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April 21, 2010

Ms. Susan May  
Supervisor  
Town of Orangeville  
Orangeville Town Hall  
4082 Route 20A  
Orangeville, NY 14569

**RE: Comments to the EAF, DEIS Scope and DEIS for Stony Creek Wind Farm**

Dear Ms. May:

Core Environmental, Inc. (Core) would like to present our comments to the Environmental Assessment Form (EAF) Part 1, Draft Environmental Impact Statement (DEIS) Scope and DEIS for the proposed Stony Creek Wind Farm. It is our understanding that the Town of Orangeville is acting as the Lead Agency for the purposes of the State Environmental Quality Review Act (SEQRA) process with Ms. Susan May, Supervisor, Town of Orangeville acting as the responsible officer at the lead agency.

- Our review of the EAF identified a number of inconsistencies or errors.
- Our review of the DEIS Scope identified a number of omitted or deficient items.
- Our review of the DEIS identified a number inaccurate or lacking items.

Part 1 of the EAF was completed. Our review of the form identified a number of inconsistencies or errors.

- EAF Item No. 9 (Page 3 of 21). The site is located over a primary, principal or sole source aquifer. However, the question is answered with a check mark in the "No" box, even though a portion of the proposed project site is located over the Cattaraugus Creek Sole Source Aquifer. Does the applicant/sponsor recognize the presence of the aquifer within the Project Area?
- EAF Item No. 15 (Page 6 of 21). The project or any portion of project is located in a 100 year old flood plain. However, the question is answered with a check mark in the "No" box. FEMA Flood Boundary Zone A areas of 100 year flood associated with Stony Brook, Stony Creek and the Attica Reservoir 3 are present. Does the

applicant/sponsor recognize the presence of the flood plains within the Project Area?  
Why were the floodplains omitted from the EAF?

- EAF Item No. 17 (Page 7 of 21). The project will “involve the disposal of solid waste.” However, the question is answered with a check mark in the “No” box. The proposed construction phase as well as operation of 59 wind turbines, an electrical collection system and substation, access roads, Operations and Maintenance facility, a meteorological tower and possibly a concrete plant will certainly include generation of solid waste. No estimated rates of disposal or anticipated site life are provided. Does the applicant/sponsor believe no solid waste will be generated as part of the construction or operation of the project components? Why was the generation of solid waste omitted from the EAF?
- EAF Item No. 22 (Page 7 of 21). The project may “include “water supplied from wells” for watering roads. However, the pumping capacity is not provided but rather indicates NA (not applicable). This area of the form should have been completed to indicate anticipated pumping capacity in gallons/minute. Does the applicant/sponsor believe the pumping capacity of wells as part of the construction or operation of the project components is not going to occur? Why was the anticipated pumping capacity in gallons/minute omitted from the EAF?
- EAF Item No. 23 (Page 7 of 21). The “total anticipated water usage per day is listed as NA (not applicable). This area of the form should be completed to indicate anticipated daily water usage. Does the applicant/sponsor believe the daily water usage will be none? Why was the daily water usage omitted from the EAF?

The DEIS Scope details what is to be included in the DEIS; a number of omitted or deficient items were identified:

- The DEIS Scope Section 3.4.1 Surfacewater indicates under “Impacts” it will evaluate “Potential impacts to the Attica Reservoir.” However, the DEIS merely states that “Neither Project construction nor operation will directly impact the Attica Reservoir because it is located approximately ½ mile away from project components. Indirect impacts by the Project to the waters of the Attica Reservoir will be mitigated by practices to manage and protect Stormwater runoff from area that are directly impacted by Project construction and operation.” The DEIS does not include potential

worse case scenarios (from contamination from silt, oil, waste, etc.), adequate impacts or mitigation. Could you please provide specific characterization of the wind turbine generators (WTG) in the Attica Reservoir #3 watershed, as well impacts, and mitigation other than just stating the distance?

