

AMENDED AND RESTATED

TOWN OF ENFIELD, TOMPKINS COUNTY, NEW YORK

LOCAL LAW NUMBER 4 OF 2019

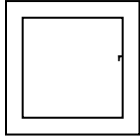
WIND ENERGY FACILITIES LOCAL LAW

Table of Contents

ARTICLE I - GENERAL STATEMENT AND DEFINITIONS	1
SECTION 1: TITLE & APPLICATION	1
SECTION 2: LEGISLATIVE FINDINGS	1
SECTION 3: AUTHORITY	3
SECTION 4: DEFINITIONS	4
ARTICLE II - PERMITS	8
SECTION 1: APPLICABILITY	8
SECTION 2: PERMITS REQUIRED; MODIFICATIONS	8
ARTICLE III - PERMITTING PROCESS	10
SECTION 1: APPLICATION REQUIREMENTS FOR WIND ENERGY FACILITIES	10
SECTION 2: APPLICATION REVIEW	20
SECTION 3: ISSUANCE OR DENIAL OF WIND ENERGY PERMITS	23
SECTION 4: APPROVAL LIMITATIONS; EASEMENTS AFFECTING TOWN PROPERTY	25
ARTICLE IV - STANDARDS FOR WIND ENERGY FACILITIES	25
SECTION 1: TRANSMISSION LINES	25
SECTION 2: ANTENNAE CO-LOCATIONS	26
SECTION 3: ADVERTISING	26
SECTION 4: WTG LIGHTING	26
SECTION 5: VISUAL IMPACT MITIGATION	26
SECTION 6: GUY WIRES	26
SECTION 7: SIGNAL INTERFERENCE	26
SECTION 8: WASTE REMOVAL	26
SECTION 9: CLEARING	26
SECTION 10: WILDLIFE	27
SECTION 11: WETLANDS	27
SECTION 12: STORMWATER	27
SECTION 13: CONSTRUCTION TIMES	27

SECTION 14: WATER SUPPLY	27
SECTION 15: REQUIRED SAFETY MEASURES	27
SECTION 16: ROADS AND TRAFFIC	28
SECTION 17: SOUND LEVELS AND LARGE WTG SETBACKS	28
SECTION 18: PROJECT MANAGEMENT AND OVERSIGHT	30
SECTION 19: PROPERTY VALUE GUARANTEE	31
SECTION 20: TRANSFER OF OWNERSHIP	31
ARTICLE V - WAIVERS, VARIANCES, AND APPEALS	32
SECTION 1: WAIVERS	32
SECTION 2: VARIANCES	33
SECTION 3: APPEALS	33
ARTICLE VI - OPERATION, PERMIT REVOCATION, ABATEMENT, VIOLATIONS	33
SECTION 1: OPERATION, PERMIT REVOCATION, AND ABATEMENT	33
SECTION 2: ABANDONMENT AND DECOMMISSIONING	39
ARTICLE VII - WIND MEASUREMENT TOWERS	47
SECTION 1: WIND SITE ASSESSMENT	47
SECTION 2: APPLICATIONS FOR WIND MEASUREMENT TOWERS	47
SECTION 3: STANDARDS FOR WIND MEASUREMENT TOWERS	47
ARTICLE VIII - SMALL WTG	48
SECTION 1: PURPOSE AND INTENT	48
SECTION 2: APPLICATIONS	48
SECTION 3: DEVELOPMENT STANDARDS	49
SECTION 4: STANDARDS	51
SECTION 5: PERMIT REVIEW AND PROCESS	51
SECTION 6: ABATEMENT	52
ARTICLE IX - GENERAL AND MISCELLANEOUS PROVISIONS	53
SECTION 1: PERMITS, FEES AND AGREEMENTS	53
SECTION 2: VIOLATION AND ENFORCEMENT	54
SECTION 3: SEVERABILITY	58
SECTION 4: INDEMNITY AND LIMITATION UPON TOWN LIABILITY	58

SECTION 5: LIABILITY INSURANCE	59
SECTION 6: CONSTRUCTION	60
SECTION 7: EFFECTIVE DATE AND FILING	60
Appendix A - Noise Measurement Standards and Procedures	61
Appendix B - Property Value Guarantee	64
Appendix C - Scientific Studies, Government Reports, Articles and Town Laws	66



**AMENDED AND RESTATED
TOWN OF ENFIELD, TOMPKINS COUNTY, NEW YORK
LOCAL LAW NUMBER 4 OF 2019**

WIND ENERGY FACILITIES LOCAL LAW

This Amended and Restated Local Law Number 4 of 2019, entitled “2019 WIND ENERGY FACILITIES LOCAL LAW,” is hereby adopted by Resolution of the Town Board of the Town of Enfield, Resolution dated December 11, 2019, and reads in its entirety as follows:

ARTICLE I - GENERAL STATEMENT AND DEFINITIONS

SECTION 1: TITLE & APPLICATION - This Local Law, as amended and restated, shall be known as “Local Law Number 4 of 2019” (herein, the “2019 Local Law”). Local Law Number 4 of 2019 hereby repeals Local Law Number 1 of 2009, entitled “WIND ENERGY FACILITIES LOCAL LAW”, dated January 14, 2009, and any prior Local Law or Resolution that is inconsistent herewith.

SECTION 2: LEGISLATIVE FINDINGS - The Town Board of the Town of Enfield adopts this 2019 Local Law to promote the effective and efficient use of the Town’s wind energy resources through Wind Energy Facilities and Wind Turbine Generators, and to regulate the design and placement of such systems so that the public health, safety, and welfare will not be unreasonably jeopardized. Further, the Town Board of the Town of Enfield finds and declares that:

- A. The New York State Constitution's "Bill of Rights for Local Governments" (Article IX, §2-10) obligates local legislators to protect the health, safety and well-being of their community.
- B. While wind energy is a renewable energy resource of electricity generation, and under some circumstances it may reduce the use of nonrenewable energy sources, the possible benefits must be balanced against potential negative impacts to local citizens, local economy, and local ecosystems.
- C. Regulation of the siting and installation of wind turbines is necessary for protecting the health, safety, and well-being of neighboring property owners, the general public, the local economy and local ecosystems.
- D. There can be serious legal and economic detriments for landowners entering into the complicated and one-sided lease/easement contracts.

- E. Large-scale multiple-turbine industrial wind energy facilities may present significant potential aesthetic impacts because of their enormous size, lighting, dissimilarity from the natural environment, and possible shadow flicker effects.
- F. Installation of large-scale multiple-turbine industrial wind energy facilities may create and/or exacerbate drainage problems through erosion and lack of sediment control of facility and access road sites, and harm farmlands and agriculture through construction methods utilized and arable land conversion to industrial purposes.
- G. Construction of industrial wind energy facilities may create traffic problems, dangerous road conditions for local and other travelers and damage local roads
- H. Industrial wind energy facilities may reduce property values of nearby property owners. Said property value reductions could reduce the Town's tax base, resulting in a tax rate increase on all Town property owners.
- I. A large scale industrial wind energy facility may be a significant source of noise and vibration, These can have negative health impacts on residents in neighboring properties, particularly in areas with low ambient noise levels. According to various medical experts, by way of limited example, the World Health Organization), the infrasound component of such noise can be the most problematic. Furthermore, the New York State Department of Environmental Conservation's Program Policy: "Assessing and Mitigating Noise Impacts" provides that an increase in sound pressure (dB) above the local ambient noise level of 5-10 dB is intrusive; of 10-15 dB is very noticeable; of 15-20 dB is objectionable; and above 20 dB is intolerable. That policy also states: "Most objective attempts to assess nuisance noise adopt the technique of comparing the noise with actual ambient sound levels or with some derived criterion." It also states: "The property line should be the point of reference when adjacent land use is proximal to the property line." A noise study conducted by the Noise Pollution Clearinghouse, Montpelier, VT in April 2016 in the vicinity of the Connecticut Hill area of Enfield resulted in daytime ambient noise measurements between 30.1 and 35.9 dBA and nighttime ambient noise measurements between 25.2 and 37.3 dBA. A noise study conducted by Cassadaga Wind LLC in April 2016 in the vicinity of the company's wind project in Chautauqua County, New York resulted in daytime ambient noise measurements between 21 and 32 dBA and nighttime ambient noise measurements between 19 and 32 dBA, and found the area measured "is typical of rural use."
- J. In certain circumstances, industrial wind energy facilities can cause electromagnetic interference with some types of communications.
- K. Bats killed by industrial wind energy turbines can result in an appreciable

reduction in regional agricultural yields.

- L. Turbines kill birds including raptors. The Town of Enfield is habitat for many species, both year-round and seasonal.
- M. Industrial turbines can have a variety of adverse health effects on other wildlife, livestock and domestic animals, including, among other things, a reduction in dairy milk production.
- N. According to the New York State Department of Environmental Conservation, loss of suitable habitat is the major cause for declines in species populations. Development, wetland filling, and other activities reduce the total amount of habitat. These activities also fragment remaining forest, grassland, and wetland habitat into patches too small and too isolated to support some animal species. Industrial turbines can contribute to these impacts and have adverse effects on local hunting and fishing, among other things.
- O. The Town of Enfield has many scenic view sheds, and some of these may be negatively impacted by industrial wind energy facilities.
- P. The Town and its citizens desire to maintain the pastoral, rural nature of the Town. An industrial wind energy facility may be in conflict with the culture and character of this community.
- Q. In formulation of this 2019 Local Law, many studies have been reviewed - and those written by independent experts were given the greatest consideration. Many wind energy ordinances throughout the United States have been analyzed. Experiences of other communities with industrial wind energy have been studied. The Enfield Wind Farm Advisory Committee was appointed to make recommendations regarding a proposed wind energy facility in Enfield and subsequently the Enfield Renewable Energy Advisory Committee was appointed to make recommendations regarding industrial solar and wind energy regulation. Some of both Committees' conclusions were incorporated into this 2019 Local Law. Scientific studies, government reports, articles and town laws supporting the provisions adopted here are found in Appendix C of this Local Law.

SECTION 3: AUTHORITY - The Town Board of the Town of Enfield enacts this 2019 Local Law under the authority granted by: (a) Article IX of the New York State Constitution, §§ 2(c)(6) and 10; (b) the New York Statute of Local Governments, §§ 10(1) and (7); (c) the New York Municipal Home Rule Law, §§ 10(1)(i) and (ii), and §§ 10(1)(a) (6), (11), (12), and (14); (d) the New York Town Law § 130(1) (Building Code), §130(3) (Electrical Code), §130(5) (Fire Prevention), §130(7) (Use of Streets and Highways), §130(7-a) (Location of Driveways), §130(11) (Peace, Good Order and Safety), §130(15) (Promotion of Public Welfare), §130(15-a) (Excavated Lands), §130(16) (Unsafe

Buildings), §130(19) (Trespass), and §130(25) (Building Lines); and (e) the New York Town Law § 64(17-a) (Protection of Aesthetic Interests), and §64(23) (General Powers).

SECTION 4: DEFINITIONS – The following terms have the following meaning within and for the purposes of this 2019 Local Law:

2019 LOCAL LAW – Local Law Number __ of 2019, known as the 2019 Wind Energy Facilities Local Law, of the Town of Enfield, Tompkins County, New York.

ACE – The United States Army Corps of Engineers.

AGRICULTURAL OR FARM OPERATIONS – the land and on-farm buildings, equipment, manure processing and handling facilities, and practices which contribute to the production, preparation, and marketing of crops, livestock and livestock products as a commercial enterprise, including a commercial horse boarding operation as defined in the Agriculture and Markets Law. A farm operation may consist of one or more parcels of owned or rented land, which parcels may be contiguous or noncontiguous to each other.

APPLICANT – Any Person who submits or joins in the submission of any application under this 2019 Local Law.

BLADE GLINT: The intermittent reflection of the sun or moon off the surface of the blades of one or more wind turbines.

CONSERVATION AREAS - Natural areas protected by law, such as wetlands that meet the definition in the Clean Water Act 33 USC Sec. 1251 et seq.; shoreland areas; water bodies; riparian buffers; populations of endangered or threatened species, or habitat for such species; archaeological sites, cemeteries, and burial grounds; important historic sites; other significant natural features and scenic viewsheds; and existing trails or corridors that connect the tract to neighboring areas.

DEC – The New York State Department of Environmental Conservation.

DECOMMISSIONING FUND - A type of security or undertaking, acceptable to and approved by the Town Board, posted or deposited by an Applicant or Operator in favor of the Town, that is designed to provide guaranteed access to funding to remove and decommission WTG and Wind Energy Facilities and restore and remediate the Site, usually in the form of cash, a letter of credit, or a bond.

DECOMMISSIONING PLAN – A written detailed plan submitted by an Applicant or Operator that shows and verifies continual compliance with the requirements of this 2019 Local Law relative to the removal and decommissioning of Large WTGs

and Wind Energy Facilities and restoration and remediation of the Site.

DEIS – A Draft Environmental Impact Statement, as defined and construed under SEQRA.

EAF – An Environmental Assessment Form, as defined and construed under SEQRA.

EIS – An Environmental Impact Statement, as defined and construed under SEQRA.

ENFORCEMENT OFFICER – Any Person appointed by the Town Board to (i) review applications, (ii) interpret or enforce this 2019 Local Law, or (iii) take any action or make any determination under this 2019 Local Law. Unless the Town Board resolves otherwise, the Town’s Code Enforcement Officer(s) shall be deemed Enforcement Officers under this 2019 Local Law.

ESCROW ACCOUNT – An escrow account meeting the requirements of Article III, Section 2.B. of this 2019 Local Law.

FAA – the Federal Aviation Administration.

FEIS – A Final Environmental Impact Statement, as defined and construed under SEQRA.

OPERATOR – Any Person who owns, manages, operates, or otherwise exercises decision making authority for any Wind Energy Facility or WTG, but not including such Persons who own, manage or operate Small WTG.

PILOT Agreement – A payment in lieu of taxes agreement pursuant to **General** Municipal Law, Article 18-A.

LANDOWNER – With respect to parcel of property within the Town, a Person who has entered into a written lease, easement or other agreement to permit the construction and/or operation of a WTG or Wind Energy Facility on such parcel of property owned by such landowner.

LARGE WIND GENERATOR TURBINE or LARGE WTG – Any Wind Generator Turbine/ WTG other than a Small Wind Generator Turbine/Small WTG. All Large WTG project proposals are “Type I” actions under SEQRA.

PERSON – Any individual, partnership, limited liability company, corporation, joint venture, business, or other person or entity of whatever kind or nature, but not including the Town, the Town Board, the Planning Board, or any other employee, elected official, or agent of the Town, and not including the State of New York or the Federal Governments and their departments, bureaus, and employees thereof.

PLANNING BOARD – The Planning Board of the Town of Enfield, in Tompkins County, New York.

PRECAUTIONARY PRINCIPLE - This principle, or precautionary approach generally defines actions on issues considered to be uncertain, for instance applied in assessing risk management. The Principle is used by policy makers to justify discretionary decisions in situations where there is the possibility of harm from making a certain decision (e.g. taking a particular course of action) when extensive scientific knowledge on the matter is lacking. The Principle implies that there is a social responsibility to protect the public from exposure to harm, when scientific investigation has found a plausible risk. These protections can be relaxed only if further scientific findings emerge that provide sound evidence that no harm will result.

RESIDENCE – Any dwelling legally suitable for habitation existing in the Town of Enfield on the date the Town Board determines, pursuant to Article III, Section 2.D. of this 2019 Local Law, that a valid, completed application has been received by the Town. A residence may be part of a multi-dwelling or multipurpose building.

SENSITIVE RECEPTORS - Locations at which residential, public and private recreational, educational or religious use of land or property is permitted under any law or laws (see below under Visual Impact Mitigation).

SEQRA – the New York State Environmental Quality Review Act and its implementing regulations in Title 6 of the New York Codes, Rules and Regulations, Part 617.

SHADOW FLICKER: The visual effect that results when the blades of an operating wind energy turbine pass between direct and indirect light from the sun or moon and an observer, and cast an observable, moving shadow on a person or property in the vicinity.

