



Protect Lorrain Valley Coalition
PO Box 195
North Cobalt Ontario
P0J 1R0

August 26, 2015

Independant Electricity System Operator
Large Renewable Procurement Application Phase
1600-120 Adelaide Street West
Toronto, ON M5H 1T1

RE: WPD Canada "Silver Center Wind Project"

We are a group of Land Owners in the area of Lorrain Valley and South Lorrain Townships. These unorganized townships have been under review as potential wind turbine sites by WPD Canada since 2012. In early 2015 WPD Canada reported, to several area Land Owners, that the original project was not possible, due to insufficient wind, but that they would be pursuing other avenues with the opening of Crown Forests to Industry. We were informed in June of this year, that WPD had returned to the area to pursue their proposed Silver Center Wind Project. After hastily reviewing some of the changes made to the Crown Land Use Atlas, the Environmental Protection Act and several Ministries, we found that "Silver Center Wind Project" was to be presented as an Application by WPD Canada to compete for an LRP-1, Offer to Contract on the Valley's Crown Land. Our review of the information has uncovered some extremely serious issues that we feel sure you will want to review prior to considering the WPD Canada Application.

We respectfully submit this package to the IESO, the Minister of the Environment and Climate Change and The Premier Kathleen Wynne. We also will submit basic packages to the Minister of Energy, the Minister of Aboriginal Affairs and our area Members of Provincial and Federal Parliament. We take the quote below, from the Honorable Glen Murray, Minister of the Environment and Climate Change, to heart and depend on your Organization to review the vital information enclosed prior to considering any intrusive projects in this highly sensitive area of our province.

"Fighting climate change and working to keep our air, land, and water clean will ensure Ontario's prosperity and quality of life for today and for future generations."

Glen Murray, Minister of the Environment and Climate Change

Here are our concerns, with Addenda where needed.

*Issue Number 1: Arsenic Contamination

Addendum 1-A, "Effect of Disturbing Local Arsenical Deposits on Ground,Well and Lake Waters",
C. W. E. Johnson, P. Eng. Ret'd.

Addendum 1-B, "Geology of South Lorrain Township, District of Temiskaming" by W.H. McIlwaine,
Geological Report, Toronto, 1970. Page 25

*Issue Number 2: Community Approval

2-1) Community Identification

2-2) Community Approval not Achieved by WPD Canada Canada

Addendum 2-2-A-1 Land Owners Within Study Area and Abutting Crown Land and Lease Holders
Within Crown Land in Proposed Area/Within Study Area (all letters)

Addendum 2-2-A-2 Petition

Addendum 2-2-B-1 Businesses within the Study Area/Abutting or Within the Crown Land Project Area

Addendum 2-2-B-2 Businesses with Panoramic View Points

Addendum 2-2-B-3 Businesses who depend on Lorrain Valley and South Lorrain Tourism

2-3) Aboriginal Land Claim & WPD Canada Partnership with Temiskaming First Nation

*Issue Number 3: Wind Speed Assessment

Addendum 3-A "Wind Speed Insufficient" Three Emails

*Issue Number 4: Road Access/Liability/Long Term Care of Area

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Issue Number 1
ARSENIC CONTAMINATION

The Lorrain Township and South Lorrain Township, known historically as "Silver Center" were the location of the largest Silver deposit in the province. The unique deposits of the area's silver ores are distinguished by a calcitic carbonate-rich gangue, the most typical ore minerals being Co-Ni arsenides and sulphides, and native silver (Moore, 1934). The following common minerals were opened to the elements and entered the environment. Examples: native bismuth, smaltite, niccolite, breithauptite and chloanthite, and secondary minerals such as crimson erythrite ("cobalt bloom"). The area has been recovering, with help from Provincial and Federal funding, to repair and reclaim areas that have been contaminated by huge amounts of arsenic released when the ground was disturbed by blasting and silver mining.

The form of Arsenic found in our area is the "erythrite" and it is found throughout the Lorrain Valley, Silver Center area and South Lorrain Township. The "erythrite" and "crimson erythrite" is 25.03% Arsenic and contains 8 molecules of water of crystallization per 1 molecule of "erythrite". This means, in lay terms, that the form of Arsenic occurring in large amounts in our area, the "erythrite", is miscible with water and readily soluble.

One gram of erithrite ("cobalt bloom") will toxify (render poisonous) over one TRILLION litres of water (35,000,000 gallons of water). As late as the mid 1970's an old mine site (visible from Highway 567 today on the west side of the road just south of North Cobalt) was disturbed and, within a year, the George Blanchard family living across the road, were hospitalized. The entire family was extremely ill and spent many months detoxifying from their arsenic contaminated well water. Members of our Coalition had family members poisoned by the well and stream water at Bucke Park within the last 30 years and, as late as 2006, the Mass Spectrometer results from the "Maiden Lake" water showed it to contain six times the allowable level of Arsenic safe for human consumption.

(Document held by: C. W. E. Johnson, P. Eng. Ret'd.)