- The DEIS Scope Section 3.4.3 Groundwater indicates under "Characterization" it will present a number of items. However, the DEIS fails to detail the "Prevalence of use of groundwater for drinking water." The DEIS should have included a groundwater use inventory, survey or study. In many rural communities, with large and small farms and homesteads the use of groundwater for drinking water by humans and livestock is common. The impact and needed mitigation measures to these groundwater users during and after construction activities should be fully completed. Could you please provide specific characterization of the prevalence of use of groundwater for drinking water?
- The DEIS Scope Section 3.4.3 Groundwater indicates under "Characterization" it will present information on groundwater quality. The DEIS fails to characterize the "Quality of existing groundwater for drinking water use as determined from publicly and readily available records and information available from Wyoming County Soil Conservation Services and the Town of Orangeville." The DEIS Scope document implies that these agencies have groundwater for drinking water quality data that will be included in the DEIS. These agencies do not maintain this data. In New York State the Department of Health (DOH) oversees the drinking water supply. The DEIS should have included information from the DOH and not rely on a study/document by LaSala from 1968. The reviewer was not able to locate the referenced document noted in the footnotes of the DEIS. Could you please provide specific quality of existing groundwater for drinking water use as determined from publicly and readily available records and information from an appropriate source?
- The DEIS Scope Section 3.4.3 Groundwater indicates under "Impacts" it will discuss a number of items. However, the DEIS fails to detail the "Potential impacts to quality and quantity of private water supplies." Again, the DEIS should have included a groundwater use inventory, survey or study to identify these private water supplies. Without identifying the private wells the impact and mitigation requirements can not be determined. Could you please provide specific potential impacts to quality and quantity of private water supplies?

- The DEIS Scope Section 3.4.3 Groundwater indicates under "Mitigation" it will evaluate potential mitigation measures that may include "Avoiding excavation in zones of influence of drinking water wells." The location of all the wells was not determined and therefore the zones of influence may not be avoided during excavation. Again, the DEIS should have included a groundwater use inventory, survey or study to identify these private water supplies. Could you please provide a means to avoiding excavation in zones of influence of drinking water wells that includes the location of all the wells and the zones of influence?
- The DEIS Scope Section 3.15 Blasting and Seismic Issues indicates under "Characterization" that the DEIS will describe "Relevant geotechnical information." The DEIS only mentions the depth to bedrock and that it consists of weathered shale based upon the neighboring High Sheldon Wind Farm. No additional geotechnical information is provided. Could you please provide relevant geotechnical information other than just the depth to bedrock and type of bedrock? Is there site specific geotechnical information?
- The DEIS Scope Section 3.15 Blasting and Seismic Issues indicates under "Mitigation" the DEIS indicates it will include the "Identification of WTG fall zones." The DEIS does not identify these zones. Could you please provide the identification of WTG fall zones?
- The DEIS Scope Section 3.15 Blasting and Seismic Issues indicates under "Mitigation" the DEIS indicates it will "Design of all project elements for loading due to seismic events." However, the DEIS does not indicate that the WTG's have been designed in this manner. Could you please provide the documentation that the design of all project elements for loading due to seismic events has been completed?

The next section details specific portions of the DEIS which were evaluated based upon the documents, figures, drawings and studies available on the Invenergy LLC web site for Stony Creek.

## **1.0 General Topography**

Section 3.1.1 Existing Topography (Page 47); the first sentence indicates that "the Project Area is located within the Allegheny Plateau physiographic region of Western New York. We suspect this

may be a relic or leftover from an earlier document. According to the Phase IA Cultural resource Study, as well as other sources, the area is described as within the Appalachian Uplands Physiographic Province. Which physiographic region of Western New York is the project area located in?

## 2.0 Surface Water

The DEIS Section 3.4.1 Surfacewater, Existing Conditions, under "Watersheds" (page 63) indicates that the project area is divided into three watersheds. In a regional case this is true, however on a more local level it is important to recognize that the surface water in the project area directly feeds the Attica Reservoir before making its way to the larger Niagara Water Shed Area. To evaluate "Potential impacts to the Attica Reservoir" the DEIS merely states that "Neither Project construction nor operation will directly impact the Attica Reservoir because it is located approximately ½ mile away from project components. Indirect impacts by the Project to the waters of the Attica Reservoir will be mitigated by practices to manage and protect Stormwater runoff from area that are directly impacted by Project construction and operation." The DEIS does not evaluate or provide proper mitigation for the potential contamination of the reservoir from a spill of oil, motor fuel, transformer oil, WTG, or WTG transformer. Orangeville experienced a 24 hour record rainfall (24 hour storm event) of 7.0 inches of rain on July 8, 1998. Shouldn't the DEIS address impacts and mitigation measures that take into account the whole watershed area that discharges surface water to the Attica Reservoir? Couldn't a spill of transformer oil or lube oil from the WTG after a WTG collapse impact the Attica Reservoir, especially if it coincided or was preceded by a storm event such as the 24 hour storm event?