SITE – One or more parcels of land where a Wind Energy Facility or WTG is actually or proposed to be located. A “Site” may be publicly or privately owned, and may be comprised of multiple parcels owned by one or more Persons. Where a Site is comprised of multiple lots or parcels owned by any one or more Persons, the combined lots or parcels shall be deemed one “Site” for the purposes of applying any setback requirements.

SMALL WIND TURBINE GENERATOR or SMALL WTG – a wind turbine generator or WTG consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a Total Height of not more than one hundred twenty (120) feet and which is primarily intended to reduce consumption of utility power at that location.

SOUND PRESSURE LEVEL – A measurement of noise or sound performed in accordance with the Type 1 or 2 specifications of the latest version of the American National Standards Institute “American Standard Specifications for General Purpose Sound Level Meters” (ANSI Standard S1.4) or the Class 1 or 2 specifications of the most recent IEC 61672-1 International Standard.

SEIS – A Supplemental Environmental Impact Statement, as defined and construed under SEQRA.

TOTAL HEIGHT – the height of the tower and the furthest vertical extension of the WTG.

TOWN – The Town of Enfield, in Tompkins County, New York.

TOWN BOARD – The Town Board of the Town of Enfield, in Tompkins County, New York.

TOWN CLERK – The Town Clerk of the Town of Enfield, in Tompkins County, New York.

UNIQUE NATURAL AREAS - The non-regulatory inventory created by the Environmental Management Council of Tompkins County that identifies areas in the county that are special, and, in many respects, contain on-of-a kind natural features. The full updated inventory is available for review at the Tompkins County Planning Department or its successor organization.

VARIANCE – A process by which an Applicant or Operator or permit holder seeks to change or modify a requirement of this 2019 Local Law.

WAIVER - A process by which an Applicant or Operator or permit holder seeks to have a requirement of this 2019 Local Law not apply to a Site, Person, project, or permit.

WIND ENERGY FACILITY or “WEF”– One or more WTGs (other than Small WTGs) and the related Wind Measurement Tower(s), infrastructure, electrical lines, substations, access roads and accessory structures.

WIND ENERGY PERMIT – A permit granted pursuant to this 2019 Local Law granting the holder the right to construct, maintain, and operate a Wind Energy Facility, or pursuant to any state siting program.

WIND MEASUREMENT TOWER – A tower used for the measurement of meteorological data such as temperature, wind speed and wind direction.

WIND TURBINE GENERATOR or WTG – A machine or device that converts the

kinetic energy of the wind into electricity available for use beyond that used by the machine (also commonly known as a “wind turbine” or “windmill”).

ARTICLE II - PERMITS

SECTION 1: APPLICABILITY -

- A. The requirements of this 2019 Local Law shall apply to (i) all Wind Energy Facilities and Small WTGs proposed, (ii) all Wind Energy Permit applications submitted or issued after the effective date of this 2019 Local Law, and (iii) each and every Person who desires to build, lease, maintain, or operate any Wind Energy Facility, Large WTG, Small WTG, or Wind Measurement Tower. This 2019 Local Law shall apply to all areas of the Town.
- B. Applications and permits for Small WTG's applied for and/or issued prior to the date of this 2019 Local Law shall be subject to the laws in effect at the time such application or permit was filed and/or issued.

SECTION 2: PERMITS REQUIRED; MODIFICATIONS -

A. Permit Requirements.

- 1. No Wind Energy Facility shall be constructed or operated in the Town except pursuant to a Wind Energy Permit approved pursuant to this 2019 Local Law.
- 2. No Large WTG shall be constructed or operated in the Town except pursuant to a Wind Energy Permit approved pursuant to this 2019 Local Law.
- 3. No Wind Measurement Tower shall be constructed or operated in the Town except pursuant to a Wind Energy Permit issued pursuant to this 2019 Local Law.
- 4. No Small WTG shall be constructed or operated in the Town except pursuant to a Wind Energy Permit issued pursuant to this 2019 Local Law.

- B. Agricultural Use Exemption. No permit or other approval shall be required under this 2019 Local Law for a WTG utilized solely for Agricultural operations in a state or county Agricultural district so long as the facility (i) is set back from property lines at least two (2.0) times the Total Height, and (ii) does not exceed one hundred twenty (120) feet in Total Height. Towers over one hundred twenty (120) feet in Total Height utilized solely for Agricultural operations in the state or county agricultural district shall apply

for a permit in accordance with this 2019 Local Law, but shall not require a height variance. Prior to the construction of a WTG under this exemption, the property owner or a designated agent shall submit a sketch plan or building permit application to the Town to demonstrate compliance with setback requirements.

C. Modification of Application. Unless otherwise specifically waived by the Town Board, any modifications to an application for a Wind Energy Permit for a WEF following the date the Town Board determines, pursuant to Article III, Section 2.D. of this 2019 Local Law, that a valid, completed application has been received by the Town and prior to the date a Wind Energy Permit has been approved pursuant to Article III, Section 3 of this 2019 Local Law shall be considered to be the submission of a new application that is subject to all of the provisions for a new application under this 2019 Local Law.

D. Facility Modifications.

1. Following the date a Wind Energy Permit for a WEF has been approved pursuant to Article III, Section 3 of this 2019 Local Law but prior to the date the WEF is placed into service, no modifications to the design, plans or construction of the related Wind Energy Facility or any component thereof may occur without Town approval and any such modification without the approval of the Town Board shall automatically void the related Wind Energy Permit.
2. Following the date the Wind Energy Facility is placed in service, no modifications to the design of such Wind Energy Facility or any component thereof may occur without Town approval unless such action is the result of normal maintenance or routine repairs of such WEF or a component thereof. Normal maintenance or routine repair does not include any change, addition, swap-out, exchange or the like that requires or results in changes to or upgrades to the original design of a WTG or substation.

ARTICLE III - PERMITTING PROCESS

SECTION 1: APPLICATION REQUIREMENTS FOR WIND ENERGY FACILITIES

A. Application Contents. Throughout the Wind Energy Permit process for a WEF, the Applicant shall promptly notify the Town Board of any changes to the information contained in the permit application. Notwithstanding

anything to the contrary in this 2019 Local Law, changes that do not materially alter the initial application may be administratively accepted. The Wind Energy Permit application for a WEF shall be an electronic digital filing that contains at least the following:

1. Applicant Information. The name, address, and phone number of Applicant. If the Applicant is represented by an agent the application shall include the name, address and telephone number of the agent as well as an original signature of the Applicant authorizing the agent to represent the Applicant;
2. Property Owner Information and Authorization. The name, address, and telephone number of the property owner of the proposed Site of any Wind Energy Facility. If the said owner is not the Applicant, the application shall include fully executed copies of all pages of any leases, easements and any other related agreements for the WEF (not simply memorandums). The application shall be updated periodically for any amendments to any such leases, easements or agreements or for any new leases, easements or other related agreements;
3. Adjacent Owners. A list of each property owner, together with their respective residence and mailing addresses, located within one (1) mile of the boundaries of the proposed Site;
4. Parcel Information. The address or other property identification information, and the tax parcel number (tax map section, block and lot number) of each proposed WTG location, appurtenant structure, and any other related facilities;
5. Project Description. A reasonably detailed description of the project including, but not limited to, the total number of proposed WTGs and the maximum rated capacity of each WTG;
6. Plot Plans. A set of plot and/or site plans containing sufficient detail to clearly describe and show the following:
 - (a) Property lines and physical dimensions of the Site and of any property within one (1) mile of the Site boundaries;
 - (b) Locations of all proposed facilities and improvements, including, but not limited to, the WTG, access roads, turnout locations, electrical lines, substations, storage or maintenance units, gates or fencing and any permanent meteorological towers;

- (c) Location of all Residences and other existing structures on the Site and within one (1) mile of the Site boundaries;
 - (d) Locations of parcels adjoining the Site;
 - (e) Locations of public roads on or adjacent to the Site;
 - (f) Locations of all above and below ground utility lines and/or easements upon or affecting the Site;
 - (g) To demonstrate compliance with the setback requirements of this Article, a diagram for each proposed WTG and substation location indicating how such structure conforms to the setback requirements under this 2019 Local Law; and
 - (h) Any Conservation Areas or Unique Natural Areas within the Site boundaries or within one (1) mile of the Site boundaries.
7. Wind Turbine Information. One drawing or other set of information may be submitted for each WTG of the same type and Total Height. For each such type of WTG proposed, the application shall include:
- (a) A vertical drawing of the WTG showing Total Height, turbine dimensions, tower and turbine colors, distance between ground and lowest point of any blade, location of climbing pegs, and access door(s);
 - (b) Make, model, picture, and manufacturer's specifications, including information on the IEC 61400-11 test noise levels during WTG operation, subject to any appropriate confidentiality agreement upon request;
 - (c) Manufacturer's Material Safety Data Sheet documentation for the type and quality of all materials used in the operation of all equipment including, but not limited to, all lubricants and coolants, subject to any appropriate confidentiality agreement upon request;
8. Landscaping Plan. A written plan depicting existing vegetation and describing any areas to be cleared and the specimens proposed to be added to provide landscaping or screening;
9. Lighting Plan. A written plan showing any FAA required lighting and other proposed lighting;

10. Stand Down Plan. A written plan outlining the stand down requirements for high wind conditions, ice conditions, or other health or safety issues (e.g., unusual levels of noise due to malfunctions, etc.) during the operation of the WEF;
11. Decommissioning Plan. The Applicant shall submit a written decommissioning plan that shall conform to the provisions of Article VI, Section 2 of this 2019 Local Law;
12. Fire Protection Plan. A fire protection and emergency response plan that is created in consultation with the fire department(s) having jurisdiction over the proposed Site. The plan shall address all activities at the WEF from the start of construction through the end of power generation and the final removal and restoration of the site and shall describe a response plan to address all identified potential fire, rescue and hazardous materials scenarios. The Applicant/operator shall ensure that the WEF complies with the following control and prevention measures and assumes responsibility for all associated incremental costs:
 - a. Use of fire-proof or fire-resistant building materials and buffers or fire -retardant landscaping around WTGs and WEFs as appropriate.
 - b. Incorporation of a self-contained fire protection system to address nacelle fires or a written explanation of why this standard would create an undue hardship.
 - c. Maintenance of firebreak areas as appropriate, cleared of vegetation maintained as a fire/fuel break as long as the WTG is in operation.
 - d. All private road access to the WEF shall be brought up to the Town's road standards to accommodate fire and rescue vehicles and paid for by the Applicant/operator.
 - e. Provision for any additional firefighting or rescue personnel, overtime costs, services, training, materials, incremental fire emergency equipment and/or vehicles as may be required to address any emergency related to the WEF that is beyond the current capabilities and duties of the local fire department.
13. Noise Monitoring Plan: Applicant will provide a post-construction noise monitoring plan which shall, at a minimum, provide verification from a qualified party, reasonably acceptable to the Town Board, and using the Noise Measurement Standards and Procedures outlined in Appendix A hereto, that WEF noise does not exceed the sound levels set forth in Section 17.A. of this 2019 Local Law. The

plan shall provide that a full electronic version of the noise measurements, inputs, assumptions and data shall be provided to the Town in usable form that will allow the Town's consultants to verify the measurements.

14. Environmental Monitoring Plan: The Applicant shall provide an environmental monitoring plan which shall, at a minimum, permit post-construction environmental studies deemed appropriate by the Town Board. This plan will be funded by the Escrow Account. Post-construction field studies will include, among other things, scientific assessments of regional nesting failures, avian and bat mortality, and territory abandonment of special status species like raptors species, within two (2) miles of the WEF. All studies will conform to applicable state and federal agency guidelines. Should these guidelines conflict with the geographic extent outlined in this 2019 Local Law, the greatest of the geographic extent of this 2019 Local Law, the applicable federal law or the applicable state law shall apply.
15. Construction Information. Information pertaining to the construction/installation of the Wind Energy Facility, including, at a minimum, the following:
 - (a) A construction plan, blueprints, specifications, and similar construction documents duly sealed by a New York State licensed engineer or architect depicting the sequence, construction methodologies, methods and manners of proposed construction, times of operation, site and access controls, and safety and security plans; and
 - (b) A construction schedule describing anticipated construction commencement and completion dates; and
 - (c) A description of the routes to be used by construction and delivery vehicles; and
 - (d) The gross weights and heights of all loaded delivery and construction vehicles;
16. EAF. A Completed Part 1 of the Full EAF as required by SEQRA;
17. Visual Assessment. A visual assessment following DEC Program Policy DEP-00-2 ("Assessing and Mitigating Visual Impacts") and any revision must be completed to assist the Town in evaluating whether the project site is visible from any publicly accessible location (public lands and public roads);

18. Maintenance Plan. The Applicant shall provide a maintenance plan that details normal maintenance and storm follow-up and other actions that will be undertaken to keep the WEF operating quietly, efficiently, and not polluting land, air or water. This will include, but not be limited to, the minimization of audible sounds, infrasound, vibrations, Blade Glint, and fluid leaks. The plan shall also provide that: (i) the operator of the WEF shall conduct preventative maintenance inspections at least once every year as well as no later than thirty (30) days after any wind event defined as a tropical storm or Category I or higher hurricane; (ii) each inspection shall look for such things as metal fatigue, nut loosening, and other potential failures that might impact health and safety; and (iii) shall require that inspection reports be provided to the Town Board within thirty (30) days of such inspection;
 19. Standards and Other Information. The Applicant shall (i) affirmatively show compliance with the standards of Article IV of this 2019 Local Law, and (ii) provide such other information and data as reasonably required by the Town; and
 20. Signed Statement. A statement, signed under penalty of perjury, that the information contained in the application is true and accurate.
- B. Positive Declaration. If the Town Board determines in writing that the proposed Wind Energy Facility or any WTG therein may have a significant adverse impact on the environment the Town Board shall issue a positive declaration of environmental significance.
- C. WEF Economic Impact Study. Following the submission of a completed application and as a condition to the issuance of any Wind Energy Permit for a WEF hereunder, a thorough, conservative assessment of the WEF's net economic impact on the community conducted by independent experts hired by the Town and paid for from the Escrow Account shall be conducted. This will include possible reduced hunting, reduced agricultural yields due to bat takings, property devaluations (and the commensurate loss in tax base), cost to community due to adverse health effects, higher cost of electricity, among other relevant considerations. This will be compared to any guaranteed incomes from the WEF. The Applicant shall supply the Town Board with any information regarding the WEF necessary to complete such assessment.
- D. Road Use and Property Damage Agreement. Following the submission of a completed application and as a condition to the issuance of any Wind

Energy Permit for a WEF hereunder, the Applicant/Operator shall enter into a Road Use and Property Damage Agreement, reasonably acceptable to the Town Board, New York State Department of Transportation (NYSDOT), the Tompkins County Highway Department (TCHD) and/or the Town Board (as appropriate) agreeing, to the extent practicable, to repair or replace all public real or personal property damaged at any time during (a) construction of the WEF, (b) routine or extraordinary repairs or maintenance of the WEF, and/or (c) during the partial or full decommissioning of the WEF. Such agreement shall, at a minimum, include the following terms:

- a. The Applicant shall reimburse NYSDOT, TCHD and/or the Town Board (as appropriate) for any and all repairs and reconstruction to roads that are necessary due to the construction, repairs, maintenance and/or decommissioning of the WEF. A qualified independent third party or other qualified person, agreed to by the NYSDOT, the TCHD and/or the Town Board (as appropriate) and the Applicant/Operator, shall be hired to pre-inspect the roadways to be used during construction, maintenance, repairs and/or decommissioning. This third party shall be hired to evaluate, document, and rate the roads condition prior to construction, repairs, maintenance or decommissioning of the WEF, and again 30 days after the WEF is completed, maintained, repaired or removed. NYSDOT, TCHD and/or the Town Board may waive the requirement to evaluate, document and rate the roadways in those circumstances where the Applicant/Operator can demonstrate to the satisfaction of such agency that any repairs or maintenance are unlikely to cause any material damage to the roadways.
- b. Any road damage during construction, repairs, maintenance and/or decommissioning that is done by the Applicant/Operator and/or one or more of its subcontractors that is identified by this third party shall be repaired or reconstructed to the satisfaction and standards of NYSDOT, TCHD, and/or the Town Board (as appropriate and regardless of the initial condition of such roads prior to commencement of any construction or other activities by the Applicant/Operator) at the Applicant's/Operator's expense, prior to the final inspection. In addition, the Applicant/Operator shall pay for all costs related to this third-party pre inspection work prior to receipt of the final inspection.
- c. The surety for removal of a decommissioned WEF shall not be released to the Applicant/operator until the Town Board and Town Highway Superintendent are satisfied that any road damage that is identified by

this third party during and after decommissioning that is done by the Applicant/Operator and/or one or more of its contractors or subcontractors has been repaired or reconstructed to the satisfaction of the NYSDOT, TCHD and/or the Town Board (as appropriate) at the Applicant's/Operator's expense. In addition, the Applicant/Operator shall pay for all costs related to work of this third party's inspection prior to receipt of the release of the surety.

