

CLC Field Trip to **SOUTH CANOE WIND PROJECT** Site



November 9, 2012



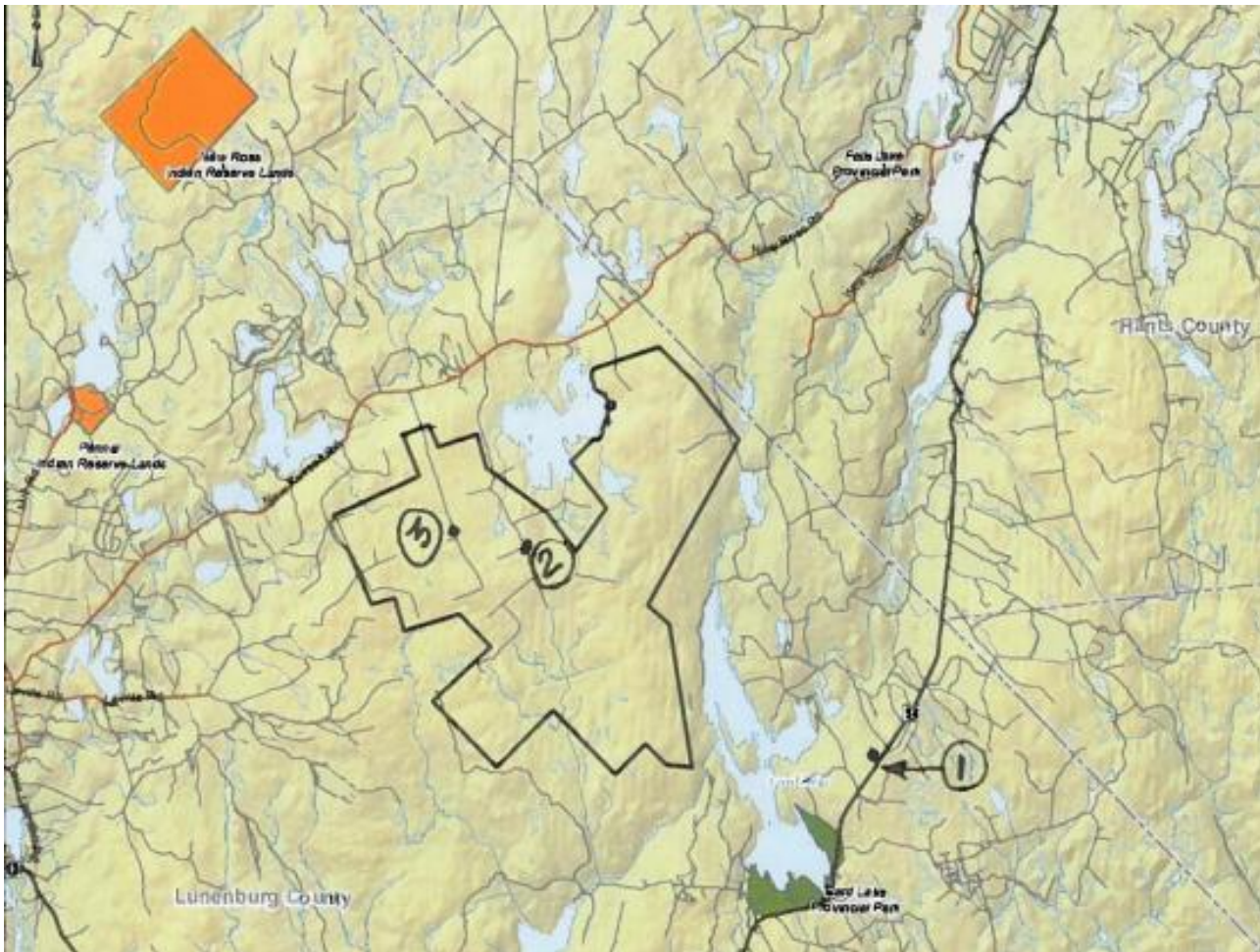
**Bruce MacDonald, NSLS
Woodland Supervisor/Surveyor**

**Mary-Frances Lynch
Energy Project Coordinator**

Bruce led our field trip and his knowledge of the site was very extensive which is evident from the following slide and other notes throughout this presentation.