However, recovery is slowly improving the area lakes and ponds. Efforts are proving fruitful and, at this time, our area is a natural geological source of arsenical minerals. If any land, from the town of North Cobalt on to the regions south of the Matabitchuan Hydro Electric Generating Station, were disturbed our area would return it to its previous state of massive contamination. The negative effects on area fish and game living in and around the lakes and the health damage to local residents and visitors drinking contaminated well water would be profound. The loss of property values for Land Owners, the loss of Tourism dollars in the region and the damage from arsenic laced water travelling into the Ottawa Valley Water System is incalculable.

See Addendum A "Effect of Disturbing Local Arsenical Deposits on Ground, Well and Lake Waters", C. W. E. Johnson, P. Eng. Ret'd.

See Addendum B "Geology of South Lorrain Township, District of Temiskaming" by W.H. McIlwaine, Geological Report, Toronto, 1970. Page 25

<http://www.geologyontario.mndmft.gov.on.ca/mndmfiles/pub/data/imaging/R083/R083.pdf>

Other Links: Summary of Ontario's Water Related Legislation: Drinking Water Source Protection

<http://actforcleanwater.ca/index.php?page=summary-of-ontario-s-water-related-legislation>

Ministry Documents of Statutes and Regulations Pertaining to Arsenic

http://www.ontario.ca/laws?search=arsenic&filteroption=current&filterstate%5B%5D=current&filteryear=&pit_date=1990-12-31&filtertype=Regulation&sort=&sort_letter=

Environmental Studies of Cobalt and Area

<http://www.cobaltmininglegacy.ca/environStudies.php>

Reclamation Efforts in Cobalt and Area

<http://www.cobaltmininglegacy.ca/reclamationEfforts.php>

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Issue Number 2

COMMUNITY APPROVAL/

2-1. Community Definition

2-2. Community Approval/Rated Criteria not Achieved by WPD Canada Canada

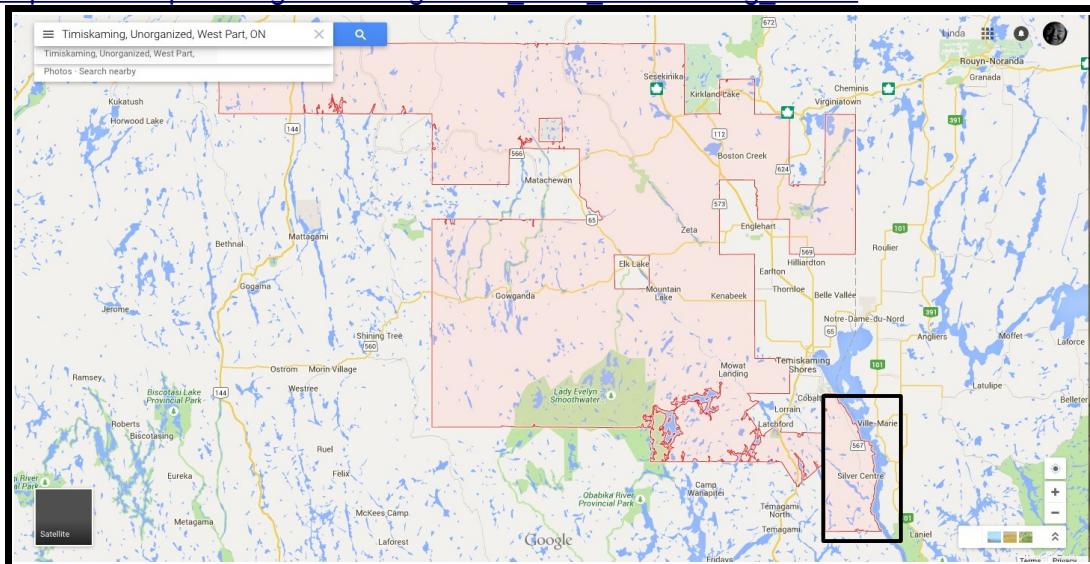
2-3. Aboriginal Partnership/Rated Criteria: Timiskaming First Nation No Land Claim Rights

2.1 Community Definition

WPD Canada has failed to define "Community" correctly in their online Documentation.

The term "Unorganized West Temiskaming District", used throughout the "Silver Center Wind Project" Documentation is in error. The referenced "Unorganized West Temiskaming District" Community is a total of 20+ unorganized townships extending almost 100 kilometres to the north of Temiskaming Shores and includes Lorrain Valley and South Lorrain Township only in the 2011 census for ease of statistical management. This Census Report in NO way represents the actual population of the two small unorganized townships in question. Our study indicates that the total number of households is approximately 150 households. Our estimate, therefore, of the Community in the Lorrain Valley and South Lorrain Townships is approximately 450 to 500 people based on an average of 3 people per household. The "Unorganized West Temiskaming District" with it's 20+ unorganized townships shows a census population of approximately 2900 people and would give a completely distorted view of our Community size.

https://en.wikipedia.org/wiki/Unorganized_West_Temiskaming_District



Red area is the "Unorganized West Temiskaming District" while the Black Rectangle shows the actual location of Lorain Valley and South Lorrain Townships. These two small townships have a population of approximately 450 to 500 people based on Land Registry Office Data and our Estimate.