- d. The Road Use and Property Damage Agreement shall include provisions to incorporate the standards for WEFs related to roads and traffic pursuant to Article IV, Section 16 of this 2019 Local Law.

- E. Environmental Studies. An Environmental Impact Study (EIS) will ordinarily be required for Large WTGs in accordance with SEQRA. The study area for the EIS shall include the proposed WEF, as well as the area at least one (1) mile surrounding the proposed WEF.

In addition to any SEQRA requirements, at a minimum the EIS shall include the potential impacts on:

- (i) humans (such as audible and inaudible sounds, vibrations, Shadow Flicker, Blade Glint, ice throw, component separation and/or disintegration due to major storms, etc.);
- (ii) wildlife, livestock and domestic animal populations, including migratory flyways and corridors (same concerns as with humans);
- (iii) land and vegetation (such as Agricultural effects);
- (iv) wetlands, water bodies, flowing water sources and groundwater (including aquifer impacts due to turbine foundations, etc.); and
- (v) air (such as changes in humidity).

In particular, the following shall apply with respect to the EIS:

- 1. The Applicant shall provide the location and full description of any Conservation Areas or Unique Natural Areas.
- 2. The Applicant must provide a written report from all appropriate state and federal agencies detailing their evaluation of the proposed WEF.
- 3. The Applicant must demonstrate, to the satisfaction of the Town, that the proposed WEF will not have undue hydro-geological consequences (e.g. with surface or subterranean

water resources, and storm water runoff), or adverse effects on geological stability, rare, threatened, or endangered wildlife, significant wildlife habitat, livestock, threatened or endangered plants, and rare or exemplary natural plant communities and ecosystems.

4. The Applicant must provide a cumulative-impact assessment of their WEF in the context of any other WEFs within twenty-five (25) miles, including migratory bird, bat and large mammal corridors, and demonstrate that the WEF is not located in an area that will result in degradation of important wildlife corridors or flyways.
5. Pre-construction field studies shall be conducted by the Applicant using the most advanced techniques available. If the preconstruction field studies demonstrate significant adverse effect to birds, bats, game animals, water resources, habitat fragmentation or other ecosystem degradation, the WEF Applicant shall propose a remediation plan for each such issue, subject to the Town Board's approval. If some environmental impacts cannot be satisfactorily mitigated, that will be factored into the Town Board's decision regarding the net benefits of the WEF.
6. In determining the nature and effectiveness of such remediation plans, the Town will be guided by input of its citizens, its own consultants, the appropriate state & federal agencies, and applicable state and federal laws and regulations. The WEF Applicant will be responsible for the full cost of implementing any approved remediation plan, under the supervision of the Town Board and its designated agents.
7. A computer-generated "zone of visibility map" (covering at least a ten (10) mile radius from the proposed LWEF) shall be created by the Applicant to illustrate locations from which the proposed installation may be seen, with and without foliage.
8. A visual impact assessment of each proposed WTG shall be prepared by the Applicant. A visual impact assessment shall include a computerized photographic simulation demonstrating any visual impacts from all reasonable strategic vantage points as identified or confirmed by the Town Board. The visual impact assessment shall also include (i) color photographs of the proposed Site from at least two locations accurately depicting the existing property conditions and

proposed impacts of each WTG upon visual sight and horizon conditions, and (ii) a map showing the location of each WTG in relation and keyed to the color photographs referenced in item (i) of this paragraph;

9. The Applicant shall prepare a sound pressure study and noise analysis, which at a minimum, provides verification from a qualified party, reasonably acceptable to the Town Board, and using the Noise Measurement Standards and Procedures outlined in Appendix A hereto, that the pressure and noise levels associated with each proposed WTG as well as any substation does not exceed the sound levels set forth in Section 17.A. of this 2019 Local Law as measured at various distances out to one (1) mile from each WTG and substation;
10. A study of potential Shadow Flicker and Blade Glint from each WTG shall be prepared by the Applicant. The study shall identify locations where Shadow Flicker or Blade Glint could be caused by the WTG and the expected durations of the same at these locations. Shadow Flicker and Blade Glint shall be mitigated if their impact materially affects any Residence;
11. An assessment of potential interference of each proposed WTG with microwave, radio, television, personal communication systems and other wireless communications shall be prepared by the Applicant. If reasonably determined necessary by the Town, an EMI (electromagnetic interference) study and the method and manner of mitigation of any EMI impacts shall be supplied;

12 WEF Air Space Impact:

- a. For all portions of the WEF more than 200 feet tall, the Applicant shall provide a copy of a FAA determination as a result of filing the FAA Form 7460-1, "Notice of Proposed Construction or Alteration of an Object that may Affect the Navigable Airspace.
- b. If any portion of a WEF will be located within forty (40) miles of any civilian or military airport runway, or heliport, the Applicant shall demonstrate compliance with all local County, State and Federal airport related laws.

- c. The Applicant shall establish to the satisfaction of the Town Board that the WEF will not adversely impact the restricted air space in the area.
- d. The Applicant shall provide a narrative description of all risks to civil air navigation (including civilian radar) and NEXRAD weather radar systems of the WEF.

All costs and expenses incurred related to the environmental tests for the WEF that are not paid for directly by the Applicant shall be paid from the Escrow Account. The Town shall use the Escrow Account funds to hire independent qualified experts, as needed, to do review any of the studies included in the SEQRA requirements or this 2019 Local Law to determine if the studies are adequate.

SECTION 2: APPLICATION REVIEW -

- A. Pre-Application Meeting. Applicants may request a pre-application meeting with the Town Board or with any consultants retained by the Town Board for application review. Meetings with the Town Board shall be conducted in accordance with the Open Meetings Law. Any such pre-application meeting is not a review of completeness of the application by the Town Board. It is the Applicant's responsibility to assure the completeness of any application.
- B. Escrow Agreement. As a condition to submitting an application for a WEF, the Town Board shall require the Applicant to execute an escrow agreement, reasonably acceptable to the Town Board, to establish an escrow account that will be used to cover the amount by which the Town's estimated costs and expenses of review, including, but not limited to, reasonable legal, consulting, and engineering fees, exceed (or will exceed) the application fees paid by the Applicant. The escrow agreement shall, at a minimum, include the following terms:
 1. The Applicant shall reimburse the Town for all oversight expenses incurred relating to the WEF, from application through decommissioning.
 2. Large WEF-related oversight expenses include (but are not limited to) amounts required for building permits, licensing, re-licensing, and decommissioning — e.g. administration, engineering, expert health and wildlife evaluations, handling complaints, legal, etc. "Legal" includes reasonable attorney fees for the Town if the Town

has to commence any proceeding against the Applicant. It shall also include any oversight expenses related to the transfer of any building permit or license of a WEF.

3. Any interest earned on the Escrow Account shall stay with the account and be considered new principal.
4. This Escrow Account shall be setup by the Applicant at the time of the WEF permit application. This Escrow Account will be at a financial institution approved by the Town Board, solely in the name of the Town, to be managed by the Town Supervisor. The Applicant will make an initial deposit of \$50,000. A WEF permit application will not be processed until proof of deposit has been provided by the Applicant. A WEF permit application determination will not be made until all costs incurred by the Town to date, have been reimbursed by the Applicant.
5. If the WEF application is denied, all Escrow Account funds will be returned to the Applicant, less related expenses incurred by the Town. The money will be returned, along with a statement as to these costs, within 30 days of the Application being formally denied, or receipt of a letter of withdrawal. Permit fees are non-refundable.
6. This Escrow Account will be funded during the life of the WEF by the Applicant/Operator. The Applicant/Operator will replenish any Escrow funds used by the Town within 14 days of being sent written notification (and explanation) of said withdrawals. Failure to maintain the Escrow Account at \$50,000 (within 30 days of being given notice) shall be cause for revocation (or denial of extension) of the application and/or revocation of the Wind Energy Permit. During any period in which the Escrow Account is not fully funded pursuant to this 2019 Local Law, all work by the Town Board and its agents on the project shall cease (except to the extent such failure to act would be in violation of any other laws, including SEQRA) until such Escrow Account has been brought back into compliance with this law.
7. Once the Owner believes that they have satisfactorily complied with the decommissioning conditions specified herein, they will send the Town written notification. The Town then has sixty (60)

days to verify to their satisfaction that all decommissioning conditions have been complied with. If there is material non-compliance, the Town will so notify the Owner and the process starts over. Otherwise the Town will return all Escrow Account funds to the Owner, less related expenses incurred by the Town, along with an explanatory statement.

- C. Application Submittal. The Applicant shall submit a fully completed electronic digital application for a WEF, including all related and ancillary exhibits, studies, and materials other than the required Environmental Impact Study (see Article III, Section 1.D. of this 2019 Local Law), to the Town Clerk, along with any application fees. Applications submitted for a WEF pursuant to this 2019 Local Law shall not be required to separately comply with the Town's Site Plan Review Law but are required to comply with all federal, state and local municipal building code requirements, including the issuance of any required building permits.
- D. WEF Application Completeness Review. Within ten (10) calendar days of the submission of an application for a WEF and the related fees to the Town Clerk by the Applicant, the Town Clerk shall transmit the application and related materials to the Town Board. Within ninety (90) days of the transmission of such fully completed application by the Town Clerk to the Town Board, the Town Board shall determine whether all information required under this Article is included in the application. For purposes of such determination, the Town Board may consult with third party consultants, the cost of which shall be reimbursed by the Applicant to the Town through the Escrow Account. Such a determination is not to be construed as an approval of any materials or submissions. No application shall be considered until determined to be complete. If the application is deemed incomplete, the Town Board shall provide the Applicant with a written statement listing any incomplete or missing data, forms, or other material or information. The Applicant shall have no longer than thirty (30) days to respond to such notice and to complete the application or the application shall be deemed to be terminated. Notwithstanding anything to the contrary contained herein, any application deemed to be complete that is outstanding for a period of longer than two (2) years following its initial submission shall automatically terminate.
- E. Public Hearing. Once the application has been declared complete, the Town Board shall thereafter promptly consider and review the WEF application. In addition, the Town Board shall schedule and conduct at least one public hearing upon the WEF application no earlier than thirty (30) days and no later than fifty (50) days after the date the application is determined to be complete. In addition to the types of notices required by the Town Law of the State of New York, notice of such public hearing shall be given by the

Town by registered mail to all property owners within 2 miles of the boundary of each parcel of property on which each proposed WTG or Wind Energy Facility is located at least 15 business days in advance of the public hearing. Persons entitled to notice may be determined by reference to the latest completed official County assessment roll, and any address stated in such assessment roll(s) shall be presumed to be a valid address for delivery of such notice. "Notice" shall be deemed sufficient if such notice is mailed by registered mail, postage prepaid, and deposited into the exclusive care and custody of the United States Postal Service at least fifteen (15) business days before the said Public Hearing. If any hearing is adjourned by the Town Board to hear additional comments, or for any other reason, no further publication or mailing shall be required unless required by the Town Law of the State of New York. All expenses, including postage, for such notices shall be reimbursed by the Applicant.

- F. County Planning Board Notice. The Town shall give notice of the WEF project to the Tompkins County Planning Board when required by General Municipal Law 239-l, 239-m, and 239-n.
- G. SEQRA Review. WEF permit applications shall be deemed Type I projects under SEQRA and the Town has amended its Type I Actions under SEQRA to so indicate. However, the Town reserves the right to classify a temporary Wind Measurement Tower as a Type II action pursuant to the current opinion and practice of the New York State Department of Environmental Conservation and 6 NYCRR Part 617.5 subsections (21), (24) and/or (27). Following the determination that the application is complete, the Town Board shall conduct a SEQRA review in conjunction with other agencies, in which case the records of review by such agencies shall become part of the record of the Town's proceedings. In addition to compliance with the rules and regulations of SEQRA, the SEQRA review shall comply with the requirements of Article III, Section 1.D. of this 2019 Local Law. As part of such review, the Town Board shall schedule and conduct at least one public hearing with respect to any Draft EIS as well as with respect to each Supplemental Draft EIS (if any). Notice of any such public hearing(s) shall comply with the requirements of Article III, Section 1. E. of this 2019 Local Law. This public hearing is in addition to any public hearing required in Article III, Section 2. E. of this 2019 Local Law.
- H. SEQRA Findings. If a positive declaration of environmental significance has been issued at the completion of the SEQRA review process and an EIS prepared, the Town shall issue a Statement of Findings with respect to the EIS pursuant to SEQRA.

SECTION 3: ISSUANCE OR DENIAL OF WIND ENERGY PERMITS –

- A. Upon receipt of a completed WEF application, receipt of the recommendation of the County Planning Board (where applicable), the holding of the public hearing(s), and completion of the SEQRA process, the Town Board shall, upon consideration of the standards contained in this 2019 Local Law, the record of the application and the record of the SEQRA review, issue a statement of findings and a written decision with the reasons for approval, conditional approval, or denial of the WEF application fully stated. The Town Board shall issue such determination within one hundred twenty (120) days after the last to occur of the receipt of a completed application, receipt of the recommendation of the County Planning Board (where applicable), the holding of the public hearing(s), and completion of the SEQRA process. This process of approval, conditional approval, or denial of the application is separate and apart from any approval, conditional approval or denial in the Findings Statement issued as part of the SEQRA review.
- B. The Town Board may disapprove a WEF Permit Application based on one or more of the following factors:
1. Conflict with safety and safety-related codes and requirements.
 2. The use or construction of a WEF that is contrary to an already-stated purpose of a specific zoning or land use designation or conflicts with provisions of the Town's Comprehensive Plan.
 3. The operation of a WEF would be a net economic liability to the community.
 4. The operation of a WEF would create unacceptable health, welfare or safety risks to members of the public.
 5. The placement and operation of a WEF that would create an unacceptable risk to wildlife and/or regional ecosystems.
 6. The placement and location of a WEF would result in a conflict with, or compromise, or significantly change, the nature or character of the surrounding area.
 7. The operation of a WEF would create unacceptable interference with any type of civilian or military radar systems.
- C. Due to the unusually broad array of findings, the Town shall adopt the Precautionary Principle as its standard in making any and all determinations under this 2019 Local Law (i.e., the Town shall be particularly conservative and cautionary in its regulation of industrial development).
- D. Approval of any Wind Energy Permit for a WEF hereunder shall be conditioned upon, among other things, ongoing compliance with the landscaping plan, lighting plan, stand down plan, decommissioning plan, fire protection plan, maintenance plan, construction plan, noise monitoring plan, and environmental monitoring plan submitted as part of

the final WEF application as well as the terms of any escrow agreement, road use and property damage agreement or any other agreements entered into in connection with the WEF. Failure to maintain such compliance during the operation of the WEF shall subject the WEF and its Operator and/or Landowner to all of the remedies set forth in Article VI of this 2019 Local Law.

- E. The approval of the Town Board shall be valid for a period of two (2) years. Prior to the expiration of such approval, the Applicant or the Operator of such WEF may submit no more than one (1) approval extension application for up to an additional (1) year. Such approval extension application shall be accompanied by a second application fee as well as a letter explaining the reasons that would justify such an approval extension. Approval of any such extension shall be in the sole discretion of the Town Board.
- F. If approved, the Town Board will direct the Town Clerk to issue a Wind Energy Permit for the WEF upon satisfaction of all conditions for said Permit, and will further direct the building inspector to issue a building permit upon demonstrated compliance with the Uniform Fire Prevention and Building Code, the applicable energy codes, other applicable codes, and other pre-construction conditions of this 2019 Local Law. The decision of the Town Board shall be promptly filed in the Office of the Town Clerk and a copy shall be promptly mailed by the Town Clerk to the Applicant by first class mail.

