COHOCTON WIND POWER PROJECT
Agricultural Protection Measures

## Siting Considerations

1. Locate wind turbines and other structures along field edges so as to minimize adverse impacts on agricultural land and farming operations.

2. Limit permanent road width to 16 feet or less, and where possible, follow hedgerows and field edges to minimize loss of agricultural land.

3. Have roads that must cross agricultural fields stay on ridgetops and other high ground. The advantages of this are 1) it allows farming along the contours, 2) it requires no cut and fill or ditching that would take additional land out of production, and 3) it avoids potential drainage and erosion problems.

4. Avoid cutting existing fields into smaller irregularly shaped fields which are more difficult to farm, by locating access roads along the edges of agricultural fields where possible.

5. Locate parking areas, construction staging areas, and other temporary and permanent support facilities outside of active agricultural fields where possible.

6. Avoid disturbance of surface and subsurface drainage features (ditches, diversions, tile lines, etc.). Identification of any known subsurface drainage features will be done through consultation with the landowners and the Steuben County Soil and Water Conservation District, and efforts will be made to avoid potential impacts. In cases where disturbance is unavoidable any necessary repair/replacement of the affected features will be undertaken.

## Construction Specifications

<u>Access Roads</u>

- No vehicular access to the tower sites will be permitted until permanent access roads have been constructed.

- Roads will be constructed only in locations shown on the construction drawings or as staked in the field by the Construction Manager (CM) or Environmental Monitor (EM).

- The boundaries of all work areas shall be identified with snow fence or other temporary barrier. No vehicles or equipment shall be allowed outside the fenced area without prior approval of the CM/EM.

- All roads across agricultural fields will be the minimum width necessary to accommodate construction traffic (i.e. no wider than 16 feet unless approved by the CM/EM).

- Roads across agricultural fields shall not be constructed during saturated conditions when their development would damage agricultural soils.

- In developing roads on active agricultural land, strip all topsoil from the entire work area and stockpile in windrows along the road or in designated temporary storage areas. Temporarily stockpiled topsoil shall be segregated from other excavated material (rock and/or subsoil) and located far enough from the road edge to allow vehicles to pass without driving over topsoil. However, stockpiled topsoil must be left on the property from which it was removed.

- When stockpiling topsoil in windrows along roads, avoid blocking surface water drainage from the road or adjacent agricultural fields.

- Permanent roads through agricultural land shall be constructed by placing up to 12 inches of stabilized gravel on a geotextile mat over compacted sub-grade.

- When constructing roads through active agricultural land, final road surface should be level with the adjacent field surface. If drainage or other issues preclude a level surface, the road shall be elevated no more than 6 inches above the surrounding field. Topsoil shall be used during restoration to create a smooth transition between the road surface and surrounding agricultural land, so as not to impede crossing by farm equipment.

- Where necessary, culverts or water bars shall be installed to assure uninterrupted natural surface water drainage patterns. Such culverts or water bars will be installed in a manner that prevents concentration of water runoff and soil erosion.

- Maintain access roads throughout construction so as to allow continued use/crossing by farm machinery. Maintenance will be required when rutting occurs to an extent that it interrupts natural cross drainage of the area traversed or prevents use or crossing of the road by the landowner.

- To prevent damage to adjacent agricultural land, all vehicle traffic and parking shall be confined to the access roads, designated work areas at the tower sites, and/or designated parking and material laydown areas. Any necessary pull-offs and parking areas will be developed outside of active agricultural fields. If this is not possible, all topsoil shall be stripped from agricultural areas used for vehicle and equipment traffic and parking. Such areas will be restored at the end of construction (see restoration specs).

<u>Construction Staging/Storage Areas</u>

- Temporary construction parking, staging and storage areas on active agricultural land will be developed by removing all topsoil from areas that will receive vehicular traffic. Topsoil will be stockpiled in windows or piles adjacent to the staging area and on the same property from which it was removed. The exposed subsoil will be covered with a geotextile mat and 12 inches of stabilized gravel.

