, Maryjo (MNR)

Subject: South Kent Mapping - Woodlands

Hi Everyone,

As discussed yesterday, below is a list of woodlands that require clarification based on current mapping. We have also provided snapshots of the mapping that we are currently using based on recent shapefiles provided by NRSI.

We request clarification in the report on whether the components are actually proposed within these features or if this is a current error in mapping:

- P002-W1
- P007-W1
- P011-W1
- P022-W1
- P027-W1
- P055-W1
- P077-W1
- P103-W4
- P114-W1
- P140-W2P162-W1

In some cases, for the following features, the EIS acknowledges that the components are proposed within these features, but we wanted to identify them and request clarification on them to be sure:

- P007-W1
- P022-W1
- P077-W1
- P114-W1

These woodlands may be directly impacted based on discussion in the EIS (may or may not require edge vegetation removal, pending further clarification based on yesterday's discussion):

- P007-W1
- P014-W2
- P022-W1
- P077-W1P114-W1
- P139-W1
- P140-W2
- CLA-W2

Please note that we have not yet looked at the SWH woodlands to determine if any of those woodlands have the project location proposed within them.

If you have any questions, please feel free to give me a call.



P005-W1 – Acknowledge that the cabling does not occur within any significant natural features; however, is the cabling supposed to be closer to Mull Road?



P007-W1 – cabling appears to go through the feature



P011-W1 – cabling appears to be in the feature



P014-W



P022-W1 – cabling and road



P027-W1



P055-W1



P077-W1



P103-W4



P114-W1



P139-W1



P140-W2



P162-W1



CLA-W2



Heather Riddell

A/ Planning Ecologist, Renewable Energy

Ministry of Natural Resources

Aylmer District 615 John Street N Aylmer, ON N5H 2S8

(p) 519-773-4723 (f) 519-773-9014 Email: heather.riddell@ontario.ca

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:11 AM

To: Vukovics, Kathleen

Subject: FW: South Kent - Landowner Contact and Alternative Site Investigation Summary

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Friday, August 19, 2011 1:36 PM

To: Tara Lessard

Cc: Andrew Ryckman (AGR); Wherry, Kathryn; Arnold, Kimberley; 335936; Keith Knudsen; Fleischhauer, Andrea (MNR)

Subject: RE: South Kent - Landowner Contact and Alternative Site Investigation Summary

Hi Tara,

Thanks for providing this information. We have reviewed it and based on the explanations provided consider your reasoning/circumstances for using alternative site investigation appropriate.

However, we do request a few more details for our records. The following are the six explanations that were provided in your summary and in red is the additional information we are requesting.

- 1. Site investigation occurred prior to the REA regulation amendment, which specifies that proper documentation of landowner contact is required. We request more specific information about dates for field work and why physical site investigation could not be used in the first place in these instances.
- 2. Timing and integrity of the field work in 2010 required site visits to occur prior to confirming site access. Access was subsequently gained in early 2011. We request more specific information about why the timing did not work out, i.e. "land acquisition was obtained on [insert date] and field work needed to be completed on [insert date] to capture information during the appropriate season."
- 3. Timing of field work in 2010 did not allow us to take the time to contact landowners. We request further details about when field work was required and why there was no time to gain landowner access.
- 4. At the time of site investigation, the landowners were associated with an acquisition property. Because of this, the South Kent Wind Farm was prohibited from calling these landowners until the acquisitions closed. We request more detail about the timing of acquisitions in association with the seasonality of fieldwork.
- 5. Landowner refused access to the property. No additional information is required.
- 6. No contact information could be obtained for this landowner. We request more detail regarding the process that was followed to obtain information and why it could not be obtained.

Please note that we will not refrain from issuing MNR confirmation on the NHA/EIS should the current updates to the EIS report be completed and approved prior to providing the above information. We would simply like this information for our records as soon as possible, in case it is needed for future reference.

Best Regards,

Heather

#### **Heather Riddell**

Ministry of Natural Resources 519-773-4723

From: Tara Lessard [mailto:tlessard@nrsi.on.ca]

**Sent:** August 11, 2011 4:02 PM **To:** Riddell, Heather (MNR)

**Cc:** Andrew Ryckman (AGR); 'Wherry, Kathryn'; 'Arnold, Kimberley'; '335936'; Keith Knudsen **Subject:** South Kent - Landowner Contact and Alternative Site Investigation Summary

# Hi Heather,

As requested, here is the South Kent landowner contact and alternative site investigation summary for your files. I trust this document will meet your requirements.

Please let me know if you have any questions or comments.

Thanks,

# Tara

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(e) tlessard@nrsi.on.ca www.nrsi.on.ca

From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:13 AM

To: Vukovics, Kathleen

Subject: FW: Revised South Kent EIS (August 25, 2011) - MNR Comments

From: Tait, Maryjo (MNR) [mailto:Maryjo.Tait@ontario.ca]

Sent: Wednesday, August 31, 2011 5:51 PM

To: Wherry, Kathryn

Cc: Andrew Ryckman; Arnold, Kimberley; Keith Knudsen; colin.edwards@patternenergy.com;

m.dawson@samsungrenewableenergy.ca; Kim Sachtleben; Fleischhauer, Andrea (MNR); Riddell, Heather (MNR); Tara

Lessard; Cameron, Amy (MNR); Tait, Maryjo (MNR)

Subject: RE: Revised South Kent EIS (August 25, 2011) - MNR Comments

Hi Kathryn,

Thank you for submitting the revised EIS.

As Heather was reviewing the most recent versions of the SI and EOS, it was noted there are a few changes coming forward that will impact the EIS.

As well, in reviewing the EOS, we picked up on some of the S1 – S3 species habitat that were not included in the EIS.

Specifically, on page 116, of the EoS report, P042-W1 and P108-W1 have not been discussed under the S1 –S3 section in the EIS. These features must be identified in the EIS under SWH S1- S3 species habitat, as they are within 120 metres of turbines, and are two features that require pre-construction monitoring.

Please let me know if you have any questions.

Thanks, Maryjo

#### **Maryjo Tait**

Renewable Energy Assistant Planner MNR Aylmer District

From: Wherry, Kathryn [mailto:KWherry@hatch.ca]

Sent: August 31, 2011 5:44 PM

**To:** Tait, Maryjo (MNR)

Cc: Andrew Ryckman; Arnold, Kimberley; Keith Knudsen; colin.edwards@patternenergy.com;

m.dawson@samsungrenewableenergy.ca; Kim Sachtleben; Fleischhauer, Andrea (MNR); Riddell, Heather (MNR); Tara

Lessard; Cameron, Amy (MNR)

Subject: RE: Revised South Kent EIS (August 25, 2011) - MNR Comments

Hi Maryjo,

Please find attached the revised EIS - the tracked changes version and the clean version for your review . The EIS still requires formatting and this will be completed in the morning.