The DEIS Section 3.4.1 Surfacewater, Existing Conditions, under "Attica Reservoirs" (page 64) third bullet item indicates "Reservoir #3 is upstream from Reservoir #2. This is the largest of the three reservoirs and the one closest to the Project Area. Based on our review of the Project Layout, Reservoir #3 is located in the Project Area. Isn't Reservoir #3 located in the Project Area?"

The DEIS Section 3.4.1 Surfacewater, Existing Conditions, under "Impacts" (page 64) first paragraph indicates with regards to stream crossings that "Several of these locations appear to be at points where streams 'start' in open fields and the streams are intermittent or difficult to

discern many times a year.” We suspect the number of creek crossings estimated may be low and would like to see the intermittent streams, which are protected by the NYSDEC, accounted for more conservatively with the 25 year storm event (i.e., 7.0 inches). Is there a way that the locations of points where streams ‘start’ in open fields and the streams and intermittent can be discerned and determined?

### **3.0 Groundwater**

The DEIS Section 3.4.3 Groundwater indicates under “Existing Conditions” (page 70) that “Groundwater from Private wells is the main source for domestic water supply in the project area.” The DEIS should have included a groundwater use inventory, survey or study to identify all groundwater users in the Project Area. Springs should also be identified and included in the survey to ensure they are not damaged and/or can be mitigated. Since groundwater from private wells is the main source for domestic water supply in the project area, shouldn’t the location of all wells and springs be identified?

The DEIS Section 3.4.3 Groundwater indicates under “General Groundwater Quality” (page 71) that “Private well locations and groundwater quality data are not maintained by either Wyoming County or the Town of Orangeville.” The DEIS should have included a groundwater use inventory, survey or study to identify all groundwater users in the Project Area. The New York State the Department of Health (DOH) should be contacted for drinking water data, testing and reporting information. Shouldn’t the DEIS include information from the DOH regarding general groundwater quality and not rely on a study/document by LaSala from 1968?

The DEIS Section 3.4.3 Groundwater indicates under “Impacts from Excavation Activities” (page 71) it will discuss “The potential impact of performing excavation or other development in the vicinity of a drinking water well was addressed in a well head protection study for the region...” The DEIS goes on to indicate that the “study evaluated well fields for several public water systems Wyoming and Genesee County, including a public water supply field near the Project Area (Route 98 and School Street) in the Hamlet of Varysburg.” (*The Genesee/Finger Lakes Regional Planning Council, “Genesee/Fingerlakes Wellhead Protection Study”, Rochester, New York. December 1998*). The well location at Route 98/School Street is in a valley, which is in stark contrast to the locations of the WTGs, and construction areas. How can the impacts from

excavation activities on groundwater be evaluated without the location of the wells being identified? Isn't basing the well head protection area on this study inappropriate due to topographic and hydrogeologic differences in the study area and project area? How was the potential impact of performing excavation or other development in the vicinity of a drinking water wells was addressed in the well head protection study applicable to all the excavation areas?

The DEIS Section 3.4.3 Groundwater indicates under "Mitigation" (page 74) includes three paragraphs. The first paragraph indicates that "impacts to the local shallow groundwater due to pumping will not be significant and therefore, no mitigation is required." However, this does not match the DEIS Scope which indicates "Avoiding excavation in zones of influence of drinking water wells." The location of all the wells was not determined and therefore the zones of influence are not known. How can impacts to the local shallow groundwater due to pumping be known to not be significant and not require mitigation when it has not been characterized?

The second paragraph indicates that "If Stony Creek obtains water for dust control from local sources, it will draw this water either from surface water or it will limit the amount drawn from a well for this purpose to the amount that would be drawn by a medium size dairy operation in the area." How can impacts to the local shallow groundwater due to pumping be known to not be significant and not require mitigation when it has not been characterized? What is the amount of water that would be drawn by a medium size dairy operation? How is this mitigation for another groundwater user that may utilize the source for their dairy farm or other operational usage?

The third paragraph indicates that "the presence and/or construction of the WTG will not impact drinking water wells more significantly than a new residential property. Additionally, there is an indiscernible impact to the recharge area for the groundwater supplies to the Town of Orangeville. Based on the limited amount of impact to the watershed, no mitigation is required." There is no basis for the statement. The pumping of groundwater impacts have not been determined nor mitigation provided. What is the basis for stating that the presence and/or construction of the WTGs will not impact drinking water wells more significantly than a new residential property? Is their specific data for this type of statement?