We trust that the recent commitment of our Provincial government to listen to the voice of rural Ontario, however small the population, will result in the IESO considering our serious concerns about contamination resulting in the destruction of our remaining Industries, Tourism and Livestock Farming. Based on the following quote, we have hope.

Although Energy Minister Bob Chiarelli wasn't available, his office said in response to interview requests. Spokesperson Dan Moulton said the government is "focused on ensuring our approach is balanced and considers the views of local communities."

<http://www.lfpress.com/2015/07/10/big-wind-20>

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Issue Number 2

COMMUNITY APPROVAL

2-2. Community Approval/Rated Criteria not Achieved by WPD Canada

As per the previous quote, focus, most recently, has been towards the "willing host" scenario, our community respectfully requests that the IESO acknowledge that we do NOT APPROVE of the WPD Canada Canada "Silver Center Wind Project".

As per the LRP "Rated Criteria" we have provided the Letters of NON Approval attached.

The Registered Proponent under the LRP I RFP is eligible to be awarded Rated Criteria points if they are able to gain the support of (i) all assessed owners of no less than seventy-five per cent (75%) of the Properties Abutting the Properties on which the Site is located and the Properties where the proposed Connection Line is located and/or (ii) all Provincial Crown Land Leaseholders of no less than seventy-five per cent (75%) of all Provincial Crown Land Leases located in whole or in part on, and Abutting, the Properties on which the Site is located.

While 'Community" is defined as the Land Owners/Lease Holders within and abutting the Project, we were told that the final site was confidential and would not be decided until and unless the Offer to Contract was awarded to WPD Canada. To ensure that we covered any eventuality we have included Documentation for those Land Owners within the Study area as well. Naturally it has proven more difficult to identify and locate all the Lease Holders within the Crown Land in the eight weeks since we were informed of the project. Some have been included with this group of Documents and more are arriving as we identify and contact them. Land Owners Non Approval letters totalling 150 (includes situations with more than one Owner) covering 96 Landowners, have been returned to date and are attached. These letters represent a return of 72.2% of the 133 Land Owners we have identified in the Lorrain Valley and South Lorrain Township Area. Those Abutting the Crown Land of the "Silver Center Wind Project" are represented within this group as are the Crown Land Lease Holders letters received to date.

We are confident that the WPD Canada staff, having NOT reached people in houses abutting the Crown Land and having NOT reached most of the Lease Holders within the Crown land, have therefore failed to secure the 75% Community Support required by the LRP.

Issue Number 2-2, Addendum A-1, Community NON Approval Documents (originals available for scrutiny if required).

The Business Owners in South Lorrain, Lorrain Valley who serve the Tourists and Outdoor Enthusiasts and who depend on the road access, the safety of the lakes and streams for anglers and the health of area wildlife for hunters as well as the businesses who abut the proposed project Crown Land are included. The businesses (Identified in Addendum B-1) have NOT been consulted by WPD Canada. The other important group, also listed in the area are those within the "Panoramic Viewscape" used to denote special relationship with visible wilderness upon which their Tourism depends.

Issue Number 2-2, Addendum B 1-2-3, Business Owners within the Study Area and Abutting or Within the Crown Land Project Area. (Letters)

Since the Lorrain Valley Crown Land is accessed and used by all our Land Owners in the "Study Area" and by Residents, Tourists, Outdoors Enthusiasts, Hikers, Hunters, Fishers, ATV'ers, Snowmobilers, Skiers and others who have always considered 'the valley' as part of the Community Land Use Area we also attach the results of our Local Area Petition. The Petition resulted in over 1000 signatures in an area with only a few thousand people. We respectfully submit this as evidence of the enormous impact and history that our Valley has on the wider community.

Issue Number 2-2, Addendum A-2, Petition

We are also awaiting the reviews, in committee, by our area Municipalities, none of whom have given approval to WPD Canada at this time. Understandably, they must each follow their Municipality's process.

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Issue Number 2

COMMUNITY APPROVAL

2-3. Aboriginal Partnership/Rated Criteria: Timiskaming First Nation Land Claim Issue

The inclusion of Timiskaming First Nation in the documentation, "Community Meeting Summary", and elsewhere on their website states as follows:

"WPD Canada, in partnership with the Timiskaming First Nation (TFN), is proposing to develop the Silver Center Wind Project."

"The Timiskaming First Nation is an Algonquin community with traditional territory located in both Ontario and Quebec."

The lands form part of TFN's traditional territory. The project could be up to 120 megawatts (MW), and could power up to 19,000 homes. "

WPD President, Ian McRae and Chief Terrence McBride of the Timiskaming First Nations have been meeting since early in 2012. In 2013 Chief McBride announced that Timiskaming First Nation, in concert with two other Aboriginal groups south of Lake Temiskaming, had presented documentation for Land Claims he felt were due his People. Then in early June, 2015, WPD Canada's Ian McRae and Chief McBride announced an Agreement to Partner on the Silver Center Wind Energy proposed project. This agreement was signed between WPD Canada and the Timiskaming First Nation.

