

At the 09Jul07 Town Board Meeting, Supervisor Dennis Roach challenged the Hamlin Wind Tower Committee to provide their final Wind Tower recommendations and present them at the 30Jul07 Special Town Board Meeting. The Committee Chair, Linda DeRue in her 15Jul07 letter published in the **Hamlin Herald**, “the Town Board due to time constraints will not have time to do their own research and will out of necessity have to rely on the most current research of this committee”. She further states “it has been clear for some time that the Town Board had planned on adopting our findings....” Ms. DeRue on behalf of the WTC accepts the challenge “our committee will redouble its efforts to get all research done in time for the Town Board to adopt our proposals and meet the new deadline set by Supervisor Roach”.

While a final Hamlin Wind Study Committee Report (HWSCR) will be presented, it was not endorsed in its entirety by all members on the Committee.

As a rebuttal, this “Minority Position Report” by Linda Morey, Stan Lyons and Mark Reeves was written. The first part follows the WTC Charter (WTCC) and Objectives. The second part addresses points of contention in the WTC Final Report.

We request the Town Board consider these alternative viewpoints in their deliberations.

I: **CHARTER OBJECTIVES**

A) WTCC OBJECTIVE: Determine what constitutes “best interest of the Town”.

COMMENT: The best interest of the Town is to look at all business ventures in a clear and unbiased way and its affects on the community as a whole. The primary difference in this case is that there were no regulations in place for this particular business enterprise which would directly benefit the Town financially. The Town Comprehensive Plan supports new business and the rural aesthetics of the towers would seem to fit with the citizen survey results.

B) WTCC OBJECTIVE: Assess the general Town opinion regarding wind energy.

COMMENT: The Wind Tower Committee discussed formal surveys of Hamlin residents for their opinions during the 04Apr07 WTC meeting. There was no consensus attained to pursue this task. This is unfortunate. If WTC meetings are any gauge of sentiment the survey would yield three distinct groups, the first being those adamantly opposed, the second comprised of those in support and the third and largest being those who are more or less ambivalent about the issue.

C) WTCC OBJECTIVE: Determine how wind towers can contribute to the Town.

COMMENT: The overall benefit to the Town Of Hamlin is financial gain. The money could be used to implement special projects, to reduce taxes and to provide utilities to needed households. Unlike most businesses, the Wind Tower Companies provides direct monetary benefits which can be earmarked for Town projects to benefit all residents. Individual landowners will gain directly through lease agreements and boundary agreements. The challenge to the Town leaders is to negotiate for maximum benefit and to use them creatively. It is recommended that they contract with experts to negotiate this objective.

D) WTCC OBJECTIVE: Communicate with and visit other municipalities with wind towers.

COMMENT: The Committee had limited discussions with other town governments and no written reports were generated to reference in this report. The committee did visit multiple tower projects. Some on the WTC were surprised at their ability to carry on conversations below and around them. In this technological age, each municipality has data on the internet and we spent many hours sorting through it regarding Wind Energy issues (See Appendix A for a valuable summary by WTC member Lester Wilson). Most sites in New York State have had relatively minor problems because of proper project planning, siting and oversight of the wind companies during installation. Communities as a whole report a positive experience.

E) WTCC OBJECTIVE: Research and identify benefits associated with wind towers and determine how to optimally maximize and distribute benefits.

COMMENT: As stated above, the primary benefit is a new point source of funds coming into Hamlin. Some municipalities have used the funds to reduce property taxes for many years. Our Town could earmark the new funds to allow projects such as public water, cable, or sewer in environmentally sensitive areas. The Town could expand green space with parks and improve infrastructure. Projects should benefit homeowners and non-homeowners alike and be a benefit to the Town in general.

F) WTCC OBJECTIVE: Research and identify negatives associated with wind towers and determine how to mitigate them.

COMMENT: This is where most of the WTC's time was spent seeking negatives with little to no time spent on positives other than Ed Evan's report earlier in the year. Negatives listed in the Hamlin Wind Study Committee Report included Noise, Flicker, Setback, Effects on Wildlife, Aesthetics and others.