Thanks,

#### Kathryn

From: Tait, Maryjo (MNR) [mailto:Maryjo.Tait@ontario.ca]

Sent: Wednesday, August 31, 2011 3:37 PM

To: Wherry, Kathryn

Cc: Andrew Ryckman; Arnold, Kimberley; Keith Knudsen; colin.edwards@patternenergy.com;

m.dawson@samsungrenewableenergy.ca; Kim Sachtleben; Fleischhauer, Andrea (MNR); Riddell, Heather (MNR); Tara

Lessard; Cameron, Amy (MNR); Tait, Maryjo (MNR)

Subject: Revised South Kent EIS (August 25, 2011) - MNR Comments

Hi Kathryn,

The MNR has reviewed the revised EIS that was submitted on August 25, 2011, and has provided comments in the attached.

The final comments are relatively minor, and therefore once the changes have been made, it is expected the next review should be the final review of the EIS.

Please let myself or Heather know if you have any questions.

Thanks, and have a great afternoon,

Maryjo

#### Maryjo Tait

Renewable Energy Assistant Planner – Aylmer District Ministry of Natural Resources 615 John Street North Aylmer, ON N5H 2S8

Phone: (519) 773-4786 email: maryjo.tait@ontario.ca

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From: Wherry, Kathryn

Sent: Tuesday, September 27, 2011 11:11 AM

To: Vukovics, Kathleen

**Subject:** FW: Comments on SI and EOS Report, and SI mapping

From: Riddell, Heather (MNR) [mailto:Heather.Riddell@ontario.ca]

Sent: Thursday, September 01, 2011 10:41 AM

To: Tara Lessard

**Cc:** Andrew Ryckman; Arnold, Kimberley; Keith Knudsen; colin.edwards@patternenergy.com; Kim Sachtleben;

Fleischhauer, Andrea (MNR); Cameron, Amy (MNR); Tait, Maryjo (MNR); Wherry, Kathryn

Subject: RE: Comments on SI and EOS Report, and SI mapping

Hi Tara,

We reviewed the Evaluation of Significance Microsite Maps provided in the Appendices, against Table 12a and have the following comments:

- P014-WE1 table says it's 11 m from components; however, in mapping it appears "adjacent"/"immediately adjacent"
- P024-W1 does not appear to be 41 m from cabling as identified in the table; looks immediately adjacent
- P108-W1 P035-WE1 label needs to be removed and P108-W1 label does not appear on the map
- P091-W1 does not appear to be labelled on the Microsite Map
- P092-W1 not labelled
- P102-W2 not labelled
- P022-W1 the access road also crosses this feature, so it should read "in underground cabling and access road" in the table
- P162-W1 switch appears to be "in" the feature
- P162-W2 this feature has not been provided as a Microsite Site map
- P166 the table should show habitat for S1-S3 bat species in the table and the feature needs to be labelled in Microsite Mapping (as seen on 116-W1 mapping)
  - Also, construction area is "in" it should appear as such in Table 12a
- P053-W2 not provided as a Microsite Map

We do not have any additional comments on these reports. Our expectation is that if you are able to make these revisions to the reports and mapping and ensure consistent changes between the SI, EOS and EIS reports, then we should be ready to provide confirmation. We will start that process concurrently, while you and Hatch makes changes.

If you have any questions, please send me an email (I will be on a conference call for the remainder of the morning and early afternoon).

Thanks, Heather

## **Heather Riddell**

Ministry of Natural Resources 519-773-4723

From: Riddell, Heather (MNR) Sent: August 31, 2011 6:14 PM

To: 'Tara Lessard'

Cc: 'Andrew Ryckman'; 'Arnold, Kimberley'; 'Keith Knudsen'; 'colin.edwards@patternenergy.com'; 'Kim Sachtleben';

Fleischhauer, Andrea (MNR); Cameron, Amy (MNR); Tait, Maryjo (MNR); 'Wherry, Kathryn'

Subject: Comments on SI and EOS Report, and SI mapping

Hi Tara,

The MNR reviewed the most recent submissions of the South Kent Site Investigation (SI) report, most of the Evaluation of Significance (EOS) report (excepting Table 12a) and Site Investigation mapping (note: we have not reviewed the EOS mapping). We provide the following comments as a summary and in addition to our discussion over the phone this afternoon:

In reference to Table 6a vs. Microsite Maps in Appendix of the SI report:

- Turbine P060 is in P060-H5 and P060-D1, as opposed to immediately adjacent
- Underground cabling is in RB-F3, as opposed to immediately adjacent
- P077-W1 please confirm that this is not significant habitat for S1-S3 ranked bat species (and consider clarifying this in text of the EOS) as discussed.
- P120 mapping labels need to be revised as discussed re: P108-WE1, etc.
- P125 RB-F3 is immediately adjacent to turbine construction area
- P149 Turbine and construction area is in P177-D1
- P152 P102-W1 is immediately adjacent to construction area for Turbine P152
- P154 P154 is in P080-H5
- P162 switch is in P162-W1 (and its associated habitat)

In addition to these comments:

- We have noted the changes to use of the terminology "adjacent" and "immediately adjacent" to be consistent with the EIS report.
- We have noted the edits to the wetland sections of the SI and EOS report and accept the changes.

We would still like to double-check the EOS mapping against the Table 12a summary as we have done for the Site Investigation report. We should be able to complete that by 10:00 am tomorrow morning.

If you have any questions, please give me a call. I will be on a conference call from 10:00 am to 2:00 pm tomorrow, but I will check email periodically and respond ASAP.