SECTION 4: APPROVAL LIMITATIONS; EASEMENTS AFFECTING TOWN PROPERTY -

- A. Wind Flow. Nothing in this 2019 Local Law shall be deemed to give an Applicant the right to cut down surrounding trees and vegetation on any property to reduce turbulence and increase wind flow to the Wind Energy Facility. Nothing in this 2019 Local Law shall be deemed a guarantee against any future construction, or Town approvals of future construction, that may in any way impact the wind flow to any Wind Energy Facility. It shall be the sole responsibility of the Applicant or Operator to acquire any necessary wind flow or turbulence easements or related rights to remove vegetation.
- B. Easements on Town Property. Pursuant to the powers granted to the Town to manage its own property, the Town may, in compliance with applicable law, enter into noise, setback, or wind flow easements on such terms as the Town Board deems appropriate.

ARTICLE IV - STANDARDS FOR WIND ENERGY FACILITIES

SECTION 1: TRANSMISSION LINES. Wherever possible, power transmission lines from any Large WTG to any building or other structure shall be buried at least 36 inches underground using the “double-trench” method.

SECTION 2: ANTENNAE CO-LOCATIONS. No television, radio, or other communications antennae may be affixed or otherwise made part of any Large WTG, unless a Variance or Waiver is granted under and pursuant to this 2019 Local Law.

SECTION 3: ADVERTISING. No paid advertising signs are allowed on any part of the Wind Energy Facility, including fencing and support structures.

SECTION 4: WTG LIGHTING. No Large WTG shall be lit except to comply with minimal FAA regulations or where required by the permit for safety reasons.

SECTION 5: VISUAL IMPACT MITIGATION. Applicants shall use measures to reduce the visual impact of Large WTG to the extent possible, including, at a minimum, the following: (i) Large WTG shall use tubular towers or other certified structures; (ii) Large WTG shall be finished in a single, non-reflective matte finish color; (iii) Large WTGs within a multiple WTG project shall be constructed using WTGs whose appearance with respect to one another is similar within and throughout the project so as to provide reasonable uniformity in overall size, geometry, and rotational speeds; and (iv) Large WTGs shall be designed and constructed to operate with curtailment technology that avoids exposure to shadow flicker at any Sensitive Receptor.

SECTION 6: GUY WIRES. The use of guy wires for Large WTG is disfavored. A Large WTG using guy wires for tower support shall incorporate appropriate measures to mark and protect the guy wires and any Person from injury or damage.

SECTION 7: SIGNAL INTERFERENCE. No Large WTG shall be installed in any location where its operation is likely to interfere with microwave, radio, television, personal communication systems, medical devices and other wireless communications unless adequate mitigations are in place and approved by the Town Board.

SECTION 8: WASTE REMOVAL. Solid waste, hazardous waste and construction debris shall be removed from the Site and managed in a manner consistent with all appropriate laws, rules and regulations, including, but not limited to all environmental laws, rules, regulations and orders.

SECTION 9: CLEARING. Wind Energy Facilities shall be designed to minimize erosion, sedimentation and stormwater impacts of soil disturbances, land clearing and the project. Land protected by conservation easements shall be avoided when feasible.

The use of previously developed areas will be given priority wherever possible.

SECTION 10: WILDLIFE. Wind Energy Facilities shall be located in a manner that minimizes significant negative impacts, if any, upon rare animal species in the vicinity, particularly bird and bat species.

SECTION 11: WETLANDS. Wind Energy Facilities shall be located in a manner consistent with all applicable state and federal wetlands laws and regulations and any issued wetland permits.

SECTION 12: STORMWATER. Stormwater run-off and erosion controls shall be managed in a manner consistent with all applicable local, state and federal laws and regulations.

SECTION 13: CONSTRUCTION TIMES. Construction of the Wind Energy Facilities shall be limited to the hours of 7 a.m. to 7 p.m., except for certain activities that (i) require otherwise due to temperature or other engineering circumstances, and (ii) are so approved by the Town Board.

SECTION 14: WATER SUPPLY. Construction of Wind Energy Facilities shall be managed in a manner that minimizes the impact upon aquifers and private and public water supplies and to comply with any water protection plans which may be adopted by the Town.

SECTION 15: REQUIRED SAFETY MEASURES. The following safety measures shall be complied with:

- A. Controls. Each Large WTG shall be equipped with both manual and automatic controls to limit the rotational speed of the rotor blade so it does not exceed the design limits of the rotor;
- B. Minimum Blade Height. The minimum distance between the ground and any part of rotor or blade system shall be twenty (20) feet.
- C. Signs. Appropriate warning signs shall be posted. At least one sign shall be posted at the base of the tower warning of electrical shock or high voltage. The Town may require additional signage;
- D. Climbing Pegs. No climbing pegs or tower ladders shall be located within twelve (12) feet of ground level, as measured from the base of the structure;
- E. Access Control. Large WTGs shall be designed to prevent unauthorized access to electrical and mechanical components and shall have access doors that are kept securely locked at all times.

SECTION 16: ROADS AND TRAFFIC. The following traffic and road

requirements shall be complied with:

- A. Traffic Routes. Construction and delivery vehicles for Large WTG and Wind Energy Facilities shall only use traffic routes established as part of the application review process. Factors in establishing such corridors shall include:
 - 1. Minimizing traffic impacts from construction and delivery vehicles;
 - 2. Minimizing WTG traffic during times of school bus activity;
 - 3. Minimizing wear and tear on local roads;
 - 4. Minimizing impacts on local business operations.
- B. Traffic Controls. Wind Energy Permit conditions shall require the Applicant to provide a written plan for disseminating traffic route information to the public.
- C. Road and Construction Damage Remediation. The Applicant shall be responsible for the remediation and repair of damaged real or personal property, public or private, as well as Town roads and highways damaged during the construction or decommissioning of a WEF. A public improvement bond, or other security as determined by the Town Board, shall be posted prior to the issuance of any building permit in an amount, as determined by the Town Board, sufficient to compensate the Town for any estimated loss or expense and to effect repair and remediation of Town property, roads and highways, and their related appurtenances.

SECTION 17: SOUND LEVELS AND LARGE WTG SETBACKS. Subject to the provisions of Article IV, Section 18. below, the following shall apply to each Large WTG or Wind Energy Facility:

- A. Sound Levels. The Sound Pressure Level generated by a WTG or Wind Energy Facility, as measured at any point on or beyond the of the boundary of each parcel of property on which each proposed WTG or Wind Energy Facility is located shall not exceed:
 - 1. 40 dBA Fast Lmax between 9 AM and 9 PM;
 - 2. 35 dBA Fast Lmax between 9 PM and 9AM;
 - 3. 50 dBC Fast Lmax between 9 AM and 9 PM; and
 - 4. 45 dBC Fast Lmax between 9 PM and 9AM.

Noise measurement standards and procedures that must be used are contained in Appendix A.

- B. Setbacks. Each Large WTG shall be located with the following minimum setbacks, as measured from the center of the WTG:
1. Residences, Property Line, and Unique Natural Areas. Two thousand six hundred forty (2,640) feet or five and one-half (5.5) times the Total Height of the WTG, whichever is greater, from any Residences, property lines, and Unique Natural Areas;
 2. Driveways and Roads. Two (2) times the Total Height of the WTG from public, and seasonal and limited use roadways;
 3. WTG. Four hundred fifty (450) feet or 1.1 times the Total Height of the WTG as measured horizontally from the center-point of the proposed WTG to the center-point of any existing WTG, whichever is greater;
 4. Wetlands, Public Utilities. Two (2) times the Total Height of the WTG from mapped or jurisdictional wetlands, except where wetlands fill or construction permits have been issued by the DEC or ACE, as applicable or any public utilities;
 5. Streams. One hundred (100) feet from the edge of perennial streams and fifty (50) feet from the centerline of intermittent streams;
 6. Disclosure of WEF parcels. To properly determine setbacks under this Article IV, each Applicant for a WEF must provide information on parcel location, ownership, and project components proposed for siting on all parcels necessary for the project, including fully executed copies of all pages of any leases, easements and any other related agreements for the WEF (not simply memorandums).
- C. Substation. Any substation shall be located a minimum of two hundred (200) feet from any Residences or property lines.
- D. Infrastructure, Electrical Lines, Access Roads and Accessory Structures. Any related infrastructure, electrical lines, access roads and/or accessory structures of a Wind Energy Facility shall be located a minimum of two hundred (200) feet from any Residences or property lines.
- E. Height Restriction. No WTG shall exceed a Total Height of 500 feet.

SECTION 18: PROJECT MANAGEMENT AND OVERSIGHT

- A. Upon approval by the Town Board of a Wind Energy Permit application, and as a condition to the issuance of a Wind Energy Permit, the applicant shall designate a field representative and site manager who will be responsible for overseeing compliance with the conditions of the Wind Energy Permit. Such representative and site manager shall be in place for as long as the WEF is in place and will interact directly with the Town Board, the project monitor hired by the Town and the designated engineering firm representative. This person will have the authority to make management and technical decisions as situations demand. The Applicant and/or Operator shall provide and update, at all times, the names, addresses, daytime telephone numbers and emergency telephone numbers of field representative and site manager to the Town Board. The applicant shall also provide contact information for all entities providing operation, maintenance and monitoring services.
- B. The Town Board will make the telephone numbers of the field representative or site manager available to local residents and officials upon request
- C. As a condition to the issuance of a Wind Energy Permit, the services of an independent engineering firm and an independent full-time on-site monitor shall be retained by the Town during the construction phase of the WEF project. The Applicant/Operator shall assume all costs associated with the hiring and managing of these two positions who will report directly to the Town Board.
- D. The engineering firm shall have prior experience in commercial wind development, construction, and operation. Documentation and references will be required.
- E. The engineering firm will oversee all aspects of construction and will be included in all design, construction, and planning meetings. Both the engineering firm and the Town Board shall be provided with all technical information, specification and drawings. A representative of the engineering firm shall be on-site at all times during the construction phase.
- F. The engineering firm duties shall include code enforcement and project specification compliance and they will be responsible for confirming that all project specifications are implemented. The firm's representative and the independent monitor will have the authority to issue a "stop work order" for issues including but not limited to: (a) safety, (b) developer compliance issues, and (c) insufficient project documentation.

- G. The applicant shall file daily, weekly and monthly construction plans and will follow the planned work schedule as much as possible. When daily, weekly, or monthly schedules are not completed as planned, updated schedules shall be developed and given to the Town Board monitor and the engineering firm representative.
- H. Any design changes during construction must be pre-approved by the engineering firm and the Town Board. The Applicant/Operator shall provide the Town Board and the engineering firm representative with "As Built" Drawings within (1) one week of completion of each portion of the construction phase or as requested by the Town Board monitor or engineering firm representative.
- I. All up-grades or changes to the WEF project, as permitted, shall be reviewed and approved by the engineering firm and the Town Board monitor prior to the implementation of such upgrades or changes.

SECTION 19: PROPERTY VALUE GUARANTEE. An Applicant or Operator must offer a property value guarantee to any property owner who requests one pursuant to the standards provided in Appendix B.

SECTION 20: TRANSFER OF OWNERSHIP. The transfer of any WEF to an entity other than the Applicant to whom such permit was issued shall require approval of the Town Board, upon a demonstration that the transferee (i) is able to fully comply with this 2019 Local Law, (ii) has the financial ability to own and operate the WEF, (iii) has the experience necessary to own and operate the WEF, (iv) has accepted, in writing, all obligations imposed under any permit (including a Wind Energy Permit), Variance, Waiver, this 2019 Local Law, any Developer's Agreement, or any other applicable contract or agreement, and (v) is otherwise fit to hold and comply with all required permits. Prior to any transfer of project ownership, the Applicant and/or Operator shall provide the Town Board with the following: (1) a description of the business background and experience of the proposed transferee, (2) a draft copy of the proposed instrument by which the Applicant or Operator proposes to effectuate the transfer, (3) a current financial statement for the proposed transferee, and (4) a record of any non-compliance with any permit by the transferee or its affiliates, including its parent and corporate siblings during the 10 years prior to application to transfer or any notice of intent to transfer ownership. Within sixty (60) days after receiving this information, the Town Board shall notify the Applicant or Operator of its determination. Upon approval of the transfer, the Applicant or Operator shall provide the Town Board with a copy of the executed instrument effectuating the transfer. Should the Town Board withhold its consent, it must state in writing the specific reasons for its determination. Any costs related to the Town Board's review of such transfer shall be paid for by the transferor Applicant or Operator

ARTICLE V - WAIVERS, VARIANCES, AND APPEALS

SECTION 1: **WAIVERS** - Where the Town Board finds that, due to the special circumstances of a particular case, a waiver of certain requirements is justified a Waiver may be granted upon the following terms and conditions:

- A. The Town Board calls and conducts a public hearing upon such Waiver request, whereas the impact of the Waiver on the neighborhood, the potential detriment to nearby properties, the benefit to the Applicant, feasible alternatives, and the scope of the Waiver request shall be duly considered;
- B. The Town Board may attach such conditions as it deems appropriate to any Waiver approvals to minimize the impact of the Waiver, including conditions precedent to the effectiveness or validity of the Waiver;
- C. In all cases, no Waiver shall be granted unless the Town Board finds and records in its minutes that: (1) granting the Waiver would be keeping with the intent and spirit of this 2019 Local Law and is in the best interests of the community; (2) there is no adverse effect upon the welfare of the neighborhood; (3) there are special circumstances involved in the particular case; (4) denying the Waiver would result in undue hardship to the Applicant or Operator, provided that such hardship has not been self-imposed; and (5) the Waiver is necessary or required due to any rational factor, including, but not limited to, limitations due to topography, the state of scientific knowledge or the limits of material sciences, or the nature of the Site.
- D. The Town Board may revoke any Waiver for reasonable cause should the Applicant or Operator fail to comply with any non-waived provision of this 2019 Local Law or fail to comply with the terms and conditions stated in any granted Waiver.

SECTION 2: **VARIANCES** - Where the Town Board finds that, due to the special circumstances of a particular case, a Variance or modification of certain requirements is justified, such Variance may be granted upon the following terms and conditions:

- A. The Town Board finds and the Town Clerk records in the minutes that: (1) granting the Variance would be keeping with the intent and spirit of this 2019 Local Law, and is in the best interests of the community; (2) there is no adverse effect upon the welfare of the neighborhood; (3) there are special circumstances involved in the particular case; (4) denying the Variance would result in undue hardship to the Applicant or Operator, provided that such hardship has not been self-imposed; and (5) the Variance is the

minimum necessary degree of variation from the requirements of this 2019 Local Law.

- B. The Town Board may attach such conditions as it deems appropriate to Variance approvals to minimize the impact of the Variance, including conditions precedent to the effectiveness or validity of the Variance;
- C. The Town Board may revoke any Variance for reasonable cause should the Applicant or Operator fail to comply with any non-waived provision of this 2019 Local Law or fail to comply with the terms and conditions stated in any granted Variance. If the Applicant or Operator believes the revocation was improper an administrative appeal may be filed in accord with this 2019 Local Law.

SECTION 3: APPEALS - Any Person(s) aggrieved by the failure to issue or renew any variance, Waiver, or permit, by any determination, interpretation, or decision of the Town, the Town Board, or the Enforcement Officer, including by any conditions attached to any permit, Variance or Waiver, or the revocation or suspension of any permit Variance or Waiver, shall have a right to appeal such matter pursuant to a court proceeding under Article 78 of New York's Civil Practice Law and Rules.

ARTICLE VI - OPERATION, PERMIT REVOCATION, ABATEMENT, VIOLATIONS

SECTION 1: OPERATION, PERMIT REVOCATION, AND ABATEMENT -

- A. Operation. Each Large WTG and each Wind Energy Facility shall be maintained in operational condition at all times, subject to reasonable maintenance and repair outages. Operational condition includes meeting all noise requirements and other permit conditions.
- B. Violations of Permit Conditions or 2019 Local Law. Should the operation of any Large WTG or Wind Energy Facility, or any Applicant or Operator, violate any Wind Energy Permit condition(s) or any requirements of this 2019 Local Law, the Applicant or Operator shall remedy each such violation or situation of non-compliance described below in paragraph C.4. of the Complaint Resolution Process in the manner described below or, with respect to any other violation or situation of non-compliance, within ninety (90) days after the delivery of written notice from the Town Board, unless, for good cause shown, the Town Board grants an extension to such 90-day compliance period. The Town Board may grant or deny any request for an extension in its own and sole discretion, without recourse, and for any or no reason.
- C. Complaint Resolution Process.