We were unable to locate any Land Claim documentation referred to in the media interviews, given by Chief McBride. We spoke to band members of the TFN and were told that the electorate of the TFN had, in July, served the Chief and Council with a Petition for Leadership Review containing the required number of names for the review (51%) in accordance with the 2014 By Laws. Having had no Community Meetings (also required by the 2014 By Laws to occur every two weeks) since early winter 2015 the Band Members of the Timiskaming First Nations are proceeding with legal methods to remove the Chief from office. The Chief has refused to hold either a Leadership Review or even a Community Meeting according to the radio interviews given by Band Member, Betty Rose Tapiskot. Issues within the Timiskaming First Nation continue to evolve.

In a Letter to the Editor of the Temiskaming Speaker's Weekender dated Friday, August 14, 2015, Chief Terrence McBride states that the Timiskaming First Nation and two other First Nations "...have provided substantial evidence to the governments of Ontario, Canada and Quebec, consistent with the legal tests to be met when First Nations assert Aboriginal title and rights. We expect that these matters will be negotiated in due course, but until then we fully intend to participate in, and benefit from, the economic development of "our" region....".

There is a Land Claim by the Algonquins of Ontario, a group of Ten First Nations Bands, none of whom recognize the Timiskaming First Nation as having any rights to the area in question. The conflict with the Algonquins of Ontario Land Claim, a well documented claim ongoing through the Land Claim process and easily verifiable, the present Leadership Review and the comments of the Chief himself prove that there is no present day Land Claim and that the efforts of WPD Canada to present a First Nation component to their application was ill founded. There is none.

Issue Number 3

WIND SPEED ASSESSMENTS

The Canadian Wind Atlas shows this area as 4.5 m/s, one of the lowest wind speed areas in the province and one which is, according to the best information we could find, insufficient to start up even the newest generation giant turbine blades much less keep them rolling for electricity production at estimated capacity. However, it would appear that a formula using x to the third power, increased by an industry developed constant, somehow creates a number that is "acceptable" where it previously was not. We have been unable to find a reasonable explanation of this process. To us it basically means the turbine applicants can create their own numbers to fall within the guidelines. At the very least there should be an arm's length oversight of this data translation process by an independent, outside, qualified professional.

In 2013 WPD Canada spoke to several area Land Owners having collected wind data for possible wind turbine, and then, in 2015, sent emails to two of the area Land Owners telling them there was not sufficient wind to move their project forward in the past but that they were going ahead with one now. Both Land Owners have property at high points on the landscape and both were surprised that the company was going ahead after saying there wasn't enough wind.

In 2014, when Crown Land was open to Industrial development the wind assessments done by WPD Canada seemed to have changed. The close access to grid hook ups provided by Crown Land access to our three local hydro electric generating stations caused the wind to speed up, apparently.

Presently the IESO LRP standards ask for only a year of data collection while European standards require a minimum of 4-6 years of wind speed data. Ontario also allows the same folks, who stand to make billions in contracts, to decipher the wind data and provide the formula. We consider this a blatant conflict of interest.

Should the "Silver Center Wind Project" be granted an Offer to Contract, we will pursue and hope to establish an arm's length, third party review of the results of wind data collected and a review of the formula used to take the data collected and turn it into what is likely to be (according to the most recent and accurate German data available) a highly optimistic guesstimate of electricity generated from wind power in the Lorain Valley and South Lorain Townships. Germany is said to have actually collected only 14.8% of their expected megawatts of electricity production in 2014. Disappointing.

Issue Number 3: Addendum A, Wind Speed Insufficient; 3 Emails

Issue Number 4

ROAD ACCESS/LIABILITY/LONG TERM CARE OF AREA

Several Issues are of immediate concern with our narrow, winding dirt road that dead ends at one of our area's three hydro electric dams:

General loss of Income due to Issues Specific to the Lorrain Valley and South Lorrain Township areas are; Tourism Income (Ontario and Quebec) Highway 567, carries a large number of Tourists out to the many fishing locations, hunt camps, Hiking Trails, kayaking and canoeing waterways, Seasonal Use, Cottage Land Owners and Safe Use of Land Lease Holders on Crown Land