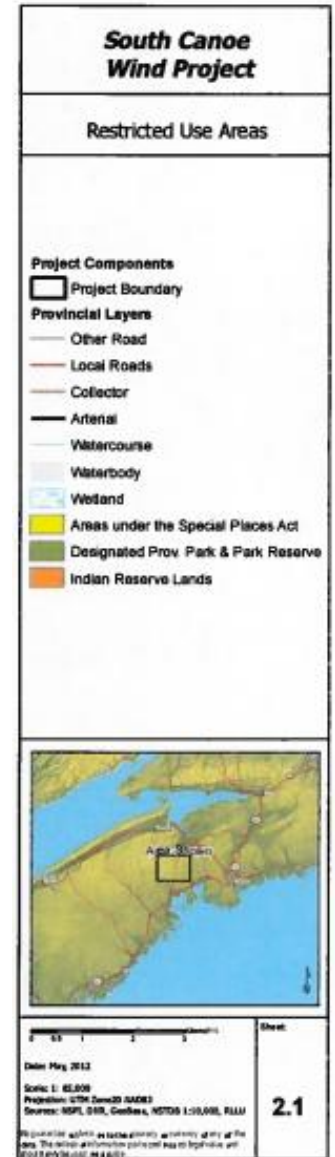
A wee bit of history

- **The Timberland Holdings (2010) Ltd** property at South Canoe Lake lies in both **Hants and Lunenburg Counties**
- **Large parcel of land** consisting of approx. **5,770 Ha (14,245 acres)**
- Property purchased by **Minas Basins Pulp and Power Company** in **1952** from Nova Scotia Light and Power Company Ltd.
- Since 1952 property has been held in several companies controlled by the **Jodrey family** in **Hantsport**.
- Property is generally bounded:
 - to the **north** by the **New Ross Road**,
 - to the **east** by **Route 14**,
 - to the **south** by **Card Lake** and,
 - to the **west** by **Wagner Forest** of Truro.



The following three (3) areas of the site were visited:

1. Highway 14
2. Timberland haul road off New Russell Road
3. Wagner property access off New Russell Road





First Stop - Highway 14 – approx. 1.1 km north of the ‘landfill road’

- CTV tower although not visible lies about 10 km north-west.

“Bruce noted that the development for the South Canoe Wind Project would be mostly north-westerly to westerly.”



Photo courtesy of K. Keddy.

CTV Tower – picture taken from New Ross/New Russell Road.

*“It was pointed out that **McCully and Soy Ltd** was contracted in the early 1960’s to run a sawmilling operation on the east side of the property. This operation was centered at **Little Joe Long Lake** near the out flow of Card Lake.”*



In the discussion at this stop, it was noted a small bridge that provided access to the old sawmill is gone and very little remains of the sawmill itself.

*“Lumber sawed was shipped by truck to **Windsor** for **overseas shipment**, and, pulp wood was shipped to the **Minas Basin Pulp and Power’s** mill in **Hantsport**. Bruce noted that the meals served at the cookhouse were something of a pure delight.”*

*“Bruce remarked that **Nova Scotia Power** has maintained flowage right (that is the right to store water for future hydro generation) and dams on **Card and South Canoe Lakes**. This water eventually flows to the power plants that make up the **Avon Power Plants**.”*

Janis and Debbie noted that they were aware of this flowage right as a result of their involvement in saving the **Nova Scotia Power Dam** on **Zwicker Lake** a few years ago.



Kerry, Eric, Janis and Buzz at our First Stop off of Highway 14 – with the low ceiling we were unable to see the CTV Tower.



Second Stop - Timberland haul road approximately 4 km from pavement (New Russell Road)

“On our way to the second site, Bruce remarked that in the late 1970’s and continuing into the 1990’s logging was conducted from the New Ross Road.”



Photo courtesy of K. Keddy.

