

# **Hamlin Wind Study Committee Report**

## **Executive Summary**

### **Introduction**

In January 2007, the Town Board of the Town of Hamlin selected a Citizens Committee comprised of 9 residents, to facilitate the gathering, compilation and understanding of available information on industrial wind turbines. In March 2007 the town enacted a moratorium on the potential installation and operation of a wind farm in the Town of Hamlin. This moratorium was enacted to allow the town to take the time necessary to understand as fully as possible the ramifications of the placement of industrial wind turbines within the town. Within this report are the findings of the Citizens Committee including currently available information, responses to specific questions, and recommendations.

### **Setbacks in Hamlin**

It is the recommendation of the Committee that Hamlin institutes a setback of 1500 feet from roadways and 2640 feet from existing dwellings.(Chapter 4)

It is also recommended that the setback to prevent flicker be 10 times the rotor diameter from existing dwellings. (Chapter 15)

If commercial wind turbines are placed in the Town of Hamlin, it is recommended that a minimum setback of 3 times the overall height of a wind turbine tower and a blade fully extended vertically be required between a wind turbines. (Chapter 12)

### **Noise**

A full four season - four times per day ambient sound analysis performed by an independent sound analysis firm needs to be performed before any permit can be issued for the wind tower construction. The analysis should be performed at the property lines of the adjoining residences as well as several various locations within a 2-mile radius.

The noise level should not exceed 45 dBa at the property line of non-participating landowners and shall not exceed the average ambient level by more than 4 dBa for more than 5 minutes out of any one hour period or exceed 45dBa for any time period at the property line. (Chapter 13)

It is also recommended that to ensure this requirement is met prior to installation, an assessment of any wind project proposals, inclusive of turbine type and location, be performed by an independent qualified engineering firm with an expertise in the evaluation of the acoustics of commercial wind turbines. Verification of noise levels after installation should be performed on a twice/year basis as part of routine

maintenance.

## **Infrastructure Considerations**

There are several aspects to the installation of commercial wind turbines and their impact on the existing infrastructure of the Town of Hamlin that were considered by the committee.

1. Disruption to existing traffic patterns
  2. Wear and tear on existing roadways
  3. Generation of dust
  4. Power lines, communication lines and poles
  5. Temporary and permanent access roads
  6. Drainage
  7. Water wells

There are roads in Hamlin with high traffic levels that would likely be affected (for example Route 18, Route 19, Church and Redman Rds.). It is suggested that only the State and County maintained roads be utilized to minimize the potential impact to the roadways maintained by the Town of Hamlin. These would most likely be the roads capable of handling the very heavy construction equipment. This may require detours or restricted hours of operation to minimize the impact on traffic.

Transportation of stone, gravel, concrete and concrete components would be of a high weight, high volume nature. Transportation of wind turbine components and crane components would be of a high weight nature. Nacelles, transported in two sections, can have a total weight of 80 tons (1). Assembled crane weights can be as much as 450 tons (1). Site to site assembled crane relocation would be of an extremely high weight nature. This may cause a rapid deterioration of the existing roadways. Therefore assurances should be put in place before any construction begins that the roads affected will be maintained and restored to their pre-construction state or better within 90 days after completion of the heavy equipment phase of the project.

Assurances must be put in place before any construction begins that the problem will be monitored and addressed for the duration of the construction project in a manner that is compliant with local, Department of Environmental Conservation and any other appropriate agencies.

Assurances should be put in place before any construction begins that disruptions in services will be minimal, not to exceed 1 hour at a time coordinated with the service providers with prior notification to all those impacted.

Construction and use of access roads (typically one access road/turbine) from existing roadways to the wind turbines can impact existing traffic patterns. Placement of roads should be planned to minimize disruptions and allow for safe entry and exit onto existing roadways.

Well performance prior to and after construction in these areas should be evaluated, with correction of problems implemented immediately after recognition of the problem. These expenses would be incurred by the wind tower company.