- Construction materials may be stored on undisturbed ground only if their placement and removal can be accomplished without driving over the undisturbed areas.

- Upon completion of construction, all gravel and geotextile mat will be removed, and the soils decompacted and restored as described in the Restoration specifications.

Vegetation Clearing & Disposal

- In areas where woody vegetation (trees and brush) needs to be removed, such removal will be undertaken in a manner that minimizes impacts on adjacent agricultural land.

- In areas that will be used as future agricultural fields or access roads, all stumps must be removed completely.

- Cut logs will be separated from limbs and brush and piled outside of active agricultural fields.

- Limbs and brush will be disposed of by piling or chipping in areas outside of active agricultural fields.

- No cut black cherry will be left in areas used as active pasture by livestock.

Excavation and Backfill

- The boundaries of all rights-of-way and work areas will be identified with snow fence or other temporary barrier. No vehicles or equipment shall be allowed outside the fenced area without prior approval of the CM/EM

- All agricultural areas to be disturbed by excavation (for tower foundations, electric cable trench, etc.) shall first be stripped of topsoil. Topsoil stripping must be undertaken on the full area anticipated to be disturbed by excavation, grading and/or piling of excavated subsoil/rock. For installation of buried electric lines, no topsoil stripping is required if direct burial methods (e.g., cable plow, rock saw) are used.

- Stripped topsoil will be segregated from subsoil and stockpiled in temporary storage areas on the property from which it was removed. Topsoil from trenching may be temporarily stockpiled by wind-rowing immediately adjacent to the trench.

- All areas to be disturbed by excavation and backfilling shall be enclosed within silt fencing or other temporary barrier to define the allowable limits of disturbance. No vehicular activity will be allowed outside the fenced area without the approval of the CM/EM.

- Excavated subsoil and rock shall not be stockpiled or spoiled on active agricultural land.

- Excess excavated subsoil and rock, or that which is not suitable as backfill will be removed from the site. On site disposal shall only occur with permission from the EM and the landowner. Such disposal shall not impact active agricultural land.

- Open excavation areas in active pasture land will be temporarily fenced to protect livestock. All existing fences and gates will be maintained or relocated as necessary to prevent livestock access to the work area and/or escape from fenced enclosures. Relocated fencing will be restored to "like new" condition in its original location following construction or as otherwise agreed to with the landowner.

- Any water pumped from open excavations shall be directed into temporary sediment traps prior to discharge. Pumping will be done in a manner that minimizes adverse effects on agricultural crops and operations. Surface water ponding and soil erosion shall be avoided.

- Buried electric lines in active agricultural fields will be at least 4 feet deep, unless bedrock is encountered prior to reaching this depth. If bedrock is encountered, the buried lines must be placed completely below the bedrock surface.

- Backfill will utilize excavated subsoil and rock whenever possible. If this material is determined to be unsuitable as backfill, select granular fill (e.g. bank run gravel) will be utilized in its place. No rock backfill is allowed in the top 24 inches in active agricultural fields.

Foundations

- Concrete trucks shall be restricted to designated access roads and gravel crane pads at all times.

- Excess concrete shall be disposed of off site, unless otherwise approved by the CM/EM and the landowner. Under no circumstances shall it be buried or left on the surface in active agricultural areas.

- Washing of concrete trucks shall occur outside of active agricultural areas in locations approved by the CM/EM.

- In active pasture areas, foundations treated with concrete curing compound or sealer shall be temporarily fenced to prevent access by livestock.

Erection

- Any grading to accommodate crane pads and material storage/laydown at the structure sites will be confined to the fenced work area around each foundation.

- Topsoil shall be stripped from crane pad locations and work areas around foundations, and stockpiled in areas designated on the construction drawings.

- Erection cranes shall be restricted to designated access roads and work pads at the structure sites. Crane set-up and break-down activities will not occur outside these areas on active agricultural land.