*“Bruce continued to tell us that sawlogs were shipped to the **Minas Lumber** sawmill in **Hantsport** and 5 foot pulpwood also went to the groundwood mill in Hantsport. Other products including studwood, hardwood and hemlock were shipped to various mills including **Canoxel** in **East River**, **Bowater Mersey** in **Liverpool** and various sawmills in the area.”*



It was nice to hear that these **harvesting operations** were conducted by **contractors from the local area** working directly for Minas Basin Pulp and Power/Timberland Holdings.



Depicted is the 50 meter met mast located approximately 200 meters south-west of this road.



Walking into the tower. Note the “pink” boots!

Photos courtesy of K. Keddy.

“Bruce had our attention once again as he pointed out that the Tower was originally placed in April 2004.”



Photos courtesy of K. Keddy.

And, yes
John was
with us!



This tower has been collecting wind data ever since it was placed. A similar collection unit was placed on the CTV tower a couple of years ago. With wind data from both units it will help make more informed decisions about the placement of the turbines.



Third Stop - Wagner property approximately 3 km from pavement (new Russell Road)

- Fifty (50) meter met mast lies to the south-east.

*“On the drive to this site, Bruce informed us that in the mid 1990’s the sawmill in **Hantsport** closed and **Minas Basin Pulp and Power** changed to using **100% re-cycled fibre** for linerboard production. At this time and for several years after smaller portions of the property were offered to contractors/sawmills in Nova Scotia on a tender basis.”*



We noticed trees were marked with **fluorescent tape** and Bruce indicated that these were the result of the wetland, water-crossing, and plants surveys undertaken by **Strum Environmental**.

“This involved making smaller parcels of land on the ground and selling the forest products on the parcel at market prices.

Harvesting operations were conducted under the provincial harvesting guidelines in effect at the time. Just several years ago lumber prices reached all-time lows so this practice was discontinued; however, it may resume if pricing of forest products warrants.”



Photo courtesy of K. Keddy.

From the ensuing discussion, it was noted that rock on the property will likely be blasted for gravel which will be used on site for road construction, etc.



On behalf of Community Liaison Committee (CLC), we would like to thank ***Bruce***, whose knowledge of the history of the site was fascinating and informative.

In addition, we would like to thank, ***John*** and ***Mary-Frances***, who are always helpful in providing us with information and field trips when requested.

In closing, this parcel of land is about to start a **new phase of development** which will **add to its fascinating past** by engaging in a **new and exciting future**.

THANK YOU!



PROJECT MEETING MINUTES			
Committee Chair:	John Woods	Project Manager:	Sean Brennan
Project Name:	South Canoe Wind Project		
Purpose of Meeting:	Regular Community Liaison Committee Meeting		
Location:	New Ross Fire Hall	Date	December 10, 2012
Attendance	Representation	Present	Regrets
CLC Members			
Ryan Cameron	Property Owner		X
Megan Davies	Local Resident	X	
Sydney Dumaresq	Friends of Nature		X
Debbie Innes	Local Resident	X	
Janis Kinnie	Cottage Owner	X	
Buzz Smith	Local Resident	X	
Ben Wiper	Chester Chamber of Commerce		X
Kerry Keddy	Local Resident	X	
Judy O'Leary	Cottage Owner	X	
Eric Christmas	Mi'kmaq Rights Initiative		X
Janice Mitchell	Cottage Owner		X
Rick Cecchetto	Oxford Frozen Foods		X
Stephanie Fuller	Nova Scotia Power	X	
Chris Peters	Minas Basin Pulp and Power	X	
John Woods	Minas Basin Pulp and Power	X	
Guests			
Sean Brennan	Nova Scotia Power, Project Manager	X	
Aaron Long	Minas Basin Pulp and Power	X	
Stephen Dewar	Oxford Frozen Foods	X	
Richard Krane	Clearwater Hills Lot Owners Association	X	
Robert Hutt	Local Resident	X	
Rubia Hutt	Local Resident	X	
Mike O'Leary	Cottager	X	
Tina Connors	Municipal Councillor	X	
Dave McCall	Local Resident	X	
Roy Bishop	Cottager	X	
Stephen Porter	Local Resident	X	
Merlin Gates	Local Resident	X	
John Parnell	South Shore Ready Mix	X	
1. Adoption of Meeting Agenda			
	Agenda adopted		
2. History of Project			
	<ul style="list-style-type: none"> • Land owned by Minas Basin Pulp and Power (MBPP) • Meteorological masts installed on-site (48m) in 2004 and on nearby CTV tower (96.5m) in 2010 • MBPP put met masts on lands at Blomidon and Morden in 2004 • MBPP's South Canoe Wind Project participated in RFPs in 2004, 2005 and 2007 • MBPP sought a partner for the South Canoe Wind Project in 2011 • REA launched RFP in 2012, RFP submitted June, Power Purchase Agreement signed August 		