1. Any property owner or resident within the Town of Enfield may register a complaint with the Enforcement Officer that a Wind Energy Facility is being operated in violation of the Wind Energy Permit or otherwise in violation of the criteria set forth in this 2019 Local Law. Such complaints may include, but will not be limited to: noise, flicker or shadow effect, change in water quantity or quality, loss of or diminished telephone, television, or radio reception, interference with a medical device, or the new presence of radon gas. The Enforcement Officer shall inform the Town Board of such complaint within three (3) business days and the Town Board shall investigate (or cause to be investigated) the complaint in accordance with this Article VI and, where necessary, may engage the services of an expert to assist in such investigation. The cost for such expert services shall be paid from the Escrow Account. In the event that the Town Board determines that the complaint is valid, and that the Wind Energy Facility is being operated in violation of its Wind Energy Permit or otherwise in violation of the criteria as set forth in this 2019 Local Law, the Town Board shall issue written notice to remedy such violation to the Applicant and/or Operator of the Wind Energy Facility, which notice shall specify the actions required to be taken by the Applicant/Operator of the Wind Energy Facility in order to cure the violation, and the time period within such action must be taken.
2. In the event that the Applicant/Operator of the Wind Energy Facility fails to comply with such notice to remedy, the Enforcement Officer shall report such failure to the Town Board with a recommendation that the Town Board proceed with the enforcement provisions contained in Articles VI and IX of this 2019 Local Law.
3. If the Town Board determines that the Wind Energy Facility is not being operated in violation of the Wind Energy Permit or otherwise in violation of the criteria set forth in this 2019 Local Law, the Town Board shall set forth its findings which shall be filed with the Town Clerk and forwarded by registered mail to the complaining party. The complaining party shall have a right to challenge such determination in a proceeding commenced pursuant to the provisions of Article 78 of New York's Civil Practice Law and Rules.
4. The following criteria/process for WEFs shall apply to the specific areas of complaints as identified below, and where the complaint falls outside of the specific areas outlined in this paragraph C.4., the general provisions in this Article VI shall apply:
 - (a) Shadow flicker: Upon the receipt of a written complaint of disturbance due to shadow flicker filed by a resident together with a video thereof identifying the particular

Large WTG(s) by number within the Wind Energy Facility, or other comparable corroborating evidence, the Town Board shall notify the Applicant/Operator of the Wind Energy Facility that such complaint has been received, and that the Town Board shall meet at a date and time certain, in a public hearing, to review the complaint. The Applicant/Operator of the WEF may present evidence to the Town Board to contradict the evidence presented by the complaining party. The Town Board shall hold a public hearing at the date and time stated in the notice to review the complaint and the evidence provided therewith, together with any evidence provided by the Applicant/Operator of the WEF, and shall make a determination as to the validity of the complaint. In the event the Town Board determines that the complaint is valid, it will notify the Applicant/Operator of the WEF and order that the disturbance be mitigated within 48 hours. Mitigation may be accomplished by ceasing operation of the identified WTG during flicker hours or in another manner acceptable to the Town Board as proposed by the Applicant/Operator of the Facility. In the event that the Applicant/Operator of the Facility fails to provide the required mitigation as indicated in the order issued by the Town Board, the Enforcement Officer shall render a written report to the Town Board, which shall also be filed with the Town Clerk, with the recommendation that the Town Board commence enforcement proceedings pursuant to Article IX of this 2019 Local Law.

- (b) Setbacks: Upon receipt of a written complaint filed by a resident that a setback requirement for a WEF or any component of a WEF imposed under the provisions of this 2019 Local Law, or specified in the Wind Energy Permit has been violated, the Town Board shall investigate such complaint (or cause such complaint to be investigated) and shall meet, in a public hearing, to review the results of such investigation. In the event a setback violation is confirmed, the Town Board shall notify the Applicant/Operator of the WEF in writing by personal service or registered mail of such violation. The notification shall include an order to remedy which shall set forth the particular method by which such violation may be cured and the time period within which the same shall be completed. Failure to comply with the notice to remedy may result in enforcement pursuant to

Article IX of this 2019 Local Law, which may include, but is not limited to, the revocation of the Wind Energy Permit.

- (c) Noise/sleep interference: Upon receipt of a written complaint filed by a resident that a noise disturbance related to a WEF in violation of the provisions of this 2109 Local Law and/or the Wind Energy Permit issued thereunder is occurring, together with a documented noise log of the specific Large WTG alleged to be in violation, the Town Board shall conduct an investigation and may, in its discretion, retain an independent acoustic investigator to investigate the complaint. The fees for such services shall be paid from the Escrow Account. The Town Board shall prepare a written acoustical investigation report, which shall include the results of any third party reports provided to the Town Board as part of the investigation. Copies of the acoustical investigation report shall be supplied to the complaining party, the Applicant/Operator of the WEF, and the Town Board. The Town Board shall meet, in a public hearing, to review the results of the written acoustical investigation report, and in the event that the investigation confirms a violation of the noise requirements, the Town Board shall issue an notice which shall require the WTG causing the noise violation to be shut down until such WTG can be brought into compliance with the provisions of this 2019 Local Law and/or the Wind Energy Permit. Failure to comply with the notice to remedy may result in enforcement pursuant to Article IX of this 2019 Local Law, which may include, but is not limited to, the revocation of the Wind Energy Permit.
- (d) Electromagnetic-stray voltage: Upon receipt of a written complaint from a resident of electromagnetic interference or stray voltage by a WEF, the Town Board shall conduct an investigation and may, in its discretion, retain the services of an electrical engineer to conduct a stray voltage or electromagnetic interference investigation with the cost of such services to be paid from the Escrow Account. The Town Board shall prepare a written investigation report, which shall include the results of any third party reports provided to the Town Board as part of the investigation. Copies of the investigation report shall be supplied to the complaining party, the Applicant/Operator of the WEF, and the Town Board. The Town Board shall meet, in a public hearing, to

review the results of the written investigation report and, in the event that the complaint is determined to be valid, the Town Board shall issue a notice to the Applicant/Operator of the WEF to cure the violation within a period of one (1) week from the date of such notice. Failure to comply with the notice to remedy may result in enforcement pursuant to Article IX of this 2019 Local Law, which may include, but is not limited to, the revocation of the Wind Energy Permit.

- (e) Contamination of aquifers, ground water, or wells: Upon receipt of a complaint, written or oral, from a resident that an aquifer, ground water, or well water has been disturbed by the Wind Energy Facility, the Town Board shall immediately notify the Applicant/Operator of the WEF that such complaint has been received, and the Applicant/Operator shall have seventy two (72) hours from receipt of such notice to determine whether the complaint is due to development impact from the WEF. If such determination cannot as a practical matter be provided within 72 hours, the Applicant/Owner must provide an alternative source of potable water to the complaining resident until the determination is provided. Provision of an alternative source of water shall continue until such time as the Town Board establishes that the WEF has not caused contamination. If the Applicant/Operator of the WEF determines that the disturbance is not related to the development and notifies the Town Board thereof, the Town Board may undertake its own investigation and may, in its discretion, engage the services of a professional engineer to conduct appropriate and necessary tests and to render a report as to the causation of the disturbance. The expense for such services shall be paid from the Escrow Account. If the Town Board's investigation establishes that the WEF development is the cause of such impact, the Town Board may order the Applicant/Operator of the WEF to provide potable water to the affected residents and to file with the Town Board an action report of the proposed resolution of the disturbance. In the event of verification of toxic contamination to a well, ground water or aquifer, the Applicant/Operator of the WEF and/or the Town Board shall notify the DEC. In the event the incident falls under the jurisdiction of the DEC, the Town shall defer to the DEC for remediation/action in connection therewith. In the event the

incident is not within the jurisdiction of the DEC, but disturbance or contamination is found, the Applicant/Operator of the WEF shall have five (5) days from receipt of such findings to correct the disturbance/contamination in a manner satisfactory to the Town Board. Failure to comply with an order of the Town Board issued hereunder shall subject the Applicant/Operator of the Facility to the enforcement pursuant to Article IX of this 2019 Local Law, which may include, but is not limited to, the revocation of the Wind Energy Permit.

- D. Hearing. If the violation(s) and/or incidents of non-compliance (other than those outlined in Article VI, Section 1.C.4. above) related to a WEF, are not cured within such 90-day period and no extension to such 90-day period has been granted, the Town Board may, after a public meeting at which the Applicant or Operator shall be given opportunity to be heard and present evidence and/or a plan to come into compliance: (i) order remedial action within a particular time frame, or (ii) order revocation of the Wind Energy Permit and require the removal and decommissioning and of the WEF and/or Large WTG and restoration of the Site within ninety (90) days. If the ordered removal, decommissioning and restoration are not completed within said ninety (90) days, the Town shall have the right to remove the WEF and/or Large WTG at the Applicant's or Operator's expense, and the Town may use any security posted as part of the Decommissioning Fund to pay the costs and expenses of such removal, decommissioning and restoration, or undertake any other action permitted by this 2019 Local Law.
- E. Inoperative WTG. If any Large WTG or Wind Energy Facility remains non-functional or inoperative for any continuous period of twelve (12) months the said WTG or Wind Energy Facility shall be removed, decommissioned, and the Site restored. This requirement may be suspended for one or more consecutive 6 month periods, but not to exceed eighteen (18) months, if either (i) the Operator or Applicant demonstrates to the Town Board that it has been making good faith efforts to restore the Large WTG or the Wind Energy Facility to an operable condition, but despite such good faith efforts, whether due to a shortage of materials, labor, Acts of God, moratorium or prohibition, or other cause outside the reasonable control of the Operator or Applicant, such restoration to operable condition is not possible and/or feasible, or (ii) the Town issues a remedial action plan, which plan shall recommend to the Operator or Applicant the means, manners, and timeframes in or by which the Large WTG or Wind Energy Facility shall be brought into compliance with this 2019 Local Law and placed into operable condition. The lack of function or operation of any Large WTG or Wind Energy Facility may be

conclusively proven by reference to reports to or from the Public Service Commission, NYSERDA, a New York Independent System Operator, or by the lack of income and/or electrical power generation. Upon request of the Town or the Enforcement Officer, the operator or Applicant shall make available to the Town Board all reports to and from the purchaser(s) of energy from any individual Large WTG necessary to prove the WTG is functioning, which reports may be redacted as necessary to protect any proprietary information.

- F. Removal and Remediation. Large WTG and Wind Energy Facility removal shall comply with the provisions of Section 2.D. of this Article VI outlined below.

SECTION 2: ABANDONMENT AND DECOMMISSIONING -

A. Applicability and purpose. This section governing abandonment and decommissioning shall apply to all WEFs. It is the purpose of this section to provide for the safety, health, protection and general welfare of persons and property in the Town of Enfield, by the Town requiring abandoned Large WEFs to be removed pursuant to a decommissioning plan. Abandoned commercial systems may become unsafe by reason of their energy-producing capabilities, serve as an attractive nuisance and/or may create an environmental hazard.

B. Abandonment. A Large WTG or WEF shall be deemed abandoned if the WTG or WEF system fails to generate and transmit electricity over a continuous period of one year at a rate of at least 25% of its projected production based on the application approved by the Town Board for the project. A WEF also shall be deemed abandoned if following WEF Permit issuance construction of the system is not completed within 18 months of issuance of the first building permit for the project.

1. Extension of time. The time at which a Large WTG or WEF shall be deemed abandoned may be extended by the Town Board for an additional period of up to one year, provided the system owner presents to the Town Board a viable plan, reasonably acceptable to the Town Board, outlining the steps and schedules for placing the WTG or WEF system in service or back in service within the time period of the extension. An application for an extension of time shall be made to the Town Board by the Applicant and/or Operator prior to abandonment as defined herein. Extenuating circumstances as to why the Large WTG or WEF has not been operating or

why construction has not been completed may be considered by the Town Board in determining whether to grant an extension.

C. Removal required. A Large WTG or WEF which has been abandoned shall be decommissioned and removed. The Applicant/Operator and/or Landowner(s) of the land upon which the Large WTG or WEF system is located shall be held responsible to physically remove all components of the Large WTG or WEF system within one year of abandonment. Removal of the Large WTG or WEF shall be in accordance with a decommissioning plan approved by the Town Board.

D. Decommissioning and Removal.

1. Decommissioning and removal of a Large WTG and/or WEF shall consist of:

(a) Physical removal of all above ground equipment and structures and removal of all below ground equipment, buried wires, conduits and foundations to a depth of three (3) feet below grade, including but not limited to all infrastructure, substations, accessory buildings, security barriers, fences, electric transmission lines and components, roadways and other physical improvements to the site related to the Large WEF;

(b) Disposal of all solid and hazardous waste in accordance with local, state and federal waste disposal regulations;

(c) Restoration of the ground surface and soil;

(d) Stabilization and revegetation of the site with native seed mixes and/or plant species (excluding invasive species) to minimize erosion.

2. Upon petition to the Town Board, the Town Board shall permit the Operator and/or Landowner to leave certain underground or above

ground improvements in place, provided such abandonment in place is not detrimental to redevelopment of the site, and does not adversely affect community character or the environment.

E. Wind Energy Permit Decommission conditions. The following conditions shall apply to all Wind Energy Permits issued for a WEF. No Wind Energy Permit for a WEF shall be issued unless the Town Board finds that the conditions have been or will be met.

1. Decommissioning plan. All applications for a WEF shall be accompanied by a decommissioning plan to be implemented upon abandonment and/or in conjunction with removal of the system. The decommissioning plan shall address those items listed in the above section and include:

(a) An estimate of the anticipated operational life of the system;

(b) Identification of the party responsible for decommissioning;

(c) Description of any agreement with the Landowner regarding decommissioning;

(d) A schedule showing the time frame over which decommissioning will occur and for completion of site restoration work;

(e) A certified and sealed cost estimate prepared by a qualified structural engineer or professional engineer, who shall be reasonably acceptable to the Town Board, estimating the full cost of decommissioning and removal of the WEF, including, but not limited to, the cost of solid waste disposal and the cost to clean-up any hazardous waste leakage on the property. For purposes of calculating such estimate, the decommissioning and removal cost for each Large WTG shall

be the greater of One Hundred Twenty-Five Thousand Dollars (\$125,000) or the amount determined pursuant to such certified and sealed cost estimate. The Town Board shall have the sole discretion to require a structural engineer or a professional engineer and regardless of which type of engineer is chosen, such engineer shall be licensed by the State of New York. The Town Board shall have the right, in its sole discretion, to have this estimate reviewed by an independent structural engineer at the Operator's expense. No salvage value shall be taken into account in determining the decommissioning and removal costs;

(f) A financial plan to ensure that financial resources will be available to fully decommission the site.

i. Financial surety. Prior to the issuance of a building permit and every two years thereafter, the Applicant and/or Operator of a WEF shall provide an irrevocable letter of credit or cash security held by the Town Board in the amount of one hundred twenty five percent (125%) of the full cost of decommissioning and removal of the WEF, which amount shall automatically be increased by two percent (2%) the following year, in the event the system is not removed by the WEF Operator and/or Landowner. Evidence of financial security shall be in effect throughout the life of the system and shall be, in the sole discretion of the Town Board, either in the form of an irrevocable letter of credit or cash security acceptable to the Town Board. The irrevocable letter of credit shall include an auto extension provision if possible, to be issued by an A-rated institution solely for the benefit of the Town and for the benefit of the Landowner if the land is leased to the operator of the system. The Town shall be entitled to draw on the letter of credit or cash security in the event that the Operator and/or Landowner is unable or unwilling to commence decommissioning activities within the time periods specified herein. In the event a demand for decommissioning is made by the Town to a Landowner that leases his or her property to the Operator of the WEF, such Landowner may also be entitled to draw on such letter of credit if the Operator of such WEF is unable or unwilling to commence decommissioning activities within

the time periods specified herein. No other parties, including the Operator shall have the ability to demand payment under the letter of credit. Upon completion of decommissioning, the Operator and/or Landowner may petition the Town to terminate the letter of credit or cash security. In the event ownership of the WEF is transferred to another party, the new owner (transferee) shall file evidence of financial security with the Town at the time of transfer, and every two years thereafter, as provided herein. Failure to keep a surety in place as required by this law shall result in the revocation of the Wind Energy Permit and the termination of the project unless and until such surety is restored; provided, however, that any lapse of a surety in excess of 180 days shall be deemed an abandonment of the project pursuant to Section 2.F. herein and subject to complete decommissioning in accordance with this 2019 Local Law.