- Crane paths across active agricultural land will be improved to the extent necessary to protect agricultural soils. If conditions allow (i.e., soils hard and dry) the crane may drive across the

ground without stripping of topsoil. If leveling of the ground is required, such leveling will be kept to a minimum and topsoil will not be mixed with subsoil. If significant rutting or soil disturbance will occur, temporary roads will be established to accommodate crane passage.

- Development of temporary roads across agricultural land will involve stripping and stockpiling of topsoil and placement of gravel over a geotextile mat. Following use by the crane all gravel and matting will be removed and soils restored in accordance with Restoration specifications.

- The same procedures described above for crane paths will also be utilized by equipment/vehicles involved in the placement of poles and stringing of overhead line on above-ground sections of the electrical interconnect system.

- With the approval of the EM, areas of active agricultural land outside the fenced work areas may be available for structure laydown and assembly, but not for heavy equipment access. Access by light vehicles may also be restricted under wet conditions if, in the opinion of the EM, such access would lead to rutting or excessive soil compaction.

- In active pasture land, the contractor shall immediately pick up and dispose of all pieces of wire, bolts, staples or other small metallic objects that fall to the ground in such areas.

Restoration

- Following completion of construction (including erection), all disturbed agricultural lands excess gravel/fill will be removed from along the access roads and crane paths, around towers, and in temporary parking and staging areas. Exposed subsoils will be decompacted with a deep ripper or heavy duty chisel plow to a minimum depth of 18 inches. Soil decompaction shall be conducted prior to topsoil replacement.

- Following decompaction of the subsoil, rock pick the surface of the subsoil to remove all rocks 4 inches in size or larger. Following rock picking, stockpiled topsoil will be returned to all disturbed agricultural areas. The topsoil will be regraded to match original depth and contours to the extent possible. The surface of the regraded topsoil shall be disked and any rocks over four inches in size shall be removed from the soil surface. Restored topsoil will be stabilized by seeding and/or mulching in accordance with guidance provided by the EM in consultation with the landowner/farm operator.

- Decompaction of crane paths over otherwise undisturbed agricultural land will be accomplished using a deep ripper or heavy chisel plow if required in the judgment of the EM and/or the NYS Department of Agriculture & Markets.

- Soil decompaction and topsoil replacement shall not be performed after October 1 or prior to May 1, unless approved on a site-specific basis by the EM, in consultation with the NYS Department of Agriculture & Markets.

- All access roads will be regraded as necessary to create a smooth travel surface, allow crossing by farm equipment, and prevent interruption of surface drainage. Temporary water bars and culverts shall be removed if they are no longer necessary.

- Restored agricultural areas will be stabilized with seed and/or mulch. In areas to remain in hay production, a seed mix will be selected in consultation with the landowner. If future crop type is undetermined at the time of restoration, the site shall be seeded with annual rye or similar cover crop, or as agreed to with the landowner. If restoration occurs outside of the growing season, restored areas will be stabilized by mulching with hay or straw.

- Following restoration of all disturbed areas, any excess topsoil shall be distributed in agricultural areas of the site if practicable without adversely impacting site drainage. All such activity will be as directed by the EM based on guidance provided by the landowner.

- Any surface or subsurface drainage features, fences or gates damaged during construction shall be repaired or replaced as necessary.

- All construction debris will be removed and disposed of off site at the completion of restoration.

- The project developer will review the restored site with the Department of Ag and Markets and the landowner during the following growing season to identify and correct any project-related problems (drainage, compaction, etc.) that may not have been apparent immediately following restoration.

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 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. After completion of the specific remediation period, the Project Sponsor will continue to respond to the reasonable requests of the farmland owner/operator to correct project related affects on the impacted agricultural resources.

- 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.