Regards, Heather

#### **Heather Riddell**

A/ Planning Ecologist, Renewable Energy Ministry of Natural Resources Aylmer District 615 John Street N Aylmer, ON N5H 2S8

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Email: heather.riddell@ontario.ca

Ministry of Natural Resources 615 John Street North Aylmer ON N5H 2S8 Tel: 519-773-9241 Fax: 519-773-9014 Ministère des Richesses naturelles 615, rue John Nord Aylmer ON N5H 2S8 Tél: 519-773-9241 Téléc: 519-773-9014



September 2, 2011

Attn: Kim Sachtleben

Development and Market Analysis Manager

Pattern Energy

100 Simcoe Street, Ste. 105 Toronto, ON M5H 3G2

RE: NHA and EIS Confirmation for South Kent Wind Project

Dear Ms. Sachtleben,

In accordance with the Ministry of the Environment's (MOE's) Renewable Energy Approvals (REA) Regulation (O.Reg.359/09), the Ministry of Natural Resources (MNR) has reviewed the natural heritage assessment and environmental impact study for South Kent Wind Project in the Municipality of Chatham-Kent submitted by Samsung Renewable Energy Inc. and Pattern Energy on September 2, 2011.

In accordance with Section 28(2) and 38(2)(b) of the REA regulation, MNR provides the following confirmations following review of the natural heritage assessment (NHA):

- The MNR confirms that the determination of the existence of natural features and the boundaries of natural features was made using applicable evaluation criteria or procedures established or accepted by MNR.
- 2. The MNR confirms that the site investigation and records review were conducted using applicable evaluation criteria or procedures established or accepted by MNR, if no natural features were identified.
- 3. The MNR confirms that the evaluation of the significance or provincial significance of the natural features was conducted using applicable evaluation criteria or procedures established or accepted by MNR (if required).
- 4. The MNR confirms that the project location is not in a provincial park or conservation reserve.
- 5. The MNR confirms that the environmental impact assessment report has been prepared in accordance with procedures established by the MNR.

In addition to the NHA, Environmental Effects Monitoring Plans that address post-construction monitoring and mitigation for birds and bats must be prepared and implemented. It is recommended that post-construction monitoring plans be prepared in accordance with MNR Guidelines and be reviewed by MNR in advance of submitting a REA application to MOE in order to minimize potential delays in determining if the application is complete.

This confirmation letter is valid for the project as proposed in the NHA and environmental impact study, including those sections describing the Environmental Effects Monitoring Plan

and Construction Plan Report. Should any changes be made to the proposed project that would alter the NHA, MNR may need to undertake additional review of the NHA.

Where specific commitments have been made by the applicant in the NHA with respect to project design, construction, rehabilitation, operation, mitigation, or monitoring, MNR expects that these commitments will be considered in MOE's Renewable Energy Approval decision and, if approved, be implemented by the applicant.

In accordance with S.12 (1) of the Renewable Energy Approvals Regulation, this letter must be included as part of your application submitted to the MOE for a Renewable Energy Approval.

Please be aware that your project may be subject to additional legislative approvals as outlined in the Ministry of Natural Resources' *Approvals and Permitting Requirements Document*. These approvals are required prior to the construction of your renewable energy facility.

If you wish to discuss any part of this confirmation, please contact Heather Riddell, Acting Renewable Energy Planning Ecologist at 519-773-4723 or <a href="mailto:heather.riddell@ontario.ca">heather.riddell@ontario.ca</a>.

Sincerely,

**Aylmer District MNR** 

cc. Jim Beal, Renewable Energy Provincial Field Program Coordinator, Regional Operations Division, MNR

Narren Santos, Environmental Assessment and Approvals Branch, MOE Andrea Fleischhauer, Acting Southern Region Renewable Energy Coordinator, MNR KC Kim, General Manager, Samsung Renewable Energy Inc.

Kim Arnold, Environmental Lead – Energy, Hatch

Tara Lessard, Terrestrial and Wetland Biologist, Natural Resources Solutions Inc.



Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project Consultation Report

**Agency Correspondence – MOE** 





August 27, 2010

Doris Dumais
Director, Approvals Program
Ministry of the Environment
Environmental Assessment and Approvals Branch
12A Floor
2 St. Clair Ave West
Toronto, ON
M4V 1L5

Dear Ms. Dumais:

**Subject:** Project Description Report

**South Kent Wind Project** 

On behalf of Pattern Wind Energy Development Inc., please find enclosed the Project Description Report for the South Kent Wind Project. The Project Description Report has been prepared in accordance with Sections 13 and 14(1)(a) of Ontario Regulation 359/09 and MOE's draft Guidance for Preparing the Project Description Report.

As per Section 14(1)(b) of Ontario Regulation 359/09, we look forward to receiving from you the list of Aboriginal communities that we will consult with on each project. We are in the process of commencing the Public and Aboriginal consultation by sending Notices of a Proposal and of First Public Meeting and as such require the list of Aboriginal communities as soon as possible to not impact project timelines.

If you have any questions, please do no hesitate to contact the undersigned at 905-374-5200, ext. 5318 or karnold@hatch.ca.

Sincerely,

Kimberley Arnold, B.Sc., M.E.S. Manager, Environmental Services, Renewable Power

Enclosure

cc: K. Sachtleben, Pattern Energy Group K. Knudsen, Bowark Energy Ltd.

M. Dawson, Samsung Renewable Energy Inc.





October 19, 2010

Doris Dumais, Director, Environmental Assessment and Approvals Branch 2 St. Clair Ave., W, 12A Floor Toronto, On M4V 1L5

Dear Ms. Dumais:

**Subject:** Notice of a Proposal and Notice of Public Meeting

Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project

Samsung Renewable Energy Inc. and Pattern Energy (hereinafter referred to as the "Proponent") are proposing to construct a wind project in the Municipality of Chatham Kent, south of Highway 401, between the towns of Tilbury and Ridgetown. The proposed project is named the South Kent Wind Project (the "Project") and will have an installed nominal capacity of 270 MW.

This proposed Project requires a Renewable Energy Approval (REA) issued in accordance with the provisions of the Ontario Environmental Protection Act Part V.0.1 and Ontario Regulation 359/09. Hatch Ltd. (Hatch) has been retained to assist the Proponent in meeting the REA requirements.

The Proponent is undertaking a public consultation program in support of the Project and we would like to invite you to the upcoming Public Meeting. Please find attached a "Notice of a Proposal to Engage in a Renewable Energy Project and Notice of Public Meeting", which details the time and date of the planned meeting. This Notice will be published in the Chatham Daily News on October 21, 2010 and October 28, 2010. The Public Meeting will provide the public with an opportunity to learn more about the proposed Project and the Proponent.

In accordance with Section 16 (3) of Ontario Regulation 359/09, a "Draft Project Description Report" and associated information pertaining to this Project and the Proponent may be found online at: <a href="https://www.southkentwind.ca">www.southkentwind.ca</a>. Additionally, a copy of the "Draft Project Description Report" is available at the Chatham-Kent municipal office for your review. We would appreciate any comments, queries or information you may have that are relevant to the proposed Project.