	<ul style="list-style-type: none"> • Open houses held last February in Upper Vaughan and Chester • Environmental Assessment submitted May 24 and approved July 13
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3. Layout Design Criteria

	<p>Layout includes the following design criteria and setbacks:</p> <ul style="list-style-type: none"> • Lot line – 165 m • Public road – 200 m • Rare plant/wetland – 30 m • Provincial park – 60 m • Wind speed <6m/s – location dependent • Slope > 15 degrees - location dependent • Residence - 1200 m <p>Energy Assessment is major component of determining layout. It includes:</p> <ul style="list-style-type: none"> • Design criteria (see above) • Terrain (e.g. elevation, vegetation, ease of construction) • Wind speed and direction • Turbine technology <p>A computer program takes into account all factors above and generates an optimized layout and energy production estimate.</p>
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4. Request For Proposals Process

	<ul style="list-style-type: none"> • Process - competitive, one chance to submit proposal • Strategy – present most productive project layout • Bid – submit annual production amount and associated electricity rate • Contract – must generate bid amount each year for 20 years • Moving turbines can lead to losing energy production as a result of 1) placing turbines too close together (wake losses) or 2) moving from a high energy yield location to low energy yield location.
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5. Technology – Acciona Wind Power North America

	<ul style="list-style-type: none"> • Project team has selected Acciona’s AW 3000-116 turbine • AW 3000-116 has 92m tower and 57 m blades, up-scaled version of the AW1500 • Negotiations with Acciona began in August and are on-going, will conclude soon • Project completed due diligence visits to ensure a high level of comfort with Acciona <p>Acciona:</p> <ul style="list-style-type: none"> • Headquartered in Madrid, Spain, over 30,000 employees in 32 countries • Focused on sustainability • Fifth largest owner of wind projects in the world • High fleet availability 98.2% (2011 North America) and over 1500 MW of wind projects in NA • Acciona turbines used in Lameque, NB and to be used in PEI. PEI project plans to use DSTN to manufacturer towers and will be operational in 2014.
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6. Turbine Layout and Photomontages

Layout (see presentation doc for map):

- The Environmental Assessment granted approval for 50 turbine locations; however, using Acciona's 3MW turbine means that 34 locations will be used (3 MW x 34 = 102 MW)
- Elevation plays a big role in optimization of the site. Higher elevation = windier areas on map
- 1.2km setback – larger than any Municipal by-law in the Province, next largest is 1km in HRM.

Questions:

- What is the box near turbine six? This is a different property boundary belonging to CBC.

Transportation:

- Site access will be via existing roads on MBPP and Wagner lands from the New Ross Rd.
- Acciona is currently working on route plan with local design firm and the Department of Transportation Infrastructure & Renewal (TIR).
- A limit of 10 trucks per day will deliver turbine components to the site between 10am and 4pm. Three turbines will be delivered to the site per week.