#### **4.0 Rare, Threatened and Endangered Species**

The DEIS Section 3.5.3 Birds indicates under "Winter Raptors and Owls" (page 82) includes the statement "No Bald Eagles were observed in either the roadside surveys or in the hikes to the Attica Reservoir even though trees bordering the shoreline of the reservoir were scanned for both presence of these raptors and for evidence of eagle nests." The surveys were completed during January, February, and March 2008. The Project Area was surveyed two days per month during the morning, afternoon and at dusk to determine the presence of wintering raptors and owls. (*Stantec Consulting, 2007 Breeding Bird and Area Search Surveys for the Buffalo Road Study Area in Wyoming County, New York. Prepared for Invenergy Wind North America LLC. October 2007*). Two (2) winters have passed since this survey was completed; since then the presence of a pair of Bald Eagles was documented at Attica Reservoir #3 (photographic evidence of the raptors as well as their hunting nest). Should further study on the presence of the raptors, as well as construction and operational impacts, and mitigation to the newly identified species be completed? Is the two (2) year old survey sufficient to characterize the Project Area? Is the recent frequent presence of the Bald Eagle, which is on the state and federal threatened species list, important to the project sponsors? And if so, does the lead agency feel appropriate identification, impacts and mitigation was provided for in the previously prepared studies?

#### **5.0 Tower Collapse and Blade Failure**

The DEIS Section 3.14.2 Tower Collapse and Blade Failure indicates under "Discussion" (page 158) that three GE built WTGs have failed in the U.S. Two (2) of failures occurred in New York State. A failure of a WTG in the vicinity of the watershed area of the Attica Reservoir could contaminate the drinking water supply of thousands of people. The secondary containment for oil contained in the turbines is of no use in the event of a collapse. The ground mounted transformers contain hundreds of gallons of transformer oil with no means of secondary containment. Core reviewed the New York State Department of Environmental Conservation (NYSDEC) Spills Incidents Search Database. Utilizing the search word "wind" Core identified two (2) active spill reports related to WTGs. The first spill occurred at Fenner Wind Farm in Madison county and involved an unknown amount of transformer oil and the second spill was identified at Windmill Farm in Clinton County involved a 30 gallon spill of hydraulic oil. Have the impacts to the Attica Reservoir #3 as the result of a nearby WTG collapse and possible leakage of oil to the

watershed been evaluated and detailed?

## **6.0 Seismicity**

The DEIS Section 3.15.2 Seismicity indicates under "Existing Conditions" (page 171) that "the Project Area is located within the Clarendon-Linden Fault system. This system crosses through the center of Wyoming County and has been known to have occasional but infrequent seismic activity. This system consists of three major faults that strike to the northeast, with two shorter strands near Attica that also strike northeast." The section continues with "In 1929, an earthquake with a magnitude of 5.2 occurred in the Attica, New York." In the "Impacts" section the DEIS states that "the risk of a tower collapse from ground shaking, fault rupture, slope instability and liquefaction are minimal. The WTG and its base are designed to withstand major structural stresses, including seismic activity." What magnitude earth quake are the WTGs designed to withstand? Does the manufacturer recommend the use of the proposed WTGs on a fault line, or do they recommend reinforced towers, or reinforced foundations? What are the manufacturers' recommendations on the seismically active nature of the Project Area and their product?

## **7.0 Construction Monitoring and Restoration Activities**

The DEIS Section 3.16 Construction Monitoring and Restoration Activities indicates under "Impacts" (page 173) that "to minimize such impacts during construction, Stony Creek will develop and implement an Environmental Monitoring Plan (EMP)... to ensure that the mitigation measures, environmental protections and best management practices associated with construction of the Project are implemented in accordance with the permit conditions of the Project." The plan includes the use of an Environmental Monitor (EM) to perform a number of project monitoring tasks, which include: reviewing reports, training construction management and crews, keeping construction personnel and equipment in designated area, performing surveillance and daily recording of activities, ensures that temporary and permanent erosion and sediment controls are installed and maintained, guarantees that fuel handling and equipment maintenance operations are located a pre-determined distance from wetlands and water bodies, and responds to and investigates incidents that contain the potential for adverse environmental consequences. According to the EMP, the EM is required to track events on a daily log, complete monthly reports, and in the case of an incident, a noncompliance report, as well as a



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post construction report. The EM is also required to document restoration activities. Since the proposed project is not the first completed by the applicant/sponsor, it would be useful to review the aforementioned documents from earlier WTG projects completed by the applicant/sponsor to make sure they were completed. The documents may also provide information useful in anticipation of incidents, such as spills of oil or fuel or releases of stored wastes, etc. The logs, and reports would provide real world data for impact analysis of incidents and provide for mitigation.