## Please direct any correspondence to:

Kimberley Arnold, BSc, MES Manager - Environmental Services, Renewable Power Hatch Ltd. 4342 Queen St., Suite 500 Niagara Falls, ON, L2E 7J7 Phone: 905-374-0701, Ext 5318

Fax: 905-374-1157 Email: karnold@hatch.ca

Yours truly,



Kimberley Arnold, B.Sc., M.E.S

Manager, Environmental Services, Renewable Power REA Coordinator MG:lc

Attachment: Notice of a Proposal/Notice of Public Meeting: South Kent Wind Project

cc Keith Knudson, Bowark Beth O'Brien, Pattern Kim Sachtleben, Pattern Marnie Dawson, Samsung Brian Edwards, Samsung







October 19, 2010

Doug McDougall, Area Supervisor for Windsor, Ministry of the Environment 4510 Rhodes Drive, Unit 620 Windsor, On N8W 5K5

Dear Mr. McDougall:

**Subject:** Notice of a Proposal and Notice of Public Meeting

Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project

Samsung Renewable Energy Inc. and Pattern Energy (hereinafter referred to as the "Proponent") are proposing to construct a wind project in the Municipality of Chatham Kent, south of Highway 401, between the towns of Tilbury and Ridgetown. The proposed project is named the South Kent Wind Project (the "Project") and will have an installed nominal capacity of 270 MW.

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Kimberley Arnold, BSc, MES Manager - Environmental Services, Renewable Power Hatch Ltd. 4342 Queen St., Suite 500 Niagara Falls, ON, L2E 7J7 Phone: 905-374-0701, Ext 5318

Fax: 905-374-1157 Email: karnold@hatch.ca

Yours truly,



Kimberley Arnold, B.Sc., M.E.S

Manager, Environmental Services, Renewable Power REA Coordinator MG:lc

Attachment: Notice of a Proposal/Notice of Public Meeting: South Kent Wind Project

cc Keith Knudson, Bowark Beth O'Brien, Pattern Kim Sachtleben, Pattern Marnie Dawson, Samsung Brian Edwards, Samsung







July 21, 2011

Doris Dumais Director, Environmental Assessment and Approvals Branch 2 St. Clair Ave., W, 12A Floor TORONTO ON M4V 1L5

**Subject:** Notice of Final Public Meeting

Samsung Renewable Energy Inc and Pattern Energy: South Kent Wind Project

Samsung Renewable Energy Inc and Pattern Energy (hereinafter referred to as the "Proponent"), are proposing to construct a wind project within the Municipality of Chatham-Kent. The proposed project is named the South Kent Wind Project (the "Project") and will have an installed nominal capacity of up to 270 MW. This Project requires a Renewable Energy Approval ("REA") issued in accordance with the provisions of the Ontario *Environmental Protection Act*, Part V.0.1 and Ontario Regulation 359/09 (as amended under O. Reg. 521/10 (January 2011)). Hatch Ltd. ("Hatch") has been retained to assist in meeting the REA requirements.

The Proponent is providing you with this notice to make you aware of the upcoming Public Meeting where you can learn more about this Project and the Proponents.

In accordance with Section 15 of O. Reg. 359/09, a Notice of Public Meeting has been prepared and a copy is enclosed. The Notice will be posted in *The Chatham Daily* on Monday, July 25, 2011 and again on Monday, August 22, 2011.

As per Section 17 (1) of O. Reg. 359/09, the draft copies of the supporting documents for the Project, including the Natural Heritage Assessment Reports, Water Body Assessment Reports, Construction Plan Report, Design and Operations Report, Decommissioning Plan Report, Noise Assessment Study, Wind Turbine Specifications Report and Stage 1 and 2 Archaeology Assessment Report are available for public review on-line at: <a href="www.southkentwind.com">www.southkentwind.com</a>. Hardcopies of the supporting documents for the Project are also available at:

Tilbury Library 2 Queen Street Tilbury ON

Blenheim Library 16 George Street Blenheim ON

Municipality of Chatham-Kent Civic Centre 315 King Street West, Chatham, ON

South Kent Wind Project c/o Pattern Energy 57 Talbot St. W Blenheim, ON

The information provided in these reports will be discussed during the Final Public Meeting on Saturday September 24, 2011 from 2:00 pm until 5:00 pm at Tilbury Memorial Arena, Ryder Hall, 55 Bond Street,







Tilbury, Ontario. Your comments, queries or information relevant to the proposed Project would be greatly appreciated. Comments will be accepted until Saturday, September 24, 2011.

Correspondence should be directed to:

Kimberley Arnold, BSc, MES Manager - Environmental Services, Renewable Power Hatch Ltd. 4342 Queen St., Suite 500 Niagara Falls, ON, L2E 7J7

Phone: 905-374-0701, Ext 5318

Fax: 905-374-1157 Email: karnold@hatch.ca

Yours truly,



Kimberley Arnold, BSc, MES ka:mg Attachment – Notice of Final Public Meeting – South Kent Wind Project

cc: K. Sachtleben, Pattern Energy





July 21, 2011

Doug McDougall Area Supervisor for Windsor, Ministry of the Environment 4510 Rhodes Drive, Unit 620 WINDSOR ON N8W 5K5

**Subject:** Notice of Final Public Meeting

Samsung Renewable Energy Inc and Pattern Energy: South Kent Wind Project

Samsung Renewable Energy Inc and Pattern Energy (hereinafter referred to as the "Proponent"), are proposing to construct a wind project within the Municipality of Chatham-Kent. The proposed project is named the South Kent Wind Project (the "Project") and will have an installed nominal capacity of up to 270 MW. This Project requires a Renewable Energy Approval ("REA") issued in accordance with the provisions of the Ontario *Environmental Protection Act*, Part V.0.1 and Ontario Regulation 359/09 (as amended under O. Reg. 521/10 (January 2011)). Hatch Ltd. ("Hatch") has been retained to assist in meeting the REA requirements.

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Blenheim Library 16 George Street Blenheim ON

Municipality of Chatham-Kent Civic Centre 315 King Street West, Chatham, ON

South Kent Wind Project c/o Pattern Energy 57 Talbot St. W Blenheim, ON

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Tilbury, Ontario. Your comments, queries or information relevant to the proposed Project would be greatly appreciated. Comments will be accepted until Saturday, September 24, 2011.

