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July 17, 2013

Mr. Kevin Gaines, Vice Chairman
Town of Denmark Planning Board
3707 Roberts Road
Carthage, New York 13619

RE: Draft Environmental Impact Statement (DEIS) for Copenhagen Wind Farm

Dear Vice Chairman Gaines:

I have completed the Department's review of the DEIS for the Copenhagen Wind Farm proposed by Copenhagen Wind Farm, LLC. Below are the Department's comments concerning agricultural impacts and mitigation.

1. The DEIS does not mention the potential for organic farm operations to be impacted by the project. The project sponsor will need to determine if any of the farmland impacted by the project is used for the production of organic crops. If so, a plan will have to be developed to prevent such farm operations from losing their organic certification.

2. On page 23 of the DEIS it states "[a]lthough transmission line design is currently preliminary, it is anticipated that the line will be carried on steel or treated wood pole structures that range in height from 65 to 80 feet above ground level, and will have an average span length of approximately 400 feet." It appears, based on figure 3B, that the transmission line will cross a number of agricultural fields. It also appears that there could be a number of angle structures that will require guying, which will be located in agricultural fields. Transmission structures and guys create an obstacle for farm equipment operation and reduce the efficiency of such operations (see attached photo of guying for an angle structure in an agricultural field). The project sponsor should avoid placing transmission structures and guys in agricultural fields. The project sponsor should also review the proposed location of such structures and guys on-site with the Department of Agriculture and Markets and the landowner prior to final design. Where the placement of structures in agricultural fields is unavoidable, the project sponsor should use single pole structures and maximize pole heights and spanning distances to minimize the impact to agriculture.

3. On page 30 of the DEIS it states in section 2.6.7 "[i]nstallation of the buried electrical lines would typically require a width of up to 25 feet of vegetation clearing." In agricultural fields where 3 or more cables are installed in the same area or if an open trench is required for installation, topsoil stripping from the entire work area will be necessary. As a result, additional work space may be required.

4. On pages 32 of the DEIS it states in section 2.6.9 "[c]onstruction of the new 115kV transmission line will initiate with clearing the proposed ROW corridor. The ROW will be clear cut to a width of up to 100 feet, with additional 'danger trees' removed as appropriate." On page 33 it states "[h]owever, during construction, it is assumed that vehicular activity will disturb a corridor up to 20 feet wide within the ROW." Clearing and construction equipment traffic, particularly during wet soil conditions, can result in topsoil mixing and soil compaction in agricultural fields. The attached photo shows the severe damage to agricultural fields that can occur when the appropriate protection measures are not implemented. In order to protect the agricultural resources, the project sponsor should either: prohibit any clearing or construction equipment from crossing agricultural fields, place construction matting in areas of agricultural fields used for clearing and construction access, or strip the topsoil from the areas of agricultural fields that will be used for clearing and construction access. Also, following construction, subsoil decompaction should be completed with a heavy duty subsoiler or deep ripper in any areas of agricultural fields that are used for access.

5. Section 4.3 of the DEIS describes the Environmental Compliance and Monitoring Program, including the responsibilities of the environmental monitor. An additional responsibility of the environmental monitor should be to maintain regular contact with the affected farmers and the New York State Department of Agriculture and Markets concerning farm resources and management matters pertinent to the agricultural operations and the site-specific implementation of the construction and restoration guidelines.

6. I have enclosed the most recent version of the Department's windpower guidance document for inclusion in the Final DEIS.

Thank you for consideration of the Department's comments. If you have any questions, feel free to contact me at (518) 457-2851.

Sincerely,

Matthew J. Brower

Matthew J. Brower
Associate Environmental Analyst

Enclosure
cc: James Damon, Copenhagen Wind Farm, LLC
Rudyard G. Edick, NYSDEC
Mark Gebo Esq., Hrabchak, Gebo, & Langone, P.C.

Three pole angle structure, with numerous guys, for 46kV line. Angle structures such as this located in agricultural fields can interfere with machinery operations.

Damage to agricultural field due to improper temporary access road. Continuous traffic from the clearing contractor during wet soil conditions resulted in total destruction of the topsoil layer.

NEW YORK STATE
DEPARTMENT OF AGRICULTURE AND MARKETS

Guidelines for Agricultural Mitigation for Wind Power Projects

The following guidelines shall apply to construction areas for wind power construction projects impacting agricultural land. The project sponsor shall coordinate with the New York State Department of Agriculture and Markets (Ag. and Markets) to develop an appropriate schedule for inspections to assure that the goals of these guidelines are being met. The project sponsor shall hire an Environmental Monitor to oversee the construction and restoration in agricultural fields. The Environmental Monitor shall be on site whenever construction or restoration work is occurring on agricultural land. The Environmental Monitor shall maintain regular contact with the affected farmers and Ag. and Markets concerning farm resources and management matters pertinent to the agricultural operations and the site-specific implementation of the construction and restoration guidelines.