- ii. Amount. The amount of the surety shall be determined by the Town Board based upon a current estimate of decommissioning and removal costs as provided in the decommissioning plan and subsequent bi-annual reports required pursuant to paragraph iii. below. For purposes of this determination, the bi-annual decommissioning report shall be required to meet the same requirements set forth in Article VI Section 2.E.1.e. as the original decommissioning cost estimate. The amount of the surety shall be adjusted by the Town Board as appropriate upon receipt of a bi-annual report containing an updated cost estimate for decommissioning and removal.
- iii. Annual report. The WEF Operator shall, on a yearly basis, provide the Town Clerk a report showing the rated capacity of the system and the amount of electricity that was generated by the system and transmitted to the grid over the most recent twelve-month period compared to the amount of energy that was projected to be generated in the application approved by the Town Board. The Town Clerk shall forward such report to the Town Board and the Enforcement Officer within 5 business days of receipt of the report. The report shall also identify any change in ownership of the WEF and/or the land upon which the

system is located and shall identify any change in the party responsible for decommissioning and removal of the system upon its abandonment. The annual report shall be submitted no later than 45 calendar days after the end of the calendar year. Every second year, to coincide with the filing of evidence of financial security, such report shall also include a recalculation of the estimated full cost of decommissioning and removal of the WEF in accordance with the provisions of this Section 7. The Town shall require an adjustment, as appropriate, in the amount of the surety to reflect any changes in the estimated cost of decommissioning and removal; provided, however, that the cost to decommission and remove the Large WTGs shall not be less than One Hundred Twenty Five Thousand Dollars (\$125,000) per Large WTG. Failure to submit a report as required herein shall be considered a violation of Section 2 of this 2019 Local Law.

F. Decommissioning and removal by Town. If the WEF Operator and/or Landowner fails to decommission and remove an abandoned Large WTG or WEF in accordance with the requirements of this section, the Town may enter upon the property to decommission and remove the system.

1. Procedure

- (a) Upon a determination by the Town Board that a Large WTG or WEF has been abandoned, the Enforcement Officer shall notify the Operator and Landowner by certified mail: (a) in the case of a facility under construction, to complete construction and installation of the facility within 180 calendar days; or (b) in the case of a fully constructed WEF that is operating at a rate of less than 25% of its projected production level as outlined in the application approved by the Town Board, to restore operation of the facility to no less than 80% of rated capacity within 180 calendar days, or the Town Board will deem the system abandoned and commence action to revoke the Wind Energy Permit and require removal of the system.

(b) Being so notified, if the WEF Operator and/or Landowner fails to perform as directed by the Enforcement Officer within the 180 day period, the Enforcement Officer shall notify the WEF Operator and Landowner, by certified mail, that the Large WTG or WEF has been deemed abandoned and the Town intends to revoke the Wind Energy Permit for such Large WTG or WEF, as the case may be, within sixty (60) calendar days of mailing said notice. The notice shall also state that the Applicant and/or Operator is entitled to appeal the determination pursuant to Article 78 of the New York Civil Practice Laws and Rules.

(c) Upon a determination by the Town Board that a Wind Energy Permit has been revoked, the decommissioning plan must be implemented and the Large WTG or WEF removed within one year of having been deemed abandoned or the Town may cause the removal at the Operator's and/or Landowner's expense. If the Operator and/or Landowner fails to fully implement the decommissioning plan within one year of abandonment, the Town may collect the required surety and use said funds to implement the decommissioning plan.

(d) Removal by Town and reimbursement of Town expenses. Any costs and expenses incurred by the Town in connection with any proceeding or work performed by the Town or its representatives to decommission and remove a Large WTG or WEF, including legal costs and expenses, shall be reimbursed either from the financial surety posted by the Operator or Landowner as provided in Section 2.D. of this Article VI and/or by the Landowner. Any costs incurred by the Town for decommissioning and removal that are not paid for or covered by the required surety, including legal costs, shall be assessed against the property, shall become a lien and tax upon said property, shall be added to and become part of the taxes to be levied and assessed thereon, and shall be enforced and collected, with interest, by the same officer and in the same manner, by the same proceedings, at the same time and under the same penalties as are provided by law for the collection and enforcement of real property taxes in the Town.

ARTICLE VII - WIND MEASUREMENT TOWERS

SECTION 1: WIND SITE ASSESSMENT - The Town acknowledges that prior to construction of a Large WTG a wind site assessment is usually conducted to determine the wind speeds and the feasibility of using particular Sites. Installation of Wind Measurement Towers, also known as meteorological or MET towers, shall be permitted only pursuant to the issuance of a Wind Energy Permit in accordance with this Article.

SECTION 2: APPLICATIONS FOR WIND MEASUREMENT TOWERS -

A. Applications. An application for a Wind Measurement Tower shall include:

1. Applicant Information. The name, address, and phone number of Applicant. If the Applicant is represented by an agent the application shall include the name, address and telephone number of the agent as well as an original signature of the Applicant authorizing the agent to represent the Applicant;
2. Property Owner Information and Authorization. The name, address, and telephone number of the property owner of the proposed Site of any Wind Measurement Tower(s). If the said owner is not the Applicant, the application shall include (i) a letter or other written permission signed by such property owner that (i) confirms that the property owner is familiar with the proposed application(s) and (ii) authorizes the submission of the application, or (ii) an easement, lease, or other agreement of such owner relative to the siting of the Wind Measurement Tower;
3. Site Information. The address of each proposed tower location including the tax map section, block and lot number;
4. Map. A map showing proposed location of the Wind Measurement Tower and any roads, parcel boundaries or structures within a radius of the Total Height of the Wind Measurement Tower.

SECTION 3: STANDARDS FOR WIND MEASUREMENT TOWERS -

- A. Setback. The distance between a Wind Measurement Tower and a property line shall be at least equal to the height of the Wind Measurement Tower. Sites for a Wind Measurement Tower can include more than one lot or parcel of property, and if so, then the requirements shall apply to the combined properties. Property line setback exceptions for neighboring properties are also allowed with the consent of those neighboring property owners.

- B. Permit Duration. Wind Energy Permits for Wind Measurement Towers may be issued for a period of up to two years. Permits may be renewable in the Town Board's discretion upon application to the Town Board.
- C. Decommissioning. Wind Measurement Towers utilized for WEFs are project components subject to the decommissioning provisions of Section 2.E of this Article VI.

ARTICLE VIII - SMALL WTG

SECTION 1: **PURPOSE AND INTENT** - The purpose of this Article is to provide standards for Small WTG that are: (i) designed for home, farm, and small commercial uses; (ii) wholly located upon the same parcel or lot of land; and (ii) primarily used to reduce consumption of utility power at that location. The intent of this Article is to encourage the development of small wind energy systems and to protect the public health, safety, and community welfare.

SECTION 2: **APPLICATIONS** - Applications for Small WTG Wind Energy permits shall be submitted to the Planning Board and, in addition to complying with any requirements under the Site Plan Review Law, shall include:

- A. Applicant Information. The name, address, and phone number of Applicant. If the Applicant is represented by an agent the application shall include the name, address and telephone number of the agent as well as an original signature of the Applicant authorizing the agent to represent the Applicant;
- B. Property Owner Information and Authorization. The name, address, and telephone number of the property owner of the proposed Site of any Small WTG. If the said owner is not the Applicant, the application shall include (i) a letter or other written permission signed by such property owner that (a) confirms that the property owner is familiar with the proposed application(s), (b) authorizes the submission of the application, and (c) confirms that the property owner is familiar with this 2019 Local Law, and (ii) the submission of fully executed copies of all pages of any easement, lease, or other agreement of such owner relative to the siting of the Small WTG (not simply memorandums). It shall also include a list of each adjacent property owner, together with their respective residence and mailing addresses.
- C. Site Information. The address of each proposed tower location including the tax map section, block and lot number;
- D. Height Information. Evidence that the proposed tower height does not exceed the lesser of one hundred twenty (120) feet or the height recommended by the manufacturer or distributor of the system;

- E. Electrical Drawing. A line drawing of the electrical components of the system in sufficient detail to allow for a determination that the manner of installation conforms to the Uniform Fire Prevention and Building Code and other applicable codes and requirements;
- F. Electric Use. Sufficient information demonstrating that the system will be used primarily to reduce consumption of electricity at that location;
- G. Utility Notice. Written evidence that the electric utility service provider that serves the proposed Site has been informed of the Applicant's intent to install an interconnected customer-owned electricity generator, unless the Applicant does not plan, and so states so in the application, to connect the system to the electricity grid;
- H. Visual Analysis. A visual analysis of the Small WTG as installed, which may include a computerized photographic simulation, demonstrating the visual impacts from nearby strategic vantage points. The visual analysis shall also indicate the color treatment of the system's components and any visual screening incorporated into the project that is intended to lessen the system's visual prominence.

SECTION 3: DEVELOPMENT STANDARDS - All Small WTG shall comply with the following standards. Additionally, such systems shall also comply with all the requirements established by other sections of this Article that are not in conflict with the requirements in this section:

- A. Lot Size. A Small WTG shall be located on a lot with a minimum size of one acre; however, this requirement can be met by multiple owners submitting a joint application or by the Applicant obtaining a lease, easement, or other consent from applicable neighboring landowners;
- B. Number. Only one Small WTG per lot shall be allowed. Multiple Applicants' joint lots shall be treated as one lot for purposes of this Article;
- C. Use. Small WTGs shall be used primarily to reduce the on-site consumption of electricity;
- D. Color. The WTG's tower and blades shall be (i) painted a non-reflective, unobtrusive color that blends the system and its components into the surrounding landscape to the greatest extent possible, and (ii) incorporates non-reflective surfaces to minimize any visual disruption;
- E. Visual Impact. The Small WTG shall be designed and located in such a manner to minimize adverse visual impacts from public viewing areas;

- F. Lighting. Exterior lighting on any structure associated with the system shall not be allowed except when otherwise required by the FAA;
- G. Electric Lines. All on-site electrical wires associated with the system shall be installed underground except for the “tie-ins” to a public utility company and public utility company transmission poles, towers and lines. This standard may be modified by the Town Board if the project terrain is determined to be unsuitable due to reasons of excessive grade, biological impacts, or similar factors.
- H. Electromagnetic Interference. The system shall be operated such that no disruptive electromagnetic interference is caused. If it has been demonstrated that a system is causing harmful interference, the system operator shall promptly mitigate the harmful interference or cease operation of the system;
- I. Signs. At least one sign shall be posted on the tower at a height of five feet warning of electrical shock or high voltage and harm from revolving machinery. No brand names, logo or advertising shall be placed or painted on the tower, rotor, generator or tail vane where it would be visible from the ground, except that a system or tower’s manufacturer’s logo may be displayed on a system generator housing in an unobtrusive manner;
- J. Access Control. Towers shall be constructed to provide one of the following means of access control, or other appropriate method of access control(s): (i) Tower-climbing apparatus located no closer than 12 feet from the ground; (ii) A locked anti-climb device installed on the tower; and/or (iii) A locked protective fence at least six (6) feet in height that encloses the tower;
- K. Anchors. Anchor points for any guy wires shall be located within the property boundaries where the Small WTG is located and shall not cross any above-ground electric transmission or distribution lines. The point of attachment for the guy wires shall be enclosed by a six (6) foot fence, sheathed in a non-removable covering from ground level to a height of eight feet above ground level, or similarly protected as directed by the Town;
- L. Access Roads. Construction of on-site access roadways shall be minimized. Temporary access roads utilized for initial installation shall be re-graded and re-vegetated to the pre-existing natural conditions after completion of installation;
- M. Code Compliance. All Small WTGs shall be designed and constructed to be in compliance with pertinent provisions of the Uniform Fire Prevention and Building Code and other applicable codes and requirements;

- N. Controls. All Small WTGs shall be equipped with manual and automatic over-speed controls. The conformance of rotor and over-speed control design and fabrication with good engineering practices shall be certified by the manufacturer.

SECTION 4: STANDARDS - All Small WTGs shall comply with the following standards:

- A. Setbacks. A Small WTG shall not be located closer to a property line than two (2) times the Total Height of the Small WTG;
- B. Noise. Except during short-term events including utility outages and severe wind storms, a Small WTG shall be designed, installed, and operated so that the Sound Pressure Level generated by a Small WTG, as measured at any point on or beyond the of the boundary of each parcel of property on which each proposed Small WTG is located shall not exceed:
1. 40 dBA Fast Lmax between 9 AM and 9 PM;
 2. 35 dBA Fast Lmax between 9 PM and 9AM;
 3. 50 dBC Fast Lmax between 9 AM and 9 PM; and
 4. 45 dBC Fast Lmax between 9 PM and 9AM.

SECTION 5: PERMIT REVIEW AND PROCESS -

- A. The Enforcement Officer shall conduct an on-site inspection and collect any fees associated with the application for a Small WTG.
- B. The Town Clerk shall notify all adjacent landowners of such application by certified mail, at the Applicant's expense, within ten (10) business days of the submission of the Small WTG application.
- C. The Planning Board shall notify the Applicant within thirty (30) days from the date of submission whether the application is complete. If the application is deemed to be incomplete, the Planning Board shall indicate the additional information needed. The application shall be deemed to be abandoned unless the Applicant provides the information requested, or submits in writing the reason for any delay, within thirty (30) days from the date of such notice. The Planning Board may, in its discretion, grant an extension of time not to exceed six (6) months.
- D. A decision to approve or reject the Small WTG application or to approve the Small WTG application with conditions shall be made by the Planning Board pursuant to the provisions of the Site Plan Review Law and must be based on

whether the application complies with the requirements of this 2019 Local Law and the Site Plan Review Law.

- a. A public hearing shall be required for a Small WTG application.

SECTION 6: ABATEMENT -

- A. Operation. All small WTG shall be maintained in good condition and in accordance with all requirements of this Article.
- B. Removal. Small WTG which are not used for a continuous period of five (5) years shall be deemed abandoned and shall be dismantled and removed from the property at the expense of the property owner. Failure to abide by and faithfully comply with this requirement, or with any and all conditions that may be attached to the granting of any permit, shall constitute grounds for the revocation of the permit. Notwithstanding the foregoing, the property owner shall have the right to appeal such removal to the Town Board.
- C. Complaint Process.
 - 1. Any property owner or resident within the Town of Enfield may register a complaint with the Enforcement Officer that a Small WTG is being operated in violation of the Wind Energy Permit or otherwise in violation of the criteria set forth in this 2019 Local Law. The Enforcement Officer shall investigate (or cause to be investigated) the complaint and, where necessary, may engage the services of an expert to assist in such investigation. The cost for such expert services shall be paid landowner operating the Small WTG in the event that the Enforcement Officer determines that the complaint is valid, and that the Wind Energy Facility is being operated in violation of its Wind Energy Permit or otherwise in violation of the criteria as set forth in this 2019 Local Law. If the Enforcement Officer determines that the complaint is valid, and that the Wind Energy Facility is being operated in violation of its Wind Energy Permit or otherwise in violation of the criteria as set forth in this 2019 Local Law, the Enforcement Officer shall issue written notice to remedy such violation to the owner of the Small WTG, which notice shall specify the actions required to be taken by the owner in order to cure the violation, and the time period within such action must be taken.
 - 2. In the event that the owner of the Small WTG fails to comply with such notice to remedy, the Enforcement Officer shall report such failure to the Town Board and proceed with the enforcement provisions

contained in Article IX of this 2019 Local Law.