Correspondence should be directed to:

Kimberley Arnold, BSc, MES Manager - Environmental Services, Renewable Power Hatch Ltd. 4342 Queen St., Suite 500

Niagara Falls, ON, L2E 7J7 Phone: 905-374-0701, Ext 5318

Fax: 905-374-1157 Email: karnold@hatch.ca

Yours truly,



Kimberley Arnold, BSc, MES ka:mg Attachment – Notice of Final Public Meeting – South Kent Wind Project

cc: K. Sachtleben, Pattern Energy



May 7, 2012

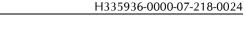
Sarah Raetsen Ministry of the Environment 2 St. Clair Avenue West Floor 12A Toronto, ON, M4V 1L5

Dear Ms. Raetsen,

Subject: Hard Copies of Revised Reports
South Kent Wind Project

Please find attached two hard copies of the following reports reflecting the Project modifications:

- Executive Summary dated May 2, 2012
- Project Description Report dated April 25, 2012
- Construction Plan Report dated April 25, 2012
- Design and Operations Report dated April 25, 2012
- Wind Turbine Specifications Report dated April 25, 2012
- Decommissioning Plan Report dated April 25, 2012
- Natural Heritage Assessment Records Review Report dated February 2012
- Natural Heritage Assessment Site Investigation Report dated February 2012
- Natural Heritage Assessment Evaluation of Significance Report dated February 2012
- Natural Heritage Assessment Environmental Impact Assessment dated April 27, 2012
- Water Body Records Review Report dated May 2012
- Water Body Site Investigation Report dated May 2012
- Water Body Environmental Impact Assessment Report dated May 2012
- Additional Stage 2 Property Assessment Report (Archaeology) dated April 25, 2012
- Heritage Assessment Report dated April 23, 2012







Sarah Raetsen Ministry of the Environment May 7, 2012

We are in the process of revising the Noise Assessment Report based on your recent comments. We will be sending you digitally the Noise Assessment Report by Wednesday, May 9<sup>th</sup>, followed by two hard copies via courier.

The revised Consultation Report will be sent to you the week following the Final Public Meeting which is taking place on Saturday, May 12, 2012 at the Blenheim Golf Course in Blenheim.

Should you have any questions or require any further information, please do not hesitate to contact me at your earliest convenience either by phone (905-374-5200) or email (karnold@hatch.ca).

Sincerely,



Kimberley Arnold Environmental Lead - Energy

KA:LC

cc: K. Sachtleben, Pattern

C. Edwards, Pattern

S. Male, Hatch





Samsung Renewable Energy Inc. and Pattern Energy - South Kent Wind Project Consultation Report

**Agency Correspondence - MTC** 



**Ministry of Tourism and Culture** 

Culture Programs Unit Programs & Services Br. 900 Highbury Avenue London, ON N5Y 1A4 Tel: 519-675-6898 Fax: 519-675-7777

e-mail. shari.prowse@ontario.ca

August 25, 2011

O Highbury Avenue 900, av. Highbury

Direction des programmes et des services 900, av. Highbury London, ON N5Y 1A4

Ministre du Tourisme et de la Culture Unité des programmes culturels

Tél: 519-675-6898
Téléc: 519-675-7777
e-mail: shari.prowse@ontario.ca



Ms. Kathryn Wherry Hatch Energy Ltd. 4342 Queen Street

Niagara Falls ON L2E 7J7

RE: South Kent Wind Project, Romney, East Tilbury, Raleigh, Harwich and Howard Townships, Former Kent County, Municipality of Chatham-Kent, Ontario, MTC File HD00583, PIF #s P264-119-2010, P264-120-2010, P027-112-2010 and P347-001-2011

## Dear Proponent:

This letter constitutes the Ministry of Tourism and Culture's written comments as required by s. 22(3)(a) of O. Reg. 359/09 under the *Environmental Protection Act* regarding archaeological assessments undertaken for the above project.

Based on the information contained in the reports you have submitted for this project, the Ministry believes the archaeological assessment complies with the *Ontario Heritage Act's* licensing requirements, including the licence terms and conditions and the Ministry's 1993 Archaeological Assessment Technical Guidelines or the 2011 Standards and Guidelines for Consultant Archaeologists (whichever apply). Please note that the Ministry makes no representation or warranty as to the completeness, accuracy or quality of the reports.\*

The reports recommend the following:

## Stage 1 - PIF # P264-120-2010, Revised, February 2011, Received February 16, 2011

1. No Stage 2 Archaeological Assessment (Property Assessment) is recommended for the former Michigan Central Railway rail bed proposed to be impacted by this project since the underlying ground has been disturbed and lacks archaeological potential. However, there is potential for railway related sites within and adjacent to the rail bed to the east of the Fargo Road crossing (east of the existing rail line), and a Stage 2 Archaeological Assessment should be carried out in that vicinity (sic);

- 2. A property inspection of impacted road ROWs is recommended in advance of the Stage 2 Archaeological Assessment (Property Assessment) to identify and document visibly disturbed sections. No Stage 2 archaeological assessment of the disturbed locations is recommended. Stage 2 assessment should be conducted where undisturbed ROWs will be impacted. This work will be done in accordance with the MTC Standards and Guidelines for Consultant Archaeologists;
- 3. All remaining locations of proposed construction impact (e.g. turbine sites, access roads, circuits, and turn-arounds) must be subjected to Stage 2 Archaeological Assessment (Property Assessment) in accordance with the MTC *Standards and Guidelines for Consultant Archaeologists*; and
- 4. Should design changes (subsequent to the turbine layout dated November 3, 2010; access road layout dated November 17, 2010; and electrical circuit layout dated December 3, 2010) or temporary workspace requirements result in the inclusion of previously unassessed lands where there is potential for sites, these lands should be subjected to Stage 2 Archaeological Assessment (Property Assessment) to determine if cultural remains are present.