Siting Goals

Minimize impacts to normal farming operations by locating structures along field edges and in nonagricultural areas where possible.

Avoid dividing larger fields into smaller fields, which are more difficult to farm, by locating access roads along the edge of agricultural fields (hedgerows and field boundaries) and in nonagricultural areas where possible.

Locate access roads, which cross agricultural fields, along ridge tops and following field contours, where possible, to eliminate the need for cut and fill and reduce the risk of creating drainage problems.

The permanent width of access roads in agricultural fields should be no more than 16 feet to minimize the loss of agricultural land.

All existing drainage and erosion control structures such as diversions, ditches, and tile lines shall be avoided or appropriate measures taken to maintain the design and effectiveness of the existing structures. Any structures disturbed during construction shall be repaired to as close to original condition as possible, as soon as possible, unless such structures are to be eliminated based on a new design.

Construction Requirements

The surface of access roads constructed through agricultural fields shall be level with the adjacent field surface.

Culverts and waterbars shall be installed to maintain natural drainage patterns.

All topsoil must be stripped from agricultural areas used for vehicle and equipment traffic and parking. All vehicle and equipment traffic and parking shall be limited to the access road and/or designated work areas such as tower sites and laydown areas. No vehicles or equipment will be allowed outside the work area without prior approval from the landowner and, when applicable, the Environmental Monitor.

The area of impact from the installation of electric cables can vary depending on the installation method and number of cables. When 3 or more cables are installed in the same area or if an open trench is required for installation, topsoil stripping from the entire work area will be necessary. As a result, additional work space may be required.

Topsoil stripped from work areas (tower sites, parking areas, electric cable trenches, along access roads) shall be stockpiled separate from other excavated material (rock and/or subsoil). At least 50 feet of temporary workspace is needed along "open-cut" electric cable trenches for proper topsoil segregation. All topsoil will be stockpiled immediately adjacent to the area where stripped/removed and shall be used for restoration on that particular site. Topsoil stockpile areas shall be clearly designated in the field and on the on-site "working set" of construction drawings.

Electric interconnect cables and transmission lines installed above ground can create long term interference with agricultural land use. As a result, interconnect cables shall be buried in agricultural fields wherever practicable. Interconnect cables and transmission lines installed above ground should be located outside field boundaries wherever possible. When above ground cables and transmission lines must cross farmland, the project sponsor shall minimize agricultural impacts by using taller structures that provide longer spanning distances and shall locate poles on field edges to the greatest extent practicable. The line location and pole placements shall be reviewed with the Department and the Environmental Monitor prior to final design.

In cropland, hayland and improved pasture a minimum depth of forty-eight inches of cover will be required for all buried electric cables. In unimproved grazing areas and land permanently devoted to pasture, a minimum depth of thirty-six inches of cover will be required. In areas where the depth of soil over bedrock ranges from zero to forty-eight inches, the electric cables shall be buried entirely below the top of the bedrock or at the depth specified for the particular land use whichever is less. At no time will the depth of cover be less than twenty-four inches below the soil surface.

For lands disturbed within or adjoined to agricultural areas where the installation of the buried electric cables alters the natural stratification of soil horizons and natural soil drainage patterns, the Project Sponsor shall rectify the effects with measures such as subsurface intercept drain lines. The Environmental Monitor, in consultation with Ag. and Markets staff, shall select the type of intercept drain lines to install to prevent surface seeps and the seasonally prolonged saturation of the cable installation zone and adjacent areas. Drawings of such drain locations shall be provided by the Project Sponsor during

monitoring and follow-up remediation. All drain lines shall be installed according to Natural Resource Conservation Service standards and specifications and shall meet or exceed the AASHTO M252 specifications.

All excess subsoil and rock shall be removed from the site. On site disposal of such material may be allowed if approved by the landowner and the Environmental Monitor, with appropriate consideration given to any possible agricultural or environmental impacts.*

In pasture areas, work areas will be fenced to prevent livestock access, consistent with landowner agreements.

All pieces of wire, bolts, and other unused metal objects will be picked up and properly disposed of as soon as practical after the unloading and packing of turbine components so that these objects will not be mixed with any topsoil.*

Excess concrete will not be buried or left on the surface in active agricultural areas. Concrete trucks will be washed outside of active agricultural areas.*

(*Any permits necessary for disposal under local, State and/or federal laws and regulations must be obtained by the contractor, with the cooperation of the landowner when required.)