Questions and Comments:

- CLC member mentioned that #316 bus drops school kids off at her house on the New Russell Rd. at 3:05pm and picks them up at 7:08am. The school bus route takes 55 minutes and travels from New Russell Rd to New Ross. The South Shore School Board should be contacted to coordinate the timing of transporting turbine components with school bus route. **ACTION: South Canoe Project Partners (SCPP)**
- Will components be transported during spring weight restrictions? No.
- Will turbines be trucked via Hwy 12 or 14? Acciona is currently working with TIR and local design firm to determine best route.
- What will be the impacts on roads and the project's commitment to fix damage? The project will sign an agreement with the Municipality and TIR for the use of the roads and to ensure roads are not damaged/are returned back to previous condition.
- Can a "no engine break" sign be put up for trucks along the New Russell Rd, especially near Lake Lewis/Red Shirt Rd? **ACTION: SCPP**
- How fast will delivery trucks drive? TIR will dictate truck speeds and flagging trucks will accompany turbine delivery trucks to ensure that lower speeds are maintained.

Maintenance building and transmission line - Questions:

- Where will the maintenance building be located on site? This depends on where the substation will be located, likely in the eastern portion of the site.
- What dictates where the transmission line/substation will go? Potential system upgrades will dictate the location of the transmission line and substation.

Photomontages (see presentation for photos):

- Photos taken from various locations near the project
- Photos rendered using geographic information, elevation data, turbine dimensions

Photos from EA:

- 1) View from New Russell Rd near Little Island Lake
- 2) New Russell Rd near South Canoe Lake – request to put missing house on map. **ACTION: SCPP**
- 3) New Russell Rd at Red Shirt Rd
- 4) Wile Settlement Rd

	<p>New photos taken from Lake Lewis and Long Lake:</p> <ol style="list-style-type: none"> 1) Lake Lewis middle of lake – you can see turbines #6,7,4,1 2) Lake Lewis (island) – you can see turbines #6, 7,4, 1 3) Long Lake – you can minimally see turbine #6 <p>Questions and Comments:</p> <p>How was the colour of the turbine chosen for the photomontage? Will ask Strum. ACTION: SCPP</p> <p>Could a grey colour be used for the turbine instead of white to make it less visually intrusive? Will ask Acciona. ACTION: SCPP</p> <p>Where are towers being made and what material will be used? The project is hopeful that DSTN in Trenton can build towers so long as they meeting quality and cost standards.</p> <p>Who can be lobbied to ensure that the towers are built in Nova Scotia? Will find out. ACTION: SCPP</p> <p>What about possibility of ice throw from turbines? From project studies, ice build-up not as likely on South Canoe site, nonetheless, the project team has purchased ice package with turbines. Blades have an auto detection system for ice and will slow down and shut off if ice builds up. There are heaters inside nacelle that may help melt ice. Will ask Acciona about ice throw on other projects. ACTION: SCPP</p> <p>What about human health impacts? From studies done for the project and with 1.2km setback, no impacts on health are anticipated. Health Canada has cited in its FAQ section that rigorous studies show no health impacts. Will share weblink to Health Canada statement with group. ACTION: SCPP</p> <p>CLC member cited the website for the Society for Wind Vigilance outlining a need for a 4.5km setback.</p> <p>How close are specific CLC members' homes from turbines? ACTION: SCPP</p> <p>Will turbine aviation lighting be red or white, will it be a strobe light, and how many turbines will have lights? The light will likely be red and medium-flashing. Not all turbines will have lights.</p> <p>A couple of additional photomontages were requested from a local resident and a CLC member (will confirm). Project team to follow up. ACTION: SCPP</p>
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7. Project Milestones	
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	<p>Project Award – August 2012</p> <p>Signed Project Operating Agreement – August 2012</p> <p>Development Application Submitted – October 2012</p> <p>Turbine Supply Agreement Signed – Likely December 2012</p> <p>Construction Services Agreement Signed – December 2012</p> <p>Geotechnical Investigation – December 2012 – February 2013</p> <p>System Impact Study Complete – January 2013</p> <p>Engineering Design – January – April 2013</p> <p>Development Application Public Info Session/Hearing – January-February 2013</p> <p>Site Layout Finalized – February 2013</p> <p>Land Clearing – February – April 2013</p> <p>Development Application Decision – February 2013</p>
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	<p>Road Construction – May – October 2013</p> <p>Foundations Construction – July – November 2013</p> <p>Collector System Construction – March – July 2014</p> <p>Interconnection Construction – March – July 2014</p> <p>Wind Turbine Deliveries – June – August 2014</p> <p>O&M Building – May – August 2014</p> <p>Wind Turbine Erection – July – September 2014</p> <p>Energization – August 2014</p> <p>Wind Turbine Commissioning – August – November 2014</p> <p>Commercial Operation – December 2014</p>
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8. Local Benefits