# PRELIMINARY NOTICE OF INTENT TO UNDERTAKE AN ACTION WITHIN AN AGRICULTURAL DISTRICT

**Name of Action:** Cohocton Wind Power Project

**Project Sponsor:** Canandaigua Power Partners, LLC
c/o UPC Wind Partners, LLC
100 Wells Avenue
Suite 201
Newton, MA 02459-3210

**Affected Agricultural Districts:** Steuben County District No. 5

**Affected Municipalities:** Town of Cohocton

**Description of Proposed Action:**

Canandaigua Power Partners, LLC (CPP) is proposing to construct a wind-powered generating facility, the Wind Farm (Project) consisting of up to 41 wind turbines. Each turbine has a nameplate capacity of 2.0 megawatts (MW), giving a maximum nameplate capacity of approximately 82 MW. In addition to the wind turbines, the Project will involve construction of permanent meteorological towers, a system of gravel access roads, a buried electrical collection system, an operations and maintenance (O&M) facility, an on-site collection station, an overhead transmission line, and an electrical substation at the point of interconnect with an existing NYSEG 230 kV transmission line. The Project will be developed on approximately 94 parcels of leased private land in the Town of Cohocton. This land is primarily in active agricultural use, but also includes woodlots, wetlands, hedgerows, and successional old fields. All of the 41 turbines are proposed to be located in the Town of Cohocton. The Project will be constructed in one continuous phase, anticipated to commence in the Spring of 2007 and to finish by December 31, 2007.

The Project will consist of 41 Gamesa G87 wind turbines, or equivalent machines. Each turbine consists of a 78 meter (~256-foot) tall tubular steel tower; a 87 meter (~285-foot) diameter rotor consisting of three 42.3 meter (~139-foot) long composite blades; and a nacelle which houses the generator, transformer, gearbox, and power train. With a rotor blade oriented straight up, each turbine has a maximum height of 399 feet (including the concrete pedestal). The Project will also include approximately 13 miles of gravel access roads, 27 miles of buried 34.5 kV electric cable, and four permanent 60-meter (~196-foot) tall meteorological towers. Should environmental or other constraints preclude the ability to bury all electrical interconnects, it may become necessary to develop areas of overhead electrical line. Other project components include a 6,000 square foot O&M building and associated 0.5 acre storage yard, a 105 x 160 foot collector station, 9.4 mile long 115 kV transmission line, and a 220 x 350 foot substation.

During construction, contractor parking, trailers, and materials storage will occur at one or more temporary material laydown/construction staging areas totaling approximately 3 acres. The staging areas are proposed to occur on agricultural land located on Pine Hill or Lent Hill in the Town of Cohocton.

The project area includes approximately nine working farms and 3,583 acres of agricultural land, including approximately 4,828 acres within Steuben County Agricultural District No. STE-05.

**Project Site/Agricultural Setting:**

The project site is dominated by active agricultural land. Dairy operations and crop farming are the primary agricultural activities in the area, and agricultural land includes a mix of pastureland and crop fields devoted to the production of hay and corn for livestock feed.

**Summary of Anticipated Adverse Impacts:**

The proposed wind turbines and associated facilities on the site have been located so as to minimize loss of active agricultural land and interference with agricultural operations. In accordance with input provided by the New York State Department of Agriculture & Markets (NYSAM), access roads have been kept to a minimum, and where possible, follow existing farm lanes, field edges, and hedgerows to minimize the extent of disturbance to agricultural land. Where agricultural land must be crossed, an attempt has been made to avoid cutting the fields into small or irregular-sized parcels that would be difficult to farm. Input from landowners has also guided access road and turbine location. Construction impacts to agricultural land will total approximately 220 acres. Total permanent loss of agricultural land resulting from construction of the project is estimated at approximately 36 acres. Agricultural protection and restoration measures have been developed for the project in accordance with NYSAM guidelines. Lease payments to farm owners will help supplement farm income and are anticipated to help keep the land in active agricultural use. The presence of the turbine will also help limit the long-term conversion of agricultural land to non-agricultural use (e.g., seasonal and year-round housing).

**Date of Anticipated Commencement**: April 2007

**Project Contact:** Chris Swartley
Development Manager, Northeast
UPC Wind Partners, LLC
100 Wells Avenue
Suite 201
Newton, MA 02459-3210

**Signature:** _____