POTENTIAL DANGER TO LIFE/LIABILITY & LONG TERM CARE

- Loss of life/health due to arsenic contamination of well, ground and lake water. This cannot be allowed and, with Walkerton's changes to the Drinking Water Legislation, the Provincial Government cannot disregard the area's geology without expecting an enormous outcry and huge legal response in the event of an Offer to Contract for ANY Industry thinking to remove the top of these ridges. Ever.
- Loss of life/property/forests due to fire, fire department and firefighters to access the homes while road is monopolized. We must have a water bomber contract in place and with funds in trust.
- Loss of life/property/forests due to fire caused by lightning strikes to turbines. Tinder of dead ground cover would make this issue of intense concern in Crown Forest situation. The west is still on fire.
- Loss of life/health due to inability of emergency aid to tourists, aging residents, land users and others
- Loss of health due to residents, tourists, land users inability to access road for doctors/hospital appt's.
- Loss of income due to area workers unable to get to and from work in a timely manner.
- Loss of life/health due to area essential services workers unable to get to work/emergency.
- Loss of habitat and access to habitat would cause dramatic loss of income for area tourism
- Loss of European clientel for Ville Marie, Temiskamingue Tourism Region across the lake who depend on the unsullied view for their 'panoramic viewscape score" in Tourism review.
- Loss of life due to blasting and other land destruction in areas known to be used/leased for hikers, fishers, hunters, leaseholders etc. There is no way to tell where they are at any time without actually preventing land use and with so many areas of access people could die.
- Loss of Environment and Changes to EPA as it pertains to Interaction and movement of Wildlife in the area is, in our opinion, a Breach of the Public Trust, by those who signed the documents changing decades of carefully documented and proven Laws. This must be pursued if Offer to Contract is granted.
- Loss of Habitat of Continuous Airways for the Migrating flocks who cover the ridges of the valley every spring and fall. Turbine Companies claim these areas are somehow free of Environmental 'Aspects". The entire SKY is at risk.
- Loss of Eagles & Raptors has resulted in a \$2,500,000.00 fine in Altemont CA USA last year due to their woefully inadequate estimate of "allowable endangered bird deaths". Bald and Golden Eagle Mating Pairs several types of Raptors including mating pairs of Peregrine Falcons and Red Tailed and Sharp Shinned Hawks, the Goshawk and others, from spring, through the summer and into fall, regularly search the areas and fly the Crown Ridges.
- Loss of Habitat of approximately 100 acres of prime Crown Forest for C02 absorption as well as Bear, Moose, Deer, Fox, Rabbits and others that depend on a CONTINUOUS habitat to thrive. The area depends on hunters for a large percentage of local livelihood and we cannot afford to have 100 acre deserts in areas of the Crown Forest. It is impossible to renew the top soil with large concrete pads guaranteeing soil loss and erosion.
- Migration routes through known and mapped Duck Ponds Habitat need continuous flight paths, not individual areas. The ducks provide sport for hunters all through the north, Ducks Unlimited supports this Migration Ponds Habitat and Injunctions will be presented should the IESO allow an Offer to Contract in this area. Loss of Income is inevitable and must be offset

- Migration Routes of Canada Geese, Sand Hill Cranes and many birds who nest in the arctic must be protected as they pass through our valley feeders. We have already noticed fewer birds these last three years. The birds are being killed in so called "acceptable" numbers. These birds, many of whom eat insects, are vital assets to our lives here.
- Erosion of the Ridges causing silt to form in area rivers and lakes already under stress from the three Hydro Electric Dams in the area will result in loss of certain types of sport fish due to water changes.
- Loss of Soil. International Year of the Soil tells us that we have lost half our topsoil and are losing more at alarming rates. Since the concrete will not form a viable environment with the area is already under stress due to Climate Change and since there is proof from other Turbine areas in Forests that nothing grows, that in fact, this area will become a desert. We must be prepared to prevent the loss of soil...
- Loss of Hydro Electric Dam Life Span due to loss of soil, erosion and therefore silt will build up behind existing hydro dams shortening their working life span. We are very concerned about each area in relation to spawning grounds in the Montreal River, the Latour Creek and the area beside Lake Temiskaming that is right by the Old Mission.
- Heritage here is an AREA not a SITE in the Lorrain Valley and South Lorrain. We cannot afford the eyesore of an inefficient source of energy impossible to store, towering over our Old Mission, Silver Center, Meteor Landing and Old Town Sites, where we can still see the bones of a thriving Silver Mining community here. The area must retain its cohesive presence to be fully appreciated.
- Cost of Road Maintenance/Snow Removal in Winter and Spring on Crown Land. The repair and maintenance is impossible without a constant removal of snow and repair of the roads. The local road people can attest to the enormous expense and effort required and, should an Offer to Contract be awarded we will require an In Trust Account, acquired through an Injunction if necessary, for road repairs and snow removal to ensure repairs to leaking and damaged machinery is done in a timely manner year round. We see examples of a serious lack of maintenance and repair in the 'anecdotal records of late' in southern Ontario.
- Decommissioning Fees in TRUST to avoid lack of funding to remove when irreparable. Recent articles reporting on the difficulty in funding removal of these giant 75 ton monstrosities in only 20 years leaves the very real concern about decommissioning turbines. If necessary we will be pursuing, through proper channels, a Trust Account to provide the funds for the decommissioning of each turbine. A price, we have been told informally, that could reach \$1,000,000.00 per turbine within a twenty year "assessed" life span. We must estimate costs in relation to inflation as well. Perhaps that number needs to be significantly higher.
- Major Concern for the Land Owners, Business Owners and Municipalities in the Area. We have discovered that the Deeds of our neighbours and friends who have signed with WPD Canada show serious encumbrances. WPD's Lawyers have registered notices on their Property Deeds. Presently the Land Owners of Ontario are gaining signatories to their Class Action Suit and we will be encouraging residents of Lorrain Valley and South Lorrain Township to contact them.