G) WTCC OBJECTIVE: Identify impact of wind towers and wind construction on infrastructure, e.g., protection of road ways, underground lines, landscaping, wells, etc.

COMMENT: Recommendations by the Town of Hamlin Highway Superintendent Thomas Ingraham, were added to the Final Hamlin Wind Study Committee 30Jul07 Report. We would add a best practices requirement that the Developer post weekly the schedule of deliveries including routes in the Hamlin Herald. Speaking with a resident of Bliss who is dealing with the installation process now, reports that this minimizes disruptions and keeps the area informed as to progress.

H) WTCC OBJECTIVE: Develop proposed regulations on wind towers which conform to and reflect the best interests and desires of the Town and submit to Town Board.

COMMENT: Due to the revision of the timing in the WTC Charter by the Town Board at the 09Jul07 meeting, the WTC was not able to fully construct regulations. That responsibility now lies with the Town Board Leaders. We view this as a positive development.

II. COMMENTS ON THE FINAL HAMLIN WIND STUDY COMMITTEE 30JULY REPORT:

- 1) **NOISE:** More time was spent on this than any issue by the WTC.
 - a. Audible Mechanical Noise – This is real and can be mitigated through setback and Db limits. The Final reports states 45Db (+4Db) at the property line. This

is the most restrictive in the state. In your research – note that Db readings are not linear to distance. There is a larger difference from 45db suggested than to the 50Db state average. (See Appendix A).

- b. Low frequency/infrasonic noise: “no reliable evidence that would indicate any effects on people when infrasound is present at a level below the hearing threshold”. Ref: “Low Frequency Noise and Infrasound From Wind Turbine Generators: A Literature Review” George Bellhouse, 30Jun04.
- c. Audible aerodynamic noise: See #1. Note that on site visits by WTC members noted being able to hear and converse without raising one’s voice. Setback will mitigate. As illustrated in the 05Jun07 WTC meeting “ *“During the presentation it was noted (by Heather) that when the room was quiet it was 34 decibels with a decibel reading on Dave Lukas’ desk with just him talking the reading was 68-73 decibels. When Andy (Simpson) spoke across the room the reading was 65-69 decibels and when Tom Jenson spoke from his desk the reading was 59-63 decibels.”*

Again, folks at the meeting did not complain when readings exceeded 65Db, it did demonstrate what sounds people are used to in everyday living.

An additional mitigation solution is for the Developer to fund upgrades to homes in proximity for central air to avoid window opening at night.

Whatever regulation the Board adopts it should be simply measurable and a method for that measurement spelled out along with a process for enforcement purposes.

- 2) **SETBACK:** While not a “problem” there was a great deal of controversy on choosing a solution. The recommendation in the final WTC Exec. Report 30Jul07 states: “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). To simplify, look at the Setback issue **as a safety issue**. Information contained in the HWSCR regarding ice throw for a 300 foot tower / 400 foot total – states a 1700 feet setback. This is in line for roadway set-back too. The noise Db maximum, good for 1500 feet can also be good for 1,700 feet. The 2,640_foot dwelling set-back recommendation in the HWSCR is most restrictive and punitive. Distances between towers should be between the landowner where they will be located and the developer. If towers are placed too close together, their performance is reduced. Logically why would a developer do this? The developer should also be able to enter into a contract with the landowner or adjacent homeowner to place a tower closer than the recommended 1700 feet.
- 3) **FLICKER:** The HWSCR recommends 10 times the rotor diameter from an existing dwelling as mitigation. Referencing the Cohocton, NY Shadow-Flicker Modeling study 06Nov06. “General industry practices place turbines at least 1000 ft from receptors. At this distance shadow flicker usually only occurs at sunrise or sunset when the cast shadows are sufficiently long”. It also discusses health in relation to flicker “The shadow-flicker frequency is related to the rotor speed and number of blades on the rotor. The modeling results presented are based on a wind turbine with a 3-bladed, 87 meter diameter rotor, 78 meter hub height and a nominal rotor speed of 16.7 RPM which translates to a blade pass frequency of 0.8 Hz (less than 1 alternation per second). Health wise, such low frequencies are harmless. Frequencies higher than 3 Hz but below 10 Hz are widely used in discotheques

and the Epilepsy Foundation has made statements that frequencies below 10 Hz are not likely to trigger epileptic seizures”

There is software available to accurately predict shadow effect at our latitude. It would be possible to mitigate through blade stoppage or turning the blades.