## <u>Stage 2 - PIF# P264-119-2010, P264-120-2010 and PIF# P027-112-2010 February 16, 2011, Received February 17, 2011</u>

- 1. Sites H1 and H2 represent late nineteenth to early twentieth-century dump sites that are situated within the turbine plough area for turbine P052. They are not considered to have archaeological significance and therefore do not have cultural heritage value. Both sites should be considered clear of further archaeological concern;
- 2. Sites of H3 and H4 represent late nineteenth to early twentieth-century dump sites that are situated within the turbine plough area for turbine P038. They are not considered to have archaeological significance and therefore do not have cultural heritage value. Both sites should be considered clear of further archaeological concern;
- 3. Site P1 is an isolated, undiagnostic Aboriginal findspot situated within the turbine plough area for turbine P057 but over 50 m from its project layout. Unless the project layout shifts to within 20 m of the Site P1 location, no additional archaeological assessment is recommended, and the site should be considered clear of further archaeological concern;
- 4. No further archaeological assessment is recommended for the three turbines plough areas for turbines P014, P038 and P047, and they can be considered clear of further archaeological concern;
- 5. A Stage 2 property assessment is recommended for all remaining areas within the turbine plough area for P018, P037, P039, P040, P052, P056, P057 that were not assessed in 2010;
- 6. A Stage 2 property assessment is recommended on the 91 remaining turbine plough areas, as well as the ROWs for all electrical circuits and substation locations where project layout is not vet available but archaeological site potential has been determined.

Project layout within active agricultural lands will require site preparation and adequate weathering in advance of Stage 2 pedestrian survey if surface visibility is not 80% or better, per the MTC's standards and guidelines; and

- 7. Should design changes or temporary workspace requirements result in the inclusion of previously unassessed lands, these lands should be subjected to Stage 2 property assessment.
- 8. A Stage 2 property assessment is recommended on all remaining areas within the turbine plough area for turbine P073 that were not assessed in 2010; and
- 9. Stage 2 property assessment is recommended on the 14 remaining turbine plough areas within the Boralex project area (former land control) for turbines P062, P064, P065, P067, P068, P069, P070, P071, P072, P094, P100, P113, P124, and P126, as well as the ROWs for all electrical circuits where project layout is not yet available but archaeological site potential has been determined.

Project layout within active agricultural lands will require site preparation and adequate weathering in advance of Stage 2 pedestrian survey if surface visibility is not 80% or better, per the MTC's standards and guidelines.

## Stage 2 PIF # P347-001-2011, Revised 2, August 17, 2011, Received August 17, 2011

- 1. If the Project impacts lands immediately adjacent to the existing rail bed within the Canadian Pacific Railway (former Michigan Central Railway) rail corridor, a Stage 2 property [assessment] should be conducted on lands determined to have archaeological potential; and
- 2. If changes to Project layout WTG 10 Rev5b or temporary workspace requirements result in the inclusion of previously unsurveyed lands, these lands should be subjected to a Stage 2 property assessment.

In addition to the above, based on the results of the Stage 2 property assessment of the South Kent Wind Project (the Project) area, Archaeological Services Inc. (ASI) makes the following recommendations:

3. The Stage 2 property assessment did not find any archaeological sites within 101 infrastructure survey areas (ISA), including turbine plough areas (TPA), substation plough areas (SPA), meteorological tower plough area (MPA), and circuit layout survey areas (CLSA) and, therefore, it is recommended that no further archaeological assessment of these areas is required. These areas are: TPA-001, TPA-002, TPA-003, TPA-004, TPA-005, TPA-007, TPA-008, TPA-009, TPA-012, TPA-013, TPA-014, TPA-016, TPA-018, TPA-022, TPA-023, TPA-024, TPA-028, TPA-030, TPA-032, TPA-033, TPA-034, TPA-035, TPA-036, TPA-037, TPA-038, TPA-039, TPA-040, TPA-041, TPA-042, TPA-044, TPA-045, TPA-046, TPA-047, TPA-048, TPA-052, TPA-053, TPA-054, TPA-055, TPA-056, TPA-057, TPA-058, TPA-061, TPA-062, TPA-064, TPA-066, TPA-067, TPA-068, TPA-069, TPA-070, TPA-072, TPA-174, TPA-077, TPA-078, TPA-080, TPA-082, TPA-087, TPA-091, TPA-092, TPA-094, TPA-095, TPA-098, TPA-099, TPA-100, TPA-101, TPA-102, TPA-108, TPA-109, TPA-111, TPA-113, TPA-115, TPA-116, TPA-120, TPA-121, TPA-122, TPA-125, TPA-126, TPA-132, TPA-135, TPA-138, TPA-145, TPA-148, TPA-149, TPA-152, TPA-155, TPA-156, TPA-161,

4. Of the 85 archaeological sites documented during the Stage 2 property assessment, forty-two (42) sites are not recommended for further archaeological assessment as their cultural heritage value or interest (CHVI) has been sufficiently assessed and documented at Stage 2. These are:

ISA	Archaeological Sites
TPA-006	AcHl-60 (SKWP-P53), SKWP-P36
TPA-010	AcHl-61 (SKWP-P55), SKWP-P56
TPA-017	AcHl-57 (SKWP-P1), SKWP-P2, SKWP-P3
TPA-019	AcHl-71 (SKWP-P64)
TPA-020	AcHl-69 (SKWP-P63), AcHl-72 (SKWP-P65)
TPA-029	AcHl-74 (SKWP-P66)
TPA-031	AcHm-54[59] (SKWP-P32), SKWP-P33
TPA-065	AbHn-29 (SKWP-P22), AbHn-30 (SKWP-P23), SKWP-P25
TPA-071	SKWP-P16
TPA-073	AbHo-3 (SKWP-P10)
TPA-075	SKWP-P71
TPA-079	AbHo-4 (SKWP-P26)
TPA-081	AbHo-2 (SKWP-P9)
TPA-093	SKWP-P67, SKWP-68
TPA-097	AcHm-60 (SKWP-P34)
TPA-103	SKWP-P48
TPA-104	SKWP-P60
TPA-106	SKWP-P54
TPA-107	AcHl-41 (SKWP-19), SKWP-P20
TPA-139	AcHl-56 (SKWP-P46), SKWP-P43, SKWP-P45
TPA-146	SKWP-P73, SKWP-P75, SKWP-P77
TPA-150	AbHo-6 (SKWP-P72)
TPA-154	SKWP-P69
TPA-166	SKWP-P38
TPA-171	SKWP-P52
TPA-173	SKWP-P5, SKWP-P7, SKWP-P8