## **Aesthetics**

If commercial wind turbines are placed in the Town of Hamlin, it is recommended that:

Wind turbines shall not be used for displaying any advertising. There should be a sign at the entrance to the access road posted with contact information available 24 hours a day and tower identification information.

Colors and surface treatments of the turbines shall minimize visual disruption.

The design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the facility into the natural setting and existing environment.

The tower shall not significantly impair a scenic vista or scenic corridor as identified in, or in the spirit of, the Town's comprehensive plan.

All cable shall be buried underground.

Maximum height to be no more than 400 feet including rotor blades.

## **Lighting**

If commercial wind turbines are placed in the Town of Hamlin, it is recommended that any wind farm project use the minimum lighting necessary for safety and security purposes and use techniques to prevent casting glare from the site, except as otherwise required by the Federal Aviation Administration (FAA) or other applicable authority .

## **Structural Integrity**

Oversight or regulation of the installation process by an independent engineering firm should be required to ensure that the installation has been properly completed and meets all safety requirements.

Local on call authorized personnel must respond within 30 minutes at all times.

Regular inspections by an independent engineering firm should be required to ensure the installation is being properly maintained and safe. Records documenting the history of maintenance should be delivered to the Town of Hamlin on a quarterly basis. (Chapter 12)

## **Radio and Television Interference (Electromagnetic Interference)**

If commercial wind turbines are placed in the Town of Hamlin, it is recommended that problems affecting television reception, radio reception, cell phone operation, or other, attributable to the installation or operation of commercial wind turbines be corrected within 5 business days of recognition of the problem. Any costs associated with the correction (cable television, satellite television and radio, etc.) will be at the project owner's expense for the lifetime of the project.

The applicant shall provide evidence in the form of test results or independent engineering studies that the wind power facilities proposed will not interfere with microwave, cellular or television/radio transmission/reception to or from existing primary structures and fixed broadcast, retransmission or reception antennas. If after construction the Owner or Operator receives a written complaint related to such interference, the Owner or Operator shall take reasonable steps, including provision of alternate communications, to respond to the complaint.

## **Removal and Restoration**

If commercial wind turbines are placed in the Town of Hamlin, it is recommended that a suitable cash bond issued by a AAA rated bonding company be put into an account to guarantee that finances are in place only for removal and restoration of the affected areas prior to commencement of any wind farm project in the Town of Hamlin.

The owner/operator shall provide the Town of Hamlin with proof of liability insurance, in the form of a duplicate insurance policy, at a level to be determined by the Town Board to cover any liability for bodily injury or property damage that might be encountered. The Town of Hamlin shall be held harmless for any and all claims resulting from this project.

The scope of the restoration must encompass the following:

- Removal of wind turbines and associated ancillary equipment
- Removal of buried cable if less than 4 feet in depth (2)
- Restoration of roadways used during removal

The following to be done to the satisfaction of the landowner:

- Removal of substation(s) and associated ancillary equipment
- Removal of concrete base of wind turbine to a depth of not less than 6 feet and restoration of affected land (2)
- Removal of access roads and restoration of affected land

If commercial wind turbines are placed in the Town of Hamlin, it is recommended that

financial penalties be imposed on the turbine owners after the 6-month interval for removal.

If the bonding, escrow or other funding sources available for the deconstruction and removal of the towers and restoration of the area in question is insufficient then the landowner will be required to remove the towers by any acceptable means in a timely manner with a maximum of 6 months. (Chapter 18)

### **Safety:**

All power generation units will be equipped an automatic fire suppression system and alarmed appropriately.

All power generation units shall be equipped with adequate rigging to safely lower an unconscious or injured person to ground level within 10 minutes.

The owner/operator will provide local emergency response agencies with training, practice drills and documentation of appropriate actions in case of emergency circumstances at the project site. Such documentation shall include the location of all emergency shutdown controls, location and identity of any potentially hazardous materials, and site maps showing access routes.

Wind tower(s) shall be equipped with sensors to detect ice or snow build-up and appropriate actions will be taken to prevent ice throw.