Whatever mitigation the Town chooses should include a simple method for measurement of flicker and a process to be used for enforcement.

The developer should also be able to negotiate this issue with landowners in the area.

- 4) **EFFECTS ON WILDLIFE:** The HWSCR addresses this in the section on “Environmental”. Hamlin is located in the area of New York State from the Niagara River through Oswego in a migratory bird “flyway”. It is also located in a prime average wind speed area. This issue was discussed at the Town of Hamlin Conservation board meeting in April06 and reported to the Hamlin Town Board at their 08May06 meeting. It was recommended to the Town Board that a ½ mile set-back from the lake as a no tower zone as a reasonable compromise. Studies referenced in the NATIONAL RESEARCH COUNCIL “Environmental Impacts of Wind Energy Projects” May07 stated “the committee saw no evidence that fatalities from existing wind facilities are causing measurable changes in bird populations in the United States”. In a NRC briefing 07May07 “NAS Briefing Environmental impacts of Wind Energy Projects Summary” Bird fatalities with Turbines account for just .003% of all bird deaths estimated to be caused by Human activities. At the recent TOH Conservation board meeting, Hilary Richardson, M.S., Department of Environmental Science and Biology- SUNY Brockport recommended that the Town require the developer fund future studies in the area if the Towers are installed. Study should include population counts on carnivore and scavenger population levels – a true indicator on food availability and if Towers contribute to it. While there are positive and negative concerns regarding Wind energy development, it should not impact or stop development in Hamlin.
- 5) **AESTHETICS:** The Tower can be big and tall and depending who is looking at it labeled as an eyesore or magnificent. At the recent 2007 Spring Local Government Workshop a Class Titled “Wind Farm Guidelines for Cultural Resources”. There is a state agency that deals with mitigation for this very issue. At the class the presenter stated that in the past the State could require the developer restore or enhance a landmark structure or feature in the Town. We recommend that we use this agency to assist with Aesthetic Mitigation by requiring the developer fund improvements to Hamlin’s North Star History Center.
- 6) **FINANCIALS:** The HWSCR includes a financial section with estimated returns. The figures were done with best intentions. Our recommendation would be to hire financial and legal experts in the wind energy field to calculate this and propose the best way to maximize return.
- 7) **EFFECTS ON PROPERTY VALUES:** The HWSCR contains a compromise statement regarding property values. Note there is no study that found any adverse effects on property value ever.

Final Thoughts: In our opinion the Town should proceed without haste in developing Wind Energy regulations that best benefit the entire Town of Hamlin.