3. If the Enforcement Officer determines that the Small WTG is not being operated in violation of the Wind Energy Permit or otherwise in violation of the criteria set forth in this 2019 Local Law, he or she shall set forth its findings which shall be filed with the Town Clerk and forwarded by registered mail to the complaining party. The complaining party shall have a right to challenge such determination in a proceeding commenced pursuant to the provisions of Article 78 of New York's Civil Practice Law and Rules.

ARTICLE IX - GENERAL AND MISCELLANEOUS PROVISIONS

SECTION 1: PERMITS, FEES AND AGREEMENTS -

- A. Wind Energy Permits. An application fee, as determined by the Town Board, shall accompany the application for a Wind Energy Permit. The amount of such required fees may be revised from time to time by the Town Board by resolution. No application fees may be refunded for any reason, and no additional application fees shall be required for supplemental submissions unless the project materially changes or the number of proposed WTGs is increased. In the event an application is deemed to be terminated under this 2019 Local Law, any submission of a new application shall require the filing of new application fees.
- B. Building Permits. The review of building and permit applications and renewals, and the inspection of such facilities, requires specific expertise. Accordingly, the permit fees for such facilities shall be \$25 per permit request for administrative costs, plus the amount charged to the Town by any outside consultant hired by the Town to review the applications, plans, construction, or conduct the inspections. In the alternative, the Town and the Applicant may enter into an agreement for an inspection or certification procedure for these unique facilities. In such cases, the Town and the Applicant may agree to a fee and escrow agreement to pay for the costs of inspections, the review of plans, test results and certifications, and such other reviews and services as may be reasonably needed in connection with any matter pertaining to permits or this 2019 Local Law.
- C. Host Community and PILOT Agreements. Nothing in this 2019 Local Law shall be read as limiting the ability of the Town to enter into host community or PILOT agreements with any Applicant to compensate the Town for expenses or impacts on the community.

SECTION 2: VIOLATION AND ENFORCEMENT -

- A. Penalties. Any Person that (i) violates or fails to comply with this 2019 Local Law or the terms and condition of any Waiver, Variance or Permit, or (ii) fails to obey the lawful order or direction of the Enforcement Officer, or (iii) who assists, aides, or abets any such violation, non-compliance or lack of adherence to a lawful order, shall be shall be guilty of an offense and (i) subject to prosecution civilly or criminally, and (ii) subject to the fines and penalties as set forth below:
1. First Violation: Any Person that violates 2019 Local Law shall be (1) guilty of a criminal offense and subject to a fine of not more than \$350.00 per violation per day, or (2) subject to a civil penalty of not more than \$350.00 per violation per day to be recovered by the Town in a civil action. Every such Person shall be deemed guilty of a separate offense for each day that such violation, disobedience, omission, neglect or refusal shall continue. Similarly, a separate civil penalty shall apply and/or be assessable for each day that such violation, disobedience, omission, neglect or refusal shall continue.
 2. Second Violation: Any violation that is found to have occurred within 2 years of any prior civil or criminal determination of any other violation of this 2019 Local Law shall be deemed a second violation. Any Person that commits any second violation shall be (1) guilty of an offense and subject to a fine of not more than \$500.00 per violation per day, or (2) subject to a civil penalty of not more than \$500.00 to be recovered by the Town in a civil action. Every such Person shall be deemed guilty of a separate offense for each day that such violation, disobedience, omission, neglect, or refusal shall continue. Similarly, a separate civil penalty shall apply and/or be assessable for each day that such violation, disobedience, omission, neglect, or refusal shall continue.
 3. Third and Subsequent Violations: Any violation that is found to have occurred within 2 years of any prior civil or criminal determination of any second violation of this 2019 Local Law shall be deemed a third or subsequent violation, as applicable. Any Person who commits a third or subsequent violation of this 2019 Local Law shall be (1) guilty of an unclassified misdemeanor and subject to a fine not more than \$1,000.00 per violation per day, or (2) subject to a civil penalty of not more than \$1,000.00 per violation per day to be recovered by the Town in a civil action. Every such Person shall be deemed guilty of a separate unclassified misdemeanor for each day that such violation, disobedience, omission, neglect or refusal shall

continue. Similarly, a separate civil penalty shall apply and/or be assessable for each day that such violation, disobedience, omission, neglect, or refusal shall continue.

B. Other Remedies. The Town shall have the following additional rights or remedies:

1. The Enforcement Officer, upon observation of any violation or non-compliance with this 2019 Local Law or the terms and conditions of any Waiver, Variance or permit issued hereunder, shall be empowered to issue a stop work order. Any Person receiving a stop work order shall immediately cease and desist from all further construction or operation of any Wind Energy Facility or WTG and/or shall cease all acts, or failures to act, that are in violation of or non-compliance with this 2019 Local Law or the order of the Enforcement Officer. No actions, work or operations shall be continued or re-commenced until the stop work order is lifted by the Enforcement Officer.

2. In the event of any violation or threatened violation of any of the provisions of this 2019 Local Law, including the terms and conditions imposed by any Variance, Waiver or permit issued pursuant to this 2019 Local Law, in addition to other remedies and penalties herein provided, the Town may institute any appropriate action or proceeding to prevent such actual or threatened violation. In the event the Town seeks any equitable order or relief, the Town shall not be required to prove that there exists, or is likely to exist, an imminent threat of irreparable harm, and under no circumstances shall the Town be required to post any bond or undertaking.

3. In the event of any violation or non-compliance with this 2019 Local Law, or the terms and conditions of any Variance, Waiver or permit issued hereunder, the Town and/or the Enforcement Officer may withhold any application extensions, permits, permit renewals, certificates of compliance, certificates of occupancy, approvals, and the like, and any applications upon the same, until such time as such violation or non-compliance is cured.

4. In the event of any violation or non-compliance with this 2019 Local Law, or the terms and conditions of any Variance, Waiver or permit issued hereunder, the Town and/or the Enforcement Officer may revoke any Variance, Waiver, certificate or permit by providing to the Person in violation or non-compliance a written Noncompliance Notice that specifies (i) the nature of the violation, non-compliance or other problem, (ii) the name and address of the

issuing Officer and the Town, (iii) the actions necessary, or the actions that must be ceased or stopped, to cause compliance, and (iv) a date by which compliance is required, which date may not be longer than 90 days from the date of the Noncompliance Notice. If such Person has not caused, or come into, compliance with the requirements of this 2019 Local Law or the terms and conditions of any Variance, Waiver, certificate or permit, or the order of any Enforcement Officer, then the Enforcement Officer may suspend or revoke any such Variance, Waiver, certificate, or permit. Such determination and the issuance of a Noncompliance Notice may be appealed through the Administrative Appeal process set forth in this 2019 Local Law. If any court proceedings are brought concerning any Variance, Waiver, certificate, or permit suspension or revocation and there is an adjudication in favor of the Appellant, Applicant, Operator, or Person holding a permit, Variance, or Waiver pertaining to (i) the alleged violation of this 2019 Local Law, or (ii) any Variance, Waiver, certificate, or permit issued hereunder, then the Variance, Waiver, certificate, or permit shall be reinstated by the Enforcement Officer with the same effect as if (1) no Noncompliance Notice had ever been issued, and (2) no suspension or revocation had occurred.

5. To condemn and order removal of any structure that is an unsafe building or structure under the Uniform Fire Prevention and Building Code, or other applicable laws and regulations.

6. To order cleanup, remediation, removal, and the decommissioning of Wind Energy Facilities, and failing compliance with such order, the Town may recover its expenses pursuant to the following procedures. The Enforcement Officer may order any Person to (i) cleanup, remediate, and restore any Site to its condition prior to its use as a Wind Energy Facility or to its natural condition, and/or (ii) remove any Wind Energy Facility when authorized or required under this 2019 Local Law. Such Person shall then have a period of no more than 90 days in which to remove facilities, cleanup, remediate, and restore the Site(s). Upon notification given by the Enforcement Officer to the Town Board that the Owner has failed or refuses to remove facilities, cleanup, remediate, and/or restore the Site within that 90-day period, the Town Board may, but is not required to, cause the Town to commence or contract-out the removal, cleanup, remediation, and restoration of such Site(s). After the work has been completed the Enforcement Officer shall file in the office of the Town Clerk a verified statement (herein, the "Verified Statement") of all the direct costs of the removal, cleanup, remediation or restoration of the Site(s), together with a 50% surcharge as

compensation to the Town for administering, supervising and handling said work in accord with the provisions of this 2019 Local Law. Such Verified Statement shall be served by certified mail upon the Person so ordered to cleanup, remediation, removal, and decommissioning any Wind Energy Facilities and any other responsible party. Upon such filing and service, each such Person shall, within 30 days, pay the amount(s) indicated as due to the Town under such Verified Statement. Absent payment within the said 30 days, (i) the Town may enter a civil judgment in the amount of any Verified Statement through the Town Court, or any other court of competent jurisdiction, and enforce the same in accord with law, and/ or (ii) the Town Clerk may, where such Person owns the land upon which is situate the affected Site, enter the same in the records of the Town Clerk as a lien against the affected properties, shall add the same to the next assessment roll of general Town taxes, and collect and enforce the assessment in the same manner, by the same proceedings, at the same time, and under the same penalties as the general Town tax, and as a part thereof. The making and filing is a Verified Statement is subject to the filing of an Administrative Appeal as set forth in this 2019 Local Law, and the amount claimed as due in such Verified Statement is also subject to such appeal and review. The amount of the Verified Statement may, but is not required to be, offset by any amounts actually recovered by the Town from any Decommissioning Fund. Similarly, the Town need not apply to any surety or other holder of Decommissioning Funds prior to effecting cleanup, remediation, removal, and decommissioning, issuing any Verified Statement, or seeking to collect such amounts due, whether judicially or administratively through tax assessment(s) or otherwise.

C. Each and all remedies and rights of the Town under this Article shall be cumulative. The Town's pursuit of any one right or remedy does not effect a waiver or an election of remedies, and the Town may thereafter pursue or continue to pursue any other right or remedy it may have in law, equity, or in admiralty. The rights and remedies herein stated are not the exclusive rights and remedies of the Town.

SECTION 3: SEVERABILITY - If any provision of this 2019 Local Law shall be adjudged by any court or other tribunal of competent jurisdiction to be invalid or unenforceable or adjudged by the New York State Board on Electric Siting and the Environment (or any successor organization or similar institution) to be unreasonable and therefore unenforceable, such determination or judgment shall not affect, impair, or invalidate the remainder of this 2019 Local Law, which shall remain valid and enforceable. Any found invalidity or unenforceability shall be confined in its operation

only to (i) the jurisdiction where such invalidity or unenforceability was determined, and (ii) the provision directly involved in the controversy in which such determination or judgment shall have been rendered, and (iii) the parties, facts, and circumstances involved in the particular controversy reviewed, and such determination or judgment shall not apply to other parties, facts, or circumstances.

SECTION 4: INDEMNITY AND LIMITATION UPON TOWN LIABILITY - The granting of the Town's WEF Permit shall contain an indemnification provision. This clause shall require the Applicant to at all times defend, indemnify, protect, save, hold harmless, and exempt the Town (and affected municipalities), and its officers, councils, employees, committee members, attorneys, agents, insurers, residents and consultants from any and all penalties, damages, costs, or charges arising out of any and all claims, suits, demands, causes of action, or award of damages, whether compensatory or punitive, or expenses arising therefrom, either at law or in equity, which might arise out of, or are caused by delivery, construction, erection, modification, location, equipment's performance, use, operation, maintenance, repair, installation, replacement, removal, or restoration of said LWEF, excepting, however, any portion of such claims, suits, demands, causes of action or award of damages as may be attributable to the gross negligence or intentional acts or omissions of the Town, or its employees or agents. With respect to the penalties, damages, or charges referenced herein, reasonable attorneys' fees, consultants' fees, and expert witness fees are included in those costs that are recoverable by the Town.

SECTION 5: LIABILITY INSURANCE - The Applicant and/or Operator for any WEF other than a Small WEF shall agree to secure and maintain for the duration of the Wind Energy Permit public liability insurance, as follows:

- A. Commercial general liability covering personal injuries, death and property damage in the following amounts:
 - a. \$10,000,000 per occurrence (\$20,000,000 aggregate), which shall specifically include the Town and its officers, councils, employees, committee members, attorneys, agents and consultants as additional named insureds.
 - b. Umbrella coverage: \$50,000,000.
- B. The insurance policies shall be issued by an agent or representative of an insurance company licensed to do business in New York State and with at least a rating of "A" from AM Best.
- C. The insurance policies shall contain an endorsement obligating the insurance company to furnish the Town with at least 30 days prior written notice in advance of a cancellation.
- D. Renewal or replacement policies shall be delivered to the Town at least 15 days

before the expiration of the insurance that such policies are to renew or replace.

- E. No more than 15 days after the grant of the Wind Energy Permit and before construction is initiated, the permit holder shall deliver to the Town a copy of each of the policies or certificates representing the insurance in the required amounts.
- F. A certificate of insurance that states that it is for informational purposes only and does not confer sufficient rights upon the Town, shall not be deemed to comply with this Local Law.
- G. At any time the Applicant/Owner shall fail to provide evidence of such required insurance or lapse of the same, upon ten (10) days written notice by the Town Board to the Applicant/Owner, the WEF shall be shut down until such time as the Applicant/Owner comes into compliance with all insurance requirements as stated herein.

SECTION 6: CONSTRUCTION - Section and paragraph headings are for convenience only and do not limit or define the contents of such paragraph or section. Words in the singular or plural shall be construed in the singular or plural as the context thereof so requires or admits. Words in the masculine, feminine or neuter gender shall be construed as in such gender the context thereof so requires or admits.

SECTION 7: EFFECTIVE DATE AND FILING - This 2019 Local Law shall be and become effective immediately upon filing with the Secretary of State in accordance with Municipal Home Rule Law. In addition, this 2019 Local Law shall be filed with the Tompkins County Department of Assessment, the New York State Board of Real Property Services, and the Office of the President of the New York State Energy Research and Development Authority.

Appendix A - Noise Measurement Standards and Procedures

1. A qualified independent acoustical consultant shall conduct all noise studies. The acoustical consultant shall be hired by and report to the Town Board.
2. Sound level meters and calibration equipment must comply with the Type 1 or 2 specifications of the latest version of the American National Standards Institute "American Standard Specifications for General Purpose Sound Level Meters" (ANSI Standard S1.4) or the Class 1 or 2 specifications of the most recent IEC 61672-1 International Standard and shall have been calibrated at a recognized laboratory within one month prior to the initiation of the study.
3. Except as specifically noted otherwise, measurements shall be conducted in compliance with ANSI Standard S12.18-1994 "Outdoor Measurements of Sound Pressure".
4. Prior to permit application approval, a pre-construction ambient noise level study shall be conducted in compliance with ANSI-ASA S12.100-2014 "Methods to Define and Measure the Residual Sound in Protected Natural and Quiet Residential Areas" at any property line adjacent to a parcel of property containing a Wind Energy Facility and/or at any Residence within 2 miles of any proposed Wind Turbine.
5. The tests shall be conducted using both an A-weighting scale (dBA) and a C-weighting scale (dBC).
6. Tests shall be reflective of seasonal changes to vegetation and atmospheric conditions. At a minimum one set of tests should be performed during periods in which leaves are both on and off the trees.
7. All measuring points shall be located in consultation with the property owners and such that no significant obstruction blocks noise and vibration to the site.
8. Outdoor noise level measurements must be taken at four (4) meters above the ground and at least 15 feet from any reflective surface.
9. Duration of measurements shall be a minimum of ten continuous minutes for each criterion at each location.
10. Measurements must be made when the wind levels are less than 4.5 mph and with appropriate wind screening for the recording device.
11. Measurements should be obtained during representative weather conditions when the WTG noise is most noticeable, including periods of temperature inversion and stable ground-level atmosphere most commonly occurring at night.