Does the lead agency and project sponsor think that the performance of the Environmental Monitor (EM) on previous WTGs projects by the sponsor could be useful to determine if the following were completed: reviewing reports, training construction management and crews, keeping construction personnel and equipment in designated area, performing surveillance and daily recording of activities, ensuring that temporary and permanent erosion and sediment controls are installed and maintained, guaranteeing that fuel handling and equipment maintenance operations were located at pre-determined distance from wetlands and water bodies, and responding to and investigating incidents that contain the potential for adverse environmental consequences? Would it be useful to review the EM documents (daily logs, monthly reports, noncompliance reports, and post construction reports) from previous WTG projects completed by the applicant/sponsor to make sure they were completed?

## **8.0 SPCC Plan**

The DEIS includes a Draft Spill Prevention Control and Countermeasure (SPCC) plan to describe measures that will be implemented to prevent oil discharges from occurring and prepare to respond in a safe, effective, and timely manner to mitigate the impacts of an oil discharge from the facility.

The DSPCC Section 3.5 Containment and Diversionary Structures (page 8) indicates that:

"The wind turbines have an inner oil containment system built into the tower. The wind turbine nacelles have a containment volume of approximately 25 gallons. Additionally, a containment trough or catch ring with a containment capacity of approximately 25 gallons runs around the tower just below the yaw deck. Leakage of yaw gear oil will first flow into the containment trough

and then would flow down the inner tower support to the basement which can contain approximately 300 gallons." Should Appendix I to the DSPCC include the dimensions of the secondary containment described in the text?

The DSPCC also indicates that "Secondary containment for the padmount transformers located at the towers is impracticable because the transformers and turbines are not readily accessible year round. The transformers and turbines are located over an approximately 14,500-acre Project Area. Land-based spill response equipment (e.g., sorbents, booms, etc.) and a spill response contractor (TBD) with a response time of approximately 4-6 hours are used to prevent oil from reaching navigable waters." Doesn't the large project area, lack of accessibility, and infrequent inspections (Quarterly or every 3 months) necessitate the use of secondary containment? Couldn't a spill from a WTG transformer could go unnoticed for up to 3 months and with a rain event travel far and potentially contaminate surface waters, or an aquifer? Isn't the lack of accessibility of the WTGs is an invalid statement since the WTG sites are readily accessible by tractor trailers, trucks and cranes during construction, but after complete are somehow inaccessible?

The DSPCC indicates that "The transformer at the substation is built with a concrete dike that has sufficient capacity to contain the transformer oil released from the substation step-up transformer plus rainfall from a 24-hour, 25-year storm event." Should Appendix I to the DSPCC include the dimensions of the secondary containment described in the text and include the capacity to contain the oil as well as the amount of rainfall that Orangeville received on July 8, 1998 (7.0 inches)?

The DSPCC Section 3.6 Practicability of Secondary Containment indicates that "management has determined that providing secondary containment for the grounding transformers and the padmount transformers located at each wind turbine is not practicable at this facility due to the electrical nature of the transformers and remote location." How is secondary containment for oil filled transformers affected by the electrical nature of the transformers? Are there are a number of options for providing secondary containment to oil filled transformers that would contain a spill and keep it from impacting the environment? Since the grounding transformers are at remote locations, wouldn't secondary containment provide the best management practice for containing a release?



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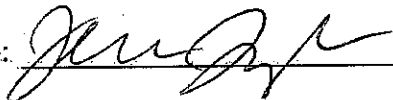
We appreciate this opportunity to offer our comments to this very important document. We look forward to reviewing the responses. If you have any questions or require clarification, please contact us at (716) 885-0541.

Sincerely,

**Core Environmental, Inc**

President


Teresa Tramposch

Signature:  Date: 4/21/10

Professional Engineer:

Robert M. Laga, P.E.

P.E. Registration No.: 075274-1

Signature:  Date: 4/21/10