APPENDIX A - WIND TOWER ORDINANCE COMPARISON MATRIX

TOWN	ZONING DISTRICTS	SPECIAL USE PERMIT	TOWERS PER PARCEL	SEQR REQ	PROPERTY LINE SETBACK (FEET)	DWELLING SETBACK (FEET)	FAA LIGHTING IMPACT (FEET)	HEIGHT LIMIT (BASE TO BLADE TIP)	GROUND TO BLADE TIP MINIMUM HEIGHT (FEET)	BLADE SPEED BRAKE OR GOVERNOR	NOISE LIMIT (dba) AT PROPERTY LINE	SHADOW FLICKER RESTRICTION	FIRE AND POLICE PROTECTION ACCESS	POST EMERGENCY CONTACT INFORMATION	RESTORATION UPON DECOMMISSIONING OR ABANDONMENT	DECOMMISSIONING BOND	PROOF OF INSURANCE	WIRELESS COMMUNICATION INTERFERENCE	UNDERGROUND POWER LINES	BIRD MIGRATION STUDY	NOTES
AUGUSTA		YES		YES	1.5x TOTAL HEIGHT	1.5x TOTAL HEIGHT	2000		30	YES	50		YES	YES	YES		YES	YES	YES		
CLINTON				YES	500	1200		400	20	YES	50	YES			YES	YES		YES	YES	YES	SEE NOTE 1
COHOCTON	AG-R	YES	1	YES	TOTAL HEIGHT + 100	1500	2000	500	30	YES	50				YES	YES	YES	YES	YES	YES	
DRYDEN	NONE																				SEE NOTE 2
EDEN	C, A, GI, PI, SR, RR	YES		YES				200	30	YES	50				YES	YES					
ELLENBURG	RU, RA	YES		YES	500	1000		440	20	YES	50	YES		YES	YES	YES		YES	YES	YES	SEE NOTE 3
FAIRFIELD				YES	TOTAL HEIGHT	1250			30	YES	50				YES	YES	YES		YES		
FENNER	AG	YES			1.5x TOTAL HEIGHT	1.5x TOTAL HEIGHT	2000		30	YES	50			YES			YES	YES	YES		
HENDERSON	AR-40				1.5x TOTAL HEIGHT	1.5x TOTAL HEIGHT			30	YES	50			YES	YES	YES	YES	YES	YES		
LEBANON		YES		YES	1000	1000			30	YES	50	YES	YES		YES	YES	YES	YES	YES	YES	
MALONE	NONE										50										SEE NOTE 4
MARTINSBURG					300	1500															
PORTLAND					1.5x TOTAL HEIGHT	1.5x TOTAL HEIGHT		350	30	YES	50			YES	YES	YES	YES		YES		
ROXBURY	RR, A, F	YES		YES	1.5x TOTAL HEIGHT	1.5x TOTAL HEIGHT			30	YES	45 dbA 1000' FROM PROP LINE OR NEAREST STRUCTURE			YES	YES			YES	YES		
SHELDON		YES			1.5x TOTAL HEIGHT	750			30		50							YES			
SIDNEY				YES	1.5x TOTAL HEIGHT	1.5x TOTAL HEIGHT		MIN HEIGHT NECESSARY	30	YES	50 dbA 1000' OR FROM NEAREST DWELLING			YES	YES			YES	YES	YES	
SOUTH BRISTOL	R1, R3, R5, NC, C1, C2, PD	YES	1	YES	2x TOTAL HEIGHT	2x TOTAL HEIGHT	2000	100 (??)	25	YES	50				YES	YES	YES				20 KW LIMIT??
SPRINGWATER				YES	1.5x TOTAL HEIGHT	1.5x TOTAL HEIGHT		400	30	YES	50	YES		YES	YES	YES	YES		YES		
STARK				YES	1.25x TOTAL HEIGHT OR 500 FEET (WIG), 400 FEET FROM ROAD	1200			25	YES	50				YES	YES			YES		
WARREN					400 FEET OR 1.2x TOTAL HEIGHT FROM ROAD	1200					50				YES	YES					
WESTFIELD		YES			1.5x TOTAL HEIGHT	1.2x TOTAL HEIGHT		400	30	YES	50			YES	YES	YES	YES		YES		
WETHERSFIELD				YES	500	1320		450	30	YES	50 FROM NEAREST DWELLING	YES		YES	YES	YES			YES	YES	
NYSERDA MODEL					VARIES	VARIES			30	YES	55 FROM PROP LINE, 50 FROM DWELLING						YES	YES	YES		

NOTES:

1. SEE ORDINANCE FOR DETAIL ON SOUND
2. INDUSTRIAL WIND TURBINES BANNED, RESIDENTIAL TURBINES PERMITTED
3. SEE ORDINANCE FOR DETAIL ON SOUND
4. INDUSTRIAL WIND TURBINES BANNED, RESIDENTIAL AND AGRICULTURAL TURBINES PERMITTED