The Valley is a haven for all of us.

We all love the Valley...the people who live here, embracing the out of doors, the hunters who come in search of bear, moose and deer, the fishers who visit our many lakes and rivers, the hikers whose trails extend over the ridges, the tenters who camp here every year, the rock hounds who find silver and other minerals around the many old mine sites, the tourists who stay at the local lodges, the locals who come out to snowmobile, cycle, ride and walk, the folks who pick fiddleheads and fruit, the people who've had cottages 'up the Mat' for over fifty years, those who love to trace the path from the old Meteor Landing site over to the Town site, mostly found these days by the rose bushes and apple trees around the foundations of the houses and those who just want to breathe some clean air and drink in the incredible view. We know, as we enter the Valley, that our cares are left behind.

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That is why the turbines can't come here. The arsenic is undoubtably the most serious physical reason that we cannot allow the rock to be disturbed. It will ruin wells, destroy or sicken our wildlife and kill our tourism industry. But the heart-felt reasons are just as serious in a different way. That is why, after only eight weeks of effort we have so many signatures, so much fundraising, so many signs at driveways and so many volunteers. At the 'Community Show' put on by WPD Canada we had people telling the employees that we will fight with the last breath in our bodies to keep this valley safe from harm. It is the plain truth. It is about our heart.

Both sides of the lake and those who love to sail on it are also involved in the Lorrain Valley and we figure that you just didn't know that. We do not dispute the need for electrical power but we are disappointed in our politicians for making such a mess of the electricity with recent decisions. We also do not dispute the respectful use of land and measured and careful decisions based on the best practises for all our grandchildren but we are disappointed in our politicians for making such thoughtless and irresponsible changes to the Environmental Protection Act. The Crown Forests of Ontario are our Living Legacy.

We also feel certain that there is somewhere far from human beings where the IESO, the present Provincial Government, the Ministry of Energy and others can continue their Wind Turbine experiment. For that is what this is. It is an Experiment that is experiencing results in Europe that this government would do well to heed. Present expectations for the power to be gained from wind has been consistently disappointing in the European experience to date. Present plans for the province to be able to use the power created by wind to replace other sources of electricity is hampered seriously by two unavoidable facts: the wind doesn't blow at peak usage times and the electricity produced cannot be stored for future use.

Until and unless these two issues can be resolved this experiment must surely fail. The people who live and love the Lorrain Valley and South Lorrain Townships are determined that we will not become part of this doomed experiment.

It is a sad day when our elected officials sit with turbine corporations across the courtroom from the voters who put them in charge. We promise to hold you to task for your decisions should you make us a party to them.



Linda Roberts
Chairperson
on behalf of the Protect Lorrain Valley Coalition
and Our Community.

The Rt. Hon. Kathleen Wynne
Premier of Ontario,
Legislative Building
Queen's Park
Toronto ON M7A 1A1

Hon Glen R. Murray
Ministry of the Environment and Climate Change
11th Floor, Ferguson Block
77 Wellesley Street West
Toronto, Ontario M7A 2T5

ADDENDA (5 pages & Letters & Petitions)

Issues 1 - 5

Letter to the IESO

Independent Electrical System Operator

August 26, 2015

Issue Number 1

ADDENDUM A,

"Effect of Disturbing Local Arsenical Deposits on Ground, Well and Lake Waters",

C. W. E. Johnson, P. Eng. Ret'd.

August 24th 2015

To Whom it May Concern,

The Chairperson of the Protect Lorrain Valley Coalition has asked me to assess the likely contamination of ground waters by Arsenic should the terrain of the Lorrain Valley be disturbed by the installation of wind turbines.

Distribution of Arsenical Minerals in the Lorrain Valley.

This is well known. The most potent is ERITHRITE, Co₃As₂O₈. (8 H₂O), known locally as "Cobalt Bloom." It is the oxidation product of several arsenical-cobaltic-nickeliferous minerals and is easily recognised in the field by its matte pink colour. It contains 25% Arsenic by weight. It is present in every spoil pile of every one of the many disused mine sites in the Lorrain/Cobalt area, being impossible to miss on a field trip. The high waters-of-crystallisation (8) indicates to me that it is highly water-soluble and contaminates the groundwaters of the area with Arsenic.

Area of Planned Rock Disturbance To Install Wind Turbines.

I understand the area currently planned for blasting the foundations for the wind turbines in the Lorrain Valley extends from the northern boundary of South Lorrain Township through Lorrain Township to the southern side of Coleman Township. The northern portion touches on the old Cobalt Mining Camp with its associated arsenic contamination.