Restoration Requirements

Following construction, all disturbed agricultural areas will be decompacted to a depth of 18 inches with a deep ripper or heavy-duty chisel plow. Soil compaction results shall be no more than 250 pounds per square inch (PSI) as measured with a soil penetrometer. In areas where the topsoil was stripped, soil decompaction shall be conducted prior to topsoil replacement. Following decompaction, all rocks 4 inches and larger in size will be removed from the surface of the subsoil prior to replacement of the topsoil. The topsoil will be replaced to original depth and the original contours will be reestablished where possible. All rocks 4 inches and larger shall be removed from the surface of the topsoil. Subsoil decompaction and topsoil replacement should be avoided after October 1, unless approved on a site-specific basis by the landowner in consultation with Ag. and Markets. All parties involved should be cognizant that areas restored after October 1st may not obtain sufficient growth to prevent erosion over the winter months. If areas are to be restored after October 1st, necessary provision should be made to restore any eroded areas in the springtime, to establish proper growth.

All access roads will be regraded to allow for farm equipment crossing and to restore original surface drainage patterns, or other drainage pattern incorporated into the design.

All restored agricultural areas shall be seeded with the seed mix specified by the landowner, in order to maintain consistency with the surrounding areas.

All surface or subsurface drainage structures damaged during construction shall be repaired to as close to preconstruction conditions as possible, unless said structures are to be removed as part of the project design. Any surface or subsurface drainage problems resulting from construction of the wind energy project will be corrected with the appropriate mitigation as determined by the Environmental Monitor, The Department and the Landowner.

On affected farmland, any restoration practices shall be postponed until favorable (workable, relatively dry) topsoil/subsoil conditions exist. Restoration shall not be conducted while soils are in a wet or plastic state. Stockpiled topsoil shall not be regraded and subsoil shall not be decompacted until plasticity, as determined by the Atterberg field test is significantly reduced. No Project restoration activities shall occur in agricultural fields between the months of October through May unless favorable soil moisture conditions exist. The Environmental Monitor shall advise Ag & Markets regarding tentative restoration planning. Potential schedules will be determined by conducting the Atterberg field test at appropriate depths into topsoil stockpiles, and below the subsoil surface for a mutual determination of adequate field conditions for the restoration phase of the Project.

Following restoration, all construction debris will be removed from the site.

Two Year Monitoring and Remediation

The Project Sponsor will provide a monitoring and remediation period of no less than two years immediately following the completion of initial restoration. The two year period allows for the effects of climatic cycles such as frost action, precipitation and growing seasons to occur, from which various monitoring determinations can be made. The monitoring and remediation phase will be used to identify any remaining agricultural impacts associated with construction that are in need of mitigation and to implement the follow-up restoration.

General conditions to be monitored include topsoil thickness, relative content of rock and large stones, trench settling, crop production, drainage and repair of severed fences, etc. Impacts will be identified by the Environmental Monitor through on site monitoring of all agricultural areas impacted by construction and through contact with respective farmland operators and the Department of Agriculture and Markets.

Topsoil deficiency and trench settling shall be mitigated with imported topsoil that is consistent with the quality of topsoil on the affected site. Excessive amounts of rock and oversized stone material will be determined by a visual inspection of disturbed areas as compared to portions of the same field located outside the construction area. All excess rocks and large stones will be removed and disposed of by the Project Sponsor.

When the subsequent crop productivity within affected areas is less than that of the adjacent unaffected agricultural land, the Project Sponsor as well as other appropriate parties, will help to determine the appropriate rehabilitation measures to be implemented.

Because conditions which require remediation may not be noticeable at or shortly after the completion of construction, the signing of a release form prior to the end of the remediation period will not obviate the Project Sponsor's responsibility to fully redress all project impacts.

Subsoil compaction shall be tested using an appropriate soil penetrometer or other soil compaction measuring device. Compaction tests will be made for each soil type identified on the affected agricultural fields. The subsoil compaction test results within the affected area will be compared with those of the adjacent unaffected portion of the farm field/soil unit. Where representative subsoil density of the affected area exceeds the representative subsoil density of the unaffected areas, additional shattering of the soil profile will be performed using the appropriate equipment. Deep shattering will be applied during periods of relatively low soil moisture to ensure the desired mitigation and to prevent additional subsoil compaction. Oversized stone/rock material which is uplifted to the surface as a result of the deep shattering will be removed.

Revised 7-10-13