12. Measurements shall be taken at each of the following three time periods:
- Day (10 a.m. – 2p.m.)
 - Evening (7p.m. – 11 p.m.)
 - Night (12 midnight – 4 a.m.)
13. Each measurement shall be replicated during the same time period over three different days within the same period for a total of 9 measurements per location per period (i.e., three daytime measurements in the winter, three evening measurements in the winter, three nighttime measurements in the winter). The lowest of the three measurements per time period, per period of the year, will be used to determine the pre-construction ambient noise for that time period and period of the year.
14. For each measurement the following minimum criteria will be recorded:
- In dBA1 and dBC
 - A narrative description of any intermittent noises registered during each measurement
 - Wind speed and direction at time of measurement
 - Description of weather conditions at time of measurement
 - Description of topography and contours relative to proposed or actual WTGs
15. A 5 dBA penalty shall be applied for short duration repetitive noise or repetitive impulse noise. This is a characteristic “thumping” or “whooshing” sometimes exhibited by larger WTGs.
16. A 5 dBA penalty shall be applied for tonal noise. This is a single or limited frequency noise (vs. broad band noise) associated with mechanical noise artifacts (i.e. high pitched whining, screeching, buzzing).
17. For sites being measured with existing WTGs two sets of measurements are required: 1) one set with the WTG(s) off and; 2) one set with the WTG(s) running.
18. For nuisance complaints after the WTGs are operational, the measurement points, season, time, and duration of measurements shall be selected in consultation

1 Lmax - the maximum noise level measured, generally equivalent to ambient noise.

with the affected property owner. If requested by the property owner, continuous measurements may be taken for longer periods of time to capture intermittent nuisance noise patterns.

19. When conducting their pre-construction noise prediction analysis, the Applicant shall make specific reference to: 1) the unique aspect of the mountainous contours and terrain of the area and its effect on noise predictability and 2) line source noise predictions (emanating from a line of WTGs) in addition to the traditional single point source predictions.

20. Any noise level falling between two (2) whole decibels shall be deemed the higher of the two.

Appendix B – Property Value Guarantee

The Applicant guarantees that there will be no loss in real property value within two miles of the WEF, due to the WEF. Any real property owner(s) included in that area ("Property Owner") who believe(s) that their property may have been devalued due to the WEF, may elect to exercise the following option:

1. All appraiser costs are paid by the Applicant, from the Escrow Account. Applicant and the Property Owner shall each select a licensed appraiser. Each appraiser shall provide a detailed written explanation of the reduction, if any, in value to the real property ("Diminution Value"), caused by the proximity to the WEF. This shall be determined by calculating the difference between the current Fair Market Value (FMV) of the real property and what the FMV would have been at the time of exercising this option, assuming no WEF was proposed or constructed.
 - A. If the higher of the Diminution Valuations submitted is equal to or less than 25% more than the other, the two values shall be averaged ("Average Diminution Value" or "ADV").
 - B. If the higher of the Diminution Valuations submitted is more than 25% higher than the other, then the two appraisers will select a third licensed appraiser, who shall present to Applicant and Property Owner a written appraisal report as to the Diminution Value for the real property. The parties agree that the resulting average of the two highest Diminution Valuations shall constitute the ADV.
 - C. In either case, the Property Owner may elect to receive payment from Applicant of the ADV. Applicant is required to make this payment within 60 days of receiving said written election from property owner.
 - D. The County assessor shall receive copies of all correspondence and written documentation regarding real property values in a timely manner. A copy of any appraisal shall be provided to the County assessor within thirty (30) days of completion.
- 2 Other Agreement Conditions:
 - A. If a Property Owner wants to exercise this option, they must do so within 10 years of the WEF receiving final approval from the Town.
 - B. A Property Owner may elect to exercise this option only once.

- C. The Applicant and the Property Owner may accept mutually agreeable modifications of this Agreement, although the Applicant is not allowed to put other conditions on a financial settlement (e.g. confidentiality). If the property owner accepts some payment for property value loss based on an alternative method, that acceptance and payment shall be considered an exercise of this option.
- D. This Agreement applies to the Property Owner of record as of the date of the WEF approval and is not transferrable to subsequent owners.
- E. The Property Owner identified under subsection D above must reasonably maintain the property from that time, until they choose to elect this option.
- F. The Property Owner must permit full access to the property by the appraisers, as needed to perform the appraisals.
- G. The Property Owner must inform the appraisers of all known defects of the property as may be required by law, as well as all consequential modifications or changes to the property subsequent to the date of the WEF application.
- H. This Agreement will be guaranteed by the Applicant (and all its successors and assigns), for 10 years following the WEF receiving final approval from the Town Board, by providing a bond (or other surety) to the Town, in an amount determined to be acceptable by the Town Board. This surety account will ensure execution of all aspects of this Agreement (including compensation of eligible Property Owners in the case of default by Applicant). Failure to maintain this surety account shall be cause for denial of the application or any extension thereof and/or revocation of the WEF Permit.
- I. Payment by the Applicant not made within sixty (60) days will accrue an interest penalty. This will be twelve percent (12%) annually, from the date of the written election from Property Owner.
- J. For any legal proceeding in any tribunal regarding this Agreement, all reasonable legal fees and costs (court and otherwise) will be paid by the Applicant.

Appendix C – Scientific Studies, Government Reports, Articles and Town Laws

The following is a partial listing of the scientific studies, government reports, articles and town laws reviewed by the Enfield Wind Farm Advisory Committee, which was appointed to make recommendations regarding a proposed wind energy facility in Enfield, and the Enfield Renewable Energy Advisory Committee, which was subsequently appointed to make recommendations regarding industrial solar and wind energy regulation.

General

“Report on Wind Turbines: Report to the Town of Enfield Town Board by the Enfield Wind Farm Advisory Committee, dated 4-12-2016, [Online]. Available: <http://townofenfield.org/wp-content/uploads/2016/04/Enfield-Wind-Farm-Advisory-Committee-Reports-2016-04-12.pdf>

Enfield Wind Farm Advisory Committee research materials, [Online]. Available: <https://trello.com/enfieldwindfarmadvisorycommittee>

Noise/Infrasound

M. Alves-Pereira and N. A. A. Castelo Branco, “Vibroacoustic disease: Biological effects of infrasound and low-frequency noise explained by mechanotransduction cellular signalling,” *Progress in Biophysics and Molecular Biology*, vol. 93, no. 1–3, pp. 256–279, Jan. 2007.

S. E. Ambrose, R. W. Rand, R. R. James, and M. A. Nissenbaum; “Public complaints about wind turbine noise and adverse health impacts justified,” 2014, *The Journal of the Acoustical Society of America* 135, 2272.

M. Bauer, T. Sander-Thömmes, A. Ihlenfeld, S. Kühn, R. Kühler, and C. Koch, “INVESTIGATION OF PERCEPTION AT INFRASOUND FRE-QUENCIES BY FUNCTIONAL MAGNETIC RESONANCE IM-AGING (FMRI) AND MAGNETOENCEPHALOGRAPHY (MEG),” 2015.

G. Berger et al., “Health-Based Audible Noise Guidelines Account for Infrasound and Low-Frequency Noise Produced by Wind Turbines,” *Front. Public Health*, vol. 3, 2015.

N. C. Branco, “Low frequency noise: a major risk factor in military operations,” in *RTO AVT Symposium Ageing Mechanisms and Control*, Manchester, UK, 2001.

N. A. A. Castelo, J. P. da Costa, P. Sociedade, H. Portuguesa, L. M. Jorge, and J. C.

Faísca, "14th International Meeting on Low Frequency Noise and Vibration and its Control Aalborg, Denmark 9 - 11 June 2010 Family with wind turbines in close proximity to home: follow-up of the case presented in 2007," 2010. [Online]. Available: <https://www.semanticscholar.org/paper/14th-International-Meeting-on-Low-Frequency-Noise-9-Castelo-Costa/6457a68d9766e660b69ad3931b302a5f7e4608f1>. [Accessed: 02-Oct-2019].

Channel Islands Acoustics, Camarillo, CA (Principal: Dr. Bruce Walker), Hessler Associates, Inc., Haymarket, VA (Principals: George F. and David M. Hessler), Rand Acoustics, Brunswick, ME (Principal: Robert Rand) and Schomer and Associates, Inc., Champaign, IL (Principal: Dr. Paul Schomer); "A Cooperative Measurement Survey and Analysis of Low Frequency and Infrasound at the Shirley Wind Farm in Brown County, Wisconsin," December 24, 2012

J. Frey, et al, "Wind Turbines and Proximity to Homes: The Impact of Wind Turbine Noise on Health," *A review of the literature & discussion of the issues*, 2012.
<http://waubrafoundation.org.au/wp-content/uploads/2014/06/Frey-Hadden-Wind-Turbines-Proximity-to-Homes.pdf>

Danielsson and U. Landström, "Blood pressure changes in man during infrasonic exposure: an experimental study," *Acta Medica Scandinavica*, vol. 217, no. 5, pp. 531-535, 1985.

J. L. Davy, K. Burgemeister, and D. Hillman, "Wind turbine sound limits: Current status and recommendations based on mitigating noise annoyance," *Applied Acoustics*, vol. 140, pp. 288-295, Nov. 2018.

G. W. Harding, B. A. Bohne, S. C. Lee, and A. N. Salt, "Effect of infrasound on cochlear damage from exposure to a 4kHz octave band of noise," *Hearing Research*, vol. 225, no. 1-2, pp. 128-138, Mar. 2007.

H. Hubbard, "Noise Induced House Vibrations and Human Perception", 1982, 19:2 *Noise Control Engineering Journal* 49, [Online]. Available: <http://waubrafoundation.org.au/resources/hubbard-h-1982-noise-induced-housevibrations-human-perception/>

R. James, "Wind Turbine Infra and Low Frequency Sound: Warning signs that were not heard," 2012, *Bulletin of Science, Technology and Society* 32 (2) 108-127.
This document is accessible from Sage Publications at <http://bsts.sagepub.com>

R. R. James and W. Bray; "Dynamic measurements of wind turbine acoustic signals, employing sound quality engineering methods considering the time and frequency sensitivities of human perception"; Presented at NOISE-CON 2011, Portland, Oregon, July 25-27, 2011

R. R. James and G. W. Kamperman; "Simple guidelines for siting wind turbines to prevent health risks"; Presented at NOISE-CON 2008, July 28-31

Kasprzak, "The Effect of the Narrow-Band Noise in the Range 4-8 Hz on the Alpha Waves in the EEG Signal," *Acta Physica Polonica A*, vol. 123, no. 5, pp. 980-983, Jun. 2013.

Kasprzak, "The Influence of Infrasound Noise from Wind Turbines on EEG Signal Patterns in Humans," *Acta Physica Polonica A*, vol. 125, no. 4A, 2014.

N. D. Kelley, R. R. Hemphill, and H. E. McKenna, "A methodology for assessment of wind turbine noise generation," *Journal of Solar Energy Engineering*, vol. 104, no. 2, pp. 112-120, 1982.

K. Kugler et al., "Low-frequency sound affects active micromechanics in the human inner ear," *Royal Society Open Science*, vol. 1, no. 2, p. 140166, Oct. 2014.

N. D. Kelley, "A proposed metric for assessing the potential of community annoyance from wind turbine low-frequency noise emissions," *Solar Energy Research Inst.*, Golden, CO (USA), 1987.

N. Kelley et al, "Acoustic Noise associated with Mod 1 Turbine; its source, impact and control," 1985, [Online]. Available:
<http://waubrafoundation.org.au/resources/kelley-et-al-1985-acousticnoise-associated-with-mod-1-wind-turbine/>

S. Lange, "World Health Organization: Wind Turbine Noise as a Health Hazard (Opening Recognition Likely to Lead to More Acknowledgement) - Master Resource." Master Resource, 17 Oct. 2018,
www.masterresource.org/wind-turbine-noise-issues/wto-wind-turbine-noise-as-a-health-hazard/. Accessed 6 Mar. 2019.

Testimony by Dr. Sarah Laurie before the Australian Senate Select Committee on Wind Turbines (2015)

National Research Center (US) I. for L. A. Research, Breakout Session: Effects of Sound on Research Animals. National Academies Press (US), 2004.

National Research Council (U.S.), Institute for Laboratory Animal Research (U.S.), and National Academies Press (U.S.), Eds., *Guide for the care and use of laboratory animals*, 8th ed. Washington, D.C: National Academies Press, 2011.

Onakpoya, J. O'Sullivan, M. J. Thompson, and C. J. Heneghan, "The effect of wind turbine noise on sleep and quality of life: A systematic review and meta-analysis of

observational studies,” *Environment International*, vol. 82, pp. 1–9, Sep. 2015.

M. Pawlaczyk-Łuszczyńska, “Evaluation of occupational exposure to infrasonic noise in Poland,” *International Journal of Occupational Medicine and Environmental Health*, vol. 12, no. 2, pp. 159–176, 1999.

E. Pedersen and P. Larsman, “The impact of visual factors on noise annoyance among people living in the vicinity of wind turbines,” *Journal of Environmental Psychology*, vol. 28, no. 4, pp. 379–389, Dec. 2008.

N. Pierpont; *Wind Turbine Syndrome: A Report on a Natural Experiment*; (K-Selected Books 2009)

Pilger and L. Ceranna, “The influence of periodic wind turbine noise on infrasound array measurements,” *Journal of Sound and Vibration*, vol. 388, pp. 188–200, Feb. 2017.

A.H. Poulsen, et al. “Short-Term Nighttime Wind Turbine Noise and Cardiovascular Events: A Nationwide Case-Crossover Study from Denmark.” *Environment International*, vol. 114, May 2018, pp. 160–166, www.sciencedirect.com/science/article/pii/S0160412017317889, 10.1016/j.envint.2018.02.030. Accessed 2 Oct. 2019.

A.H. Poulsen, O. Raaschou-Nielsen, A. Peña, A.N. Hahmann, R.B. Nordsborg, M. Ketzel, J. Brandt, M. Sørensen, “Pregnancy exposure to wind turbine noise and adverse birth outcomes: a nationwide cohort study,” *Environ Res.* 2018 Nov;167:770-775. doi: 10.1016/j.envres.2018.09.011. Epub 2018 Sep 10.

“Preliminary studies on the reaction of growing geese (*Anser anser f. domestica*) to the proximity of wind turbines. - PubMed - NCBI.” [Online]. Available: <http://www.ncbi.nlm.nih.gov/pubmed/24597302>. [Accessed: 26-Mar-2016].

J. L. Punch, R. R. James; “Wind Turbine Noise and Human Health: A Four-Decade History of Evidence that Wind Turbines Pose Risks”

J. Punch, R. James, and D. Pabst; *Wind Turbine Noise: What Audiologists Should Know*; *Audiology Today* | JulAug2010

A. N. Salt and T. E. Hullar, “Responses of the ear to low frequency sounds, infrasound and wind turbines,” *Hearing Research*, vol. 268, no. 1–2, pp. 12–21, Sep. 2010.

Schäffer, R. Pieren, U. Wissen Hayek, N. Biver, and A. Grêt-Regamey, “Influence of visibility of wind farms on noise annoyance – A laboratory experiment with audio-visual simulations,” *Landscape and Urban Planning*, vol. 186, pp. 67–78, Jun. 2019.

H.Schmidt and M. Klokke, "Health Effects Related to Wind Turbine Noise Exposure: A Systematic Review," PLoS ONE, vol. 9, no. 12, p. e114183, Dec. 2014.

Shannon, Samuel, et al. Effect of Vibration Frequency and Amplitude on Developing Chicken Embryos. 1994.

P. Schomer, and G. Hessler. The Results of an Acoustic Testing Program, Cape Bridgewater Wind Farm Prepared for Energy Pacific by Steve Cooper, The Acoustic Group A Review of This Study and Where It Is Leading. 2015.

"Scientists Discover Previously Unknown Cleansing System in Brain." [Online]. Available: <https://www.urmc.rochester.edu/news/story/3584/scientists-discover-previously-unknown-cleansing-system-in-brain.aspx>. [Accessed: 02-Oct-2019].

D. Shepherd et al. "Evaluating the Impact of Wind Turbine Noise on Health-Related Quality of Life." Noise and Health, vol. 13, no. 54, Sept. 2011, p. 333. www.noiseandhealth.org, doi:10.4103/1463-1741.85502.

Stelling, "Infrasound Low Frequency Noise and Industrial Wind Turbines," Jul. 2015.

SYTe, "Pilottutkimus osoittaa infraäänihaitan vähenevän merkittävästi vasta yli 15 kilometrin päässä tuulivoimaloista," Suomen ympäristöterveys - SYTe ry, 10-Jan-2019. (Editorial: this reference is the study which shows the detrimental health effects extend far beyond where previous studies stopped. Finland).

R