Each turbine requires a foundation hole some 6 to 30 feet deep and thirty to fifty feet across. Excavations of this size in this area cannot fail to expose hitherto quiescent arsenical deposits which will oxidise on exposure to air, allowing the now water-soluble pollutant to flow downstream and further poison the groundwater and well water, eventually draining into the Ottawa River.

Toxicity of Arsenic in Drinking Water.

I have discovered the Government-approved range of acceptable levels of Arsenic in drinking water is 0.010mg per litre in the Canadian Standards. In Ontario, the Safe Drinking Water Regulations call for a maximum of 0.025mg per litre. This can be expressed as 0.025 parts per million or 25 parts per trillion. In other words, one gramme of free arsenic will contaminate 35 million gallons of drinking water. Simply put: Arsenic is extremely toxic and should be handled with great respect.

Conclusion.

I strongly recommend that this site is highly unsuitable for wind turbines of the size now being proposed on the basis of the extreme dangers presented by the presence of arsenical mineralisation that cannot avoid being disturbed during construction.

Yours truly,

C.W.E. Johnson, P.Eng., Ret'd
RL 482, Mining Claim, Hwy. 567,
South Lorrain Twp. Ontario.

Issue Number 1
ADDENDUM B

"Geology of South Lorrain Township, District of Temiskaming" by W.H. McIlwaine, Geological Report, Toronto, 1970. Page 25

GEOCHEMICAL DATA

Sediment samples were collected by the field party from three streams; the samples were taken at approximately 500-foot intervals and analyzed at the laboratories of the Geological Survey of Canada at Ottawa. They were analyzed for the following elements: cobalt, nickel, copper, zinc, arsenic, molybdenum, antimony, tungsten, lead, and mercury by colorimetric methods; beryllium, boron, titanium, vanadium, chromium, manganese, strontium, zirconium, silver, tin, barium, gold, bismuth, and cadmium were analyzed spectrographically.

Samples were taken from: (1) Maidens Creek between Maidens Lake and the road to Maidens Bay; (2) the stream flowing southeast parallel to the road to Maidens Bay to where it joins Maidens Creek; (3) the stream flowing south from Tooth Lake to the Montreal River.

Two anomalies were detected in the results:

1. Four samples on Maidens Creek gave anomalous arsenic (130-300 ppm), cobalt (15-45 ppm), nickel (55-60 ppm), and zinc (140-210 ppm).
2. Four samples between Tooth Lake and the Montreal River gave anomalous arsenic (80-110 ppm) and zinc (120-170 ppm).

For a discussion on background values and average composition of rocks and soils in the Cobalt area the reader is referred to Boyle (1966).

ECONOMIC GEOLOGY

SILVER AND COBALT

South Lorrain Township is one of the outlying camps of the Timiskaming silver belt. The main production has been native silver with minor amounts of cobalt, nickel, and copper also having been produced (Table 4). To the end of 1965 South Lorrain had produced a total of 23,338,906 ounces of silver with 82 percent of this coming from the Keeley and Frontier Mines, and over 50 percent from the Keeley Mine itself. There was no production in 1966 or 1967-

The silver occurs in the native state in carbonate veins and vein systems. Through out the silver area these vein systems have been found to have a very close spatial relationship to the Nipissing Diabase sills or sheets. In the South Lorrain area the production has mainly come from the first 300 feet of metavolcanics overlying the diabase on the gently dipping western flank of the diabase dome. Little ore is associated with the lower contact of the diabase with the metavolcanics; in the case of the Keeley Mine development costs were not returned. Some production also came from the Nipissing Diabase; all ore was from diabase in the Wetlaufer Mine. More detailed descriptions of the important veins are found in the descriptions of properties.

Bastin (1950) presented a paragenetic sequence which indicated the following order of deposition of minerals: older calcite, cobaltite, lollingite, (fracturing), niccolite, breithauptite, silver, and younger calcite. The specimens for this study were from the Frontier Mine. Similar results were obtained from the Cobalt area.

Issue Number 2-2, Addendum A-1 See All Land Owners Letters Attached. (150 pages)
Issue Number 2-2, Addendum A-2 See All Petition (118pages)

Issue Number 2-2B-1, B-2, B-3

Business Owners within the Study Area and Abutting or Within the Crown Land Project Area

Addendum B-1

The Forbes Black Angus Breeding Farm

Maiden Bay Camp

Old Mission Camp

Camp Lorrain

Voice from the Bush

Stillwater Photography

WW Marine Services

Comment; To date no one has come to the above referenced Businesses to discuss the proposed application or it's potential effect on the businesses.

Addendum B-2

Business Owners across Lake Temiskaming

The Ville Marie Businesses, who, in the full definition of Business Community in areas where Tourism is the primary Income Driver, must be considered since they depend on the panoramic view.
(list available)

Addendum B-3

Business Owners Dependant upon Lorrain Valley and South Lorrain Tourist Business

The North Cobalt Flea Market

The Gramma's Chipper

Bee's Restaurant

Mike's One Stop

BNS Corner Gas

Value Mart

Many other Businesses in the whole area also depend on Tourism.