All towers must be protected by anti-climbing devices such as sealed entrances for internal stairs with locking portals.

All wind energy systems shall be equipped with automatic braking, governing and feathering system to prevent uncontrolled rotation. Maximum speed of rotors shall be 20 rpm.

### **Environmental:**

A complete environmental study must be done including migratory bird flight patterns, bird and bat studies, impact of alterations to native wildlife habitat, effects on ground water and storm water run-off, and any and all environmental concerns as stipulated by the Town of Hamlin and the NYS Dept. of Environmental Conservation.

All bird and bat studies shall be conducted by The U.S. Dept. of Fish and Wildlife, their designee or an independent agency to the specification of The U.S. Dept. of Fish and Wildlife.

All possible precautions will be taken to minimize hazards to birds, bats, wildlife, people and the environment .

We recommend a Type I positive declaration SEQR study with a full environmental

assessment form. All studies and expenses will be paid by the developer. We also recommend that the Town of Hamlin be designated the head agency.

All environmental issues and concerns will be addressed in a Full Environmental Impact Statement which will address the concerns of the residents of the Town of Hamlin, The NYS Dept. of Environmental Conservation, The NYS Dept of Transportation, The Town of Hamlin Highway Dept., The Town of Hamlin Conservation Board, The Town of Hamlin Town Board, The Town of Hamlin Planning Board, The Monroe County Dept of Planning, and any and all other concerned parties.

All solid and liquid wastes related to construction, operation and maintenance of the project will be removed from the site and disposed of in accordance with applicable laws.

## **Enforcement**

Upon receiving a complaint or report of defective equipment, authorized personnel will verify the problem and immediately notify appropriate representatives of the wind tower company.

Any failure to repair problems or shut down defective equipment will result in a fine as set by the Town of Hamlin until repairs are made or equipment is shut down. We recommend a fine of \$2500.00 per day.

In the event of an emergency, authorized local personnel will shut down equipment to protect the public and the defective equipment.

Any wind tower that is not repaired within 90 days will be removed or replaced.

Failure to properly maintain or repair equipment/wind tower will result in non-renewal or revocation of Special Use Permit. We strongly recommend a SUP for each tower renewable annually upon proof of proper maintenance and any necessary repairs as needed.

An authorized representative will be available at all times to respond within 30 minutes for any and all problems, concerns or emergencies.

## **Economics**

The State of New York has recently renewed a real property tax exemption for renewable energy systems, Real Property Tax Law (RPTL) 487, which includes commercial wind turbines. This exemption is for a period of 15 years after installation during which time the property is not subject to any real property tax levies. After 15 years the property would be subject to regular tax levies. Although these exemptions are state-enacted, they can be disallowed at the local level, in which the county, town or school district may vote to disallow the exemption. This is stated in the Assessor's Manual Vol. 4. - section 487. The Town Fire Department would not be included in this exemption.

For illustrative purposes, the maximum revenues from a single wind turbine based on an estimated full assessment value of \$1,500,000 with no exemption would be as follows:

<b>Tax Type</b>	<b>Rate/1000 Assessed Value</b>	<b>Revenue</b>
Town of Hamlin	6.27	\$ 4608
Morton Fire	3.42	\$ 2514
Morton Lighting	0.27	\$198
County of Monroe	14.74	\$10834
School (AVERAGE)	46.49	\$34170
<b>TOTAL</b>		<b>\$52,325</b>

Since the potential area of construction is in the Morton District only the pertinent Morton data was used for the above illustration.

The direct financial gain for the Town of Hamlin would be less than \$4608/year per turbine using this estimate. Payments from a PILOT program would likely be lower. This is because PILOT program payments must be divided according to the existing tax proportionment structure.

If commercial wind turbines are placed in the Town of Hamlin, it is recommended that a full evaluation of how the financial benefits for the County and School Districts, obtained by installation of commercial wind turbines in the Town of Hamlin, can be made to uniformly benefit the Town of Hamlin as a whole prior to initiation of any wind power projects.