- 5. In addition to the ISAs listed in Recommendation #3 above, thirteen (13) ISAs contain archaeological sites for which no further archaeological assessment is required (per Recommendation 4 above), and, therefore, it is recommended that no further archaeological assessment of these ISAs is required. They are: TPA-006, TPA-019, TPA-020, TPA-031, TPA-071, TPA-073, TPA-075, TPA-079, TPA-081, TPA-093, TPA-097, TPA-150, and TPA-154;
- 6. It is recommended that the remaining 43 archaeological sites documented during the Stage 2 property assessment be subject to Stage 3 site specific assessment if they are to be located within the Project limits as they all meet the criteria for requiring a Stage 3 site-specific assessment based on the MTC's 2011 Standards and Guidelines (S & G), Section 2.2 Analysis: Determining the requirements for Stage 3 assessment. The type of site as per S & G

a) Stage 3 is recommended for the following 21 archaeological sites or portions thereof located within the Project lands based on *S & G Section 2.2*, Standard 1.a.i.(1):

ISA Archaeological Sites		
TPA-010 AcHl-50 (SKWP-P37)		
TPA-017 AcHl-33 (SKWP-P4)		
TPA-103 AcHl-58 (SKWP-P50) AcHl-59 (SKWP-P51) AcHl-64 (SKWP-P49)		
TPA-104 AcHl-66 (SKWP-P61) AcHl-67 (SKWP-P62)		
TPA-106 AcHl-44 (SKWP-P27) AcHl-48 (SKWP-P31) AcHl-45 (SKWP-P28)		
AcHl-46 (SKWP-P29) AcHl-47 (SKWP-P30)		
TPA-107 AcHl-42 (SKWP-P21)		
TPA-118 AcHl-65 (SKWP-P58)		
TPA-133 AcHl-76 (SKWP-P70)		
TPA-139 AcHl-55 (SKWP-P44)		
TPA-140 AcHI-62 (SKWP-P57)		
TPA-171 AcHl-35 (SKWP-P11) AcHl-36 (SKWP-P12) AcHl-37 (SKWP-P13)		
AcHl-39 (SKWP-P17)		

The Stage 3 assessment must be carried out according to the criteria for small pre-contact Aboriginal sites *where it is not yet evident* that the level of CHVI will result in a recommendation to proceed to Stage 4. The Stage 3 site-specific assessment for these sites includes:

- historical documentation per S & G Section 3.1, Standard 1.a-b, if necessary;
- controlled surface pick-up of the site area: surface preparation may be required if ground conditions have deteriorated since the Stage 2 property assessment was conducted; and
- test unit (1 m square unit) excavation at 5 m intervals across the site plus an additional 20% of focused sampling;
- b) The Stage 2 property assessment identified one (1) pre-contact Aboriginal archaeological site—AcHl-68 (SKWP-P59) associated with TPA-118—dating to the Early Archaic period that meets the criteria for requiring a Stage 3 site specific assessment based on S & G Section 2.2, Standard 1.a.i.(1). At present, the entire site including the 20 m buffer is outside the Project limits (see ASI 2011c: Figure 22). If the project limits change to include the site area or its buffer, it is recommended that this area must be subject to a Stage 3 Site-specific assessment. The Stage 3 assessment must be carried out according to the criteria for a small, pre-contact Aboriginal site where it is not yet evident that the level of CHVI will result in a recommendation to proceed to Stage 4.
  - historical documentation per S & G Section 3.1, Standard 1.a-b, if necessary;
  - controlled surface pick-up of the site area: surface preparation may be required if ground conditions have deteriorated since the Stage 2 property assessment was conducted; and
  - test unit (1 m square unit) excavation at 5 m intervals across the site plus an additional 20% of focused sampling. Due to the early time period of the site, a 20% sample of the

- c) The Stage 2 property assessment identified one (1) isolated, pre-contact Aboriginal archaeological findspot—AcHl-34 (SKWP-P6) within TPA-173—dating to the Early Archaic period that meets the criteria for requiring a Stage 3 site specific assessment based on S & G Section 2.2, Standard 1.b.iii, and, therefore, it is recommended that a Stage 3 site-specific assessment be conducted for this site or portions thereof located within the Project lands. The Stage 3 assessment must be conducted according to the criteria for a small pre-contact Aboriginal site where it is not yet evident that the level of CHVI will result in a recommendation to proceed to Stage 4. The Stage 3 site-specific assessment includes:
  - historical documentation per S & G Section 3.1, Standard 1.a-b, if necessary;
  - controlled surface pick-up of the findspot area: surface preparation may be required if ground conditions have deteriorated since the Stage 2 property assessment was conducted. If no additional surface finds are discovered, another CSP will be conducted after additional weathering has occurred. If no artifacts are recovered, a minimum five onemetre units centred over the original findspot will be excavated. Due to the early time period of the site, a 20% sample of the excavated units (i.e., one unit) must be screened through 3 mm mesh to facilitate the recovery of small, potentially diagnostic artifacts; and test unit (1 m square unit) excavation at 5 m intervals across the site will *only* be required if a scatter of additional artifacts are discovered during the controlled surface pickup, plus an additional 20% of focused sampling. Due to the early time period of the site, a 20% sample of the excavated units must be screened through 3 mm mesh to facilitate the recovery of small, potentially diagnostic artifacts;
- d) The Stage 2 property assessment identified six (6) post-contact Euro-Canadian archaeological sites that meet the criteria for requiring a Stage 3 site specific assessment based on *S & G Section 2.2*, Standard 1.c, and, therefore, it is recommended that a Stage 3 site-specific assessment be conducted for these sites or portions thereof located within the Project lands. These sites are:

ISA	Archaeological Sites
TPA-021	AcHl-73 (SKWP-H11)
TPA-026	AcHl-75 (SKWP-H12)
TPA-029	AcHl-70 (SKWP-H10)
TPA-065	AbHn-31 (SKWP-H5)
TPA-124	AbHo-5 (SKWP-H13)
CLSA-2	AcHl-61 (SKWP-H9)

The Stage 3 assessment must be conducted according to the criteria for small post-contact Euro-Canadian sites *where it is not yet evident* that the level of CHVI will result in a recommendation to proceed to Stage 4. The Stage 3 site-specific assessment for these sites includes:

• historical documentation (i.e., land use history of property) per *S* & *G* Section 3.1, Standard 1.b-g, as appropriate;

- controlled surface pick-up of the site area (except for AcHl-61 that was discovered during test pit survey): surface preparation may be required if ground conditions have deteriorated since the Stage 2 property assessment was conducted; and
- test unit (1 m square unit) excavation at 5 m intervals across the site plus an additional 20% of focused sampling;
- e) The Stage 2 property assessment identified 11 pre-contact Aboriginal archaeological sites that meet the criteria for requiring a Stage 3 site specific assessment based on *S & G Section 2.2*, Standards 1.a.i.(1) or (3), and, therefore, it is recommended that a Stage 3 site-specific assessment be conducted for these sites or portions thereof located within the Project lands. These sites are:

ISA	Archaeological Sites	
TPA-060	AcHm-58 (SKWP-P14)	
TPA-103	AcHl-57 (SKWP-P47)	
TPA-105	AcHl-52 (SKWP-P40) AcHl-49 (SKWP-P35) AcHl-51 (SKWP-P39) AcHl-	
53 (SKWP-P41)		
TPA-107	AcHl-40 (SKWP-P18) AcHl-43 (SKWP-P24)	
TPA-139	AcHl-54 (SKWP-P42)	
TPA-146	AcHl-77 (SKWP-P74) AcHl-78 (SKWP-P76)	

The Stage 3 assessment must be conducted according to the criteria for small pre-contact Aboriginal sites *where it is clearly evident* that the level of CHVI will result in a recommendation to proceed to Stage 4. The Stage 3 site-specific assessment for these sites includes:

- historical documentation per S & G Section 3.1, Standard 1.a-b, if necessary;
- controlled surface pick-up of the site area: surface preparation may be required if ground conditions have deteriorated since the Stage 2 property assessment was conducted; and
- test unit (1 m square unit) excavation at 10 m intervals across the site plus an additional 40% of focused sampling;
- f) The Stage 2 property assessment identified two (2) post-contact Euro-Canadian archaeological sites that meet the criteria for requiring a Stage 3 site specific assessment based on *S & G Section 2.2, Standard 1.c*, and, therefore, it is recommended that a Stage 3 site-specific assessment be conducted for the these sites or portions thereof located within the Project lands. These sites are:

ISA	Archaeological Sites
TPA-063	AbHn-32 (SKWP-H7)
TPA-166	AcHl-63 (SKWP-H6)

The Stage 3 assessment must be conducted according to the criteria for small post-contact Euro-Canadian sites *where it is clearly evident* that the level of CHVI will result in are commendation to proceed to Stage 4. The Stage 3 site-specific assessment for these sites includes:

• historical documentation (i.e., land use history of property) per *S* & *G* Section 3.1, Standard 1.b-g, as appropriate;

- controlled surface pick-up of the site area: surface preparation may be required if ground conditions have deteriorated since the Stage 2 property assessment was conducted; and
- test unit (1 m square unit) excavation at 10 m intervals across the site plus an additional 40% of focused sampling;
- g) The Stage 2 property assessment identified one (1) pre-contact Aboriginal archaeological site—AcHl-38 (SKWP-P15) within TPA-171— that meets the criteria for requiring a Stage 3 site specific assessment based on *S & G Section 2.2*, Standards 1.a.i.(1), and, therefore, it is recommended that a Stage 3 site-specific assessment be conducted for this site or portions thereof located within the Project lands..

The Stage 3 assessment must be conducted according to the criteria for a large, relatively dense plough disturbed site with multiple scatters containing more than one diagnostic artifact *where it is clearly evident* that the level of CHVI will result in a recommendation to proceed to Stage 4. The Stage 3 site-specific assessment for these sites includes:

- historical documentation per S & G Section 3.1, Standard 1.a-b, if necessary;
- controlled surface pick-up of the site area: surface preparation may be required if ground conditions have deteriorated since the Stage 2 property assessment was conducted; and
- test unit excavation:
  - --place multiple grids over areas of artifact concentration and excavate across those grids at 5 m intervals;
  - --place and excavate additional test units, amounting to 20% of the initial grid total, between areas of concentration to document areas of lower concentration; and
  - --place and excavate additional units, amounting to 10% of the initial grid total, on the periphery of the surface scatter to determine the site extent and sample the site periphery;
- 7. Partial clearance is recommended to allow construction to proceed in areas of the Project lands where there are no further concerns for impacts to archaeological sites or parts of the project as identified in Recommendations 3, 4 and 5 above. To support this, it is recommended that MTC provide a letter confirming that there are no further concerns with regard to alterations to archaeological sites for those sites and areas as detailed in Recommendation 3, 4 and 5 above. The required conditions have been met as per *Section 7.8.5*, Standards 1.a-d, as indicated by the following:
  - the Stage 2 fieldwork has been completed for the Project lands and Stage 3 is still required for archaeological sites or portions thereof located within Project lands as detailed in Recommendations 6 a, c-g, above;
  - the partial clearance recommendation forms part of the final report on the Stage 2 work;
  - the estimated timeline for completing the remaining Stage 3 archaeological assessment work is the fall of 2011 and/or the spring of 2012;
  - the development mapping showing the location and extent of the archaeological sites requiring Stage 3 site-specific assessment along with their 20 m protective buffer and their 50 m monitoring buffer zone are provided (see ASI 2011 c, c.f., P347-001-2011: Supplementary Documentation, Figures 2-5, 10-12, 20-28, 31-32);

- the following detailed avoidance strategy has been committed to by the Proponent and will remain in place until the required Stage 3 site-specific assessments for the 42 archaeological sites have been completed (estimated to be by the end of summer 2012) as noted in Recommendation 6 a, c-g above:
  - 1) written instructions will be provided to all construction personnel working within the Project lands to avoid the location of these archaeological sites and their protective 20 m buffers. No soil disturbances other than traditional farming practices can occur within these areas; and
  - 2) prior to construction proceeding within the 50 m monitoring buffer zone surrounding these archaeological sites, snow fencing will be erected around the sites and their 20 m protective buffers within the project lands. All construction within the monitoring zone will then be monitored by a licensed archaeologist who will be empowered to stop construction if there is a concern for impact to an archaeological site.

The Ministry is satisfied with these recommendations.

This letter does not waive any requirements which you may have under the *Ontario Heritage Act*. A separate letter addressing archaeological licensing obligations under the Act will be sent to the archaeologist who completed the assessment and will be copied to you.

This letter does not constitute approval of the renewable energy project. Approvals of the project may be required under other statutes and regulations. It is your responsibility to obtain any necessary approvals or licences.

Please feel free to contact me if you have questions or require additional information.

Sincerely,

Shari Prowse Archaeology Review Officer

- cc. Ms. Katie Bryant, Archaeological Services Inc.
  - Mr. Rob Pihl, Archaeological Services Inc.
  - Dr. Andrew Riddle, Archaeological Services Inc.
  - Dr. Scarlett Janusas, Scarlett Janusas Archaeological and Heritage Consulting and Education

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<sup>\*</sup>In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report is otherwise found to be inaccurate, incomplete, misleading or fraudulent.