All the above businesses would be affected significantly if the Valley single dirt road were monopolized by turbine construction equipment for any significant amount of time. People would find somewhere else to fish and hunt, to stay overnight or to park their RV's for a week.

We have had our petitions locations in North Cobalt and Haileybury proving that the 1,000 people who signed are users of the above local venues. It may be difficult for southern Ontario people to realize how close knit the near north truly is and how close to the poverty line many of us live. We have lost almost all of our manufacturing businesses due to the high price of electricity. Our Tourism keeps many of our little local businesses going from year to year.

Issue Number 3 Addendum A

Wind Speed Insufficient EMAILS from WPD regarding Wind Speed Insufficient:

From: ray@wpd-canada.ca

To: popeyebay@hotmail.com Subject: RE: Lorain wind-farm Date: Fri, 15 May 2015 18:51:19 +0000

Hi Marty,

The Tower on the Ridge is to develop the Crown lands. These lands aren't necessarily ours to develop though; it gets a little complicated. If WPD were to launch a successful (competitive) bid we would be able to develop the lands. Developing the wind project must meet strict Ministry of Environment (MOE) standards through the Renewable Energy Approval (REA) process. Upon approval we can formally request a Lease from the MNR.

As for the MET tower the readings are what we expected, in that they correlate with the Ontario wind Atlas, generally. The MET tower is part of our requirement to launch a bid.

WPD has optioned several lands in Lorain Valley, but the wind values and property configuration didn't work. We are working on a plan for the area residents, community and First Nations. However, I don't have any details yet. My preference has always been working on private lands. Crown lands get complicated.

I fear my message might raise more questions than answers. The Large Renewable Procurement program launched by the OPA (now IESO) is somewhat complex, but I would be happy to explain this. I was in the Valley last week, but will be up again soon. I'll contact before my next trip, I'll share the updates if you like.

Have a great weekend, Ray

email number 2

From: ray@wpd-canada.ca To: popeyebay@hotmail.com Subject: WPD Canada Silver Centre Wind Prospect Date: Sat, 30 May 2015 02:39:42 +0000

Hi Marty

It has been a little while since we have last spoken, so I wanted to provide you with a brief update.

wpd Canada has been actively developing the Silver Centre Wind Project over the past several months; however, using the original layout was proving to be very difficult, if not impossible. Our modeling and subsequent wind assessment of the Lorain Valley area was not favourable.

New and revised program rules have made Provincial Crown lands available to host wind power generation for successful bidders. As a result, we've expanded the area under consideration for the project.

The Province's electrical regulator, IESO, has developed a competitive bidding program, called the Large Renewable Procurement (LRP), for new sources of renewable generation. wpd Canada is one of several qualified applicants for this new program.

On June 2nd, wpd will announce a partnership with the Timiskaming First Nation to submit a proposal that would see the Silver Centre project located on Crown lands within TFN's traditional territory in the Lorain Township area. The bid proposal does not mean that wpd will be a successful candidate.

We recognize and appreciate the past support of several people in the immediate community and larger Temiskaming area. I'll be in touch with you within the next several weeks for further details and next steps in the process. Please let me know if you have any questions or comments. I am best contacted by cell or e-mail at: 519-851-8738, or ray@wpd-canada.ca.

Best Regards, Ray CurrieManager, Business Development wpd Canada 2233 Argentia Road, Suite 102 Mississauga, ON L5N 2X7 T 905-813-8400 ext. 155

1-888-712-2401 ext. 155F 905-813-7487ray@wpd-canada.ca

Issue Number 3 Wind Speed Insufficient Email #3 from WPD regarding Wind Speed Insufficient:

Subject: WPD Canada Silver Centre Wind Prospect To: bigjohnfarris@msn.com Subject: WPD Canada Silver Centre Wind Prospect Date: Sat, 30 May 2015 02:48:54 +0000

Good evening Farris family,

It has been quite a while since we have last spoken, so I wanted to provide you with a brief update.

wpd Canada has been actively developing the Silver Centre Wind Project over the past several months; however, using the original layout was proving to be very difficult, if not impossible. Our modeling and subsequent wind assessment of the Lorrain Valley area was not favourable.

New and revised program rules have made Provincial Crown lands available to host wind power generation for successful bidders. As a result, we've expanded the area under consideration for the project.

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Best Regards,

Ray Currie Manager, Business Development wpd Canada 2233 Argentia Road, Suite 102 Mississauga, ON L5N 2X7 T 905-813-8400 ext. 155

1-888-712-2401 ext. 155F 905-813-7487 ray@wpd-canada.ca www.wpd-canada.ca

Comment: It should be noted here that John and Sue Farris had disapproved of the initial plans and had declined the wpd Canada offer of financial compensation to place turbines on their ridge back in 2012/13. The Farris Property Ridge is a high point in the area as is the Guertz property. Interestingly not only is the information about First Nations "partnership" proven to be non-existent but according to the wind values taken on these two properties prior to the opening of Crown Land the area was not viable for wind turbines by WPD themselves.