	<p>Although Acciona will provide turbines, the project will seek to maximize local contribution to work on the site. Project team requests the input of CLC and community members/leaders for identifying workers/skills. Chester Chamber of Commerce to assist in compiling list as well as local residents/councillor for New Ross.</p> <p>NS scope of work to include:</p> <ul style="list-style-type: none"> • Turbine Supply (e.g. DSTN towers) • Turbine installation • Site (e.g. housing for workers) • O&M Building • Roads • Foundations • Collector System • Foundations – batch plant on-site is better for road traffic and local services • Collector system • Substation • Transmission line
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9. General Questions and Comments

	<p>Will on-site rock be used for roads/gravel? Hopeful that existing rock can be used on-site.</p> <p>Will there be blasting? The project is currently undergoing geotechnical work to determine if blasting is needed. For the Digby Wind Project, blasting was required and pre-blasting surveys were conducted on homes approximately 1.5km of project. In the end, there were no complaints related to blasting. The project team will work with community on the issue of blasting once the geotechnical evaluation is complete.</p> <p>Could there be damage to foundations of homes due to blasting on site? At Digby, there were homes closer to the site than at South Canoe and none were damaged. The pre-blast survey is done by a third party consultant and consists of a well water quality test and an inspection of house foundation. A report is given to the resident and if concerns arise, they should be shared with the third party consultant. Each resident would need to approve the pre-blast survey. The cost of the survey is incurred by the project team. Municipality will also play a role in regulating blasting.</p>
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	<p>What if you don't have a foundation? Should not be an issue.</p> <p>What about clearing on the site? Given the use of the existing roads, clearing will be minimized.</p> <p>Where is the transmission line going? A final decision has not been made on the location of the transmission line but will be known soon. Likely to go over Hwy 14 (not over North Canoe Lake).</p> <p>CLC member requested that billboards not be put near South Canoe Lake. Project Manager responded that temporary signage for construction will be required as well as a sign at entrance of site, and signs on-site showing map of turbine locations and safety precautions.</p> <p>When will the next CLC meeting be and can information be shared from this meeting with the group? Notes and slides from meeting will be shared with those in attendance. A meeting will be held in January. If weather does not permit, the local CAP group can host webinar.</p> <p>Concern that project does not provide local benefit and instead poses a risk to health and property value loss.</p> <p>Could consideration be given to moving turbines closest to roads, is there room to move turbines? Unlikely to move turbines as the layout that has been generated is based on the design criteria and energy assessment.</p> <p>What happens if sound levels are exceeded - what is the contingency plan? Project is not allowed to exceed the 40dBA sound level. If a turbine is too noisy, it will be fixed. Project team will need to find out what is causing the noise issue and will solve problem, may take more drastic measures and curtail operation if need be.</p> <p>Is the 40dBA limit flexible? No.</p> <p>What will the project team do if people suffer negative health impacts - what is plan? The plan is to deal with health issues on a case by case basis.</p> <p>What wind speeds do the turbines cut in and reach rated power at? Cut in at 4m/s, reach rated power at 10-12m/s</p> <p>Will blasting occur 24h/day? No. Construction work will not occur through the night, though once a concrete pour begins for a foundation, it must be completed. The Municipality will play a role in setting construction hours based on their bylaws.</p> <p>What material are blades made of? Fiberglass</p> <p>Could a community member from another wind project come and speak to the CLC? Yes, good idea. Project team is happy to set up meeting but suggested that the community contact Municipalities with wind projects and coordinate a community-to-community meeting.</p>
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Minutes compiled by:	Mary-Frances Lynch
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Please review Minutes for errors and omissions, and advise complier accordingly. NOTE: Closed items will be recorded for one additional meeting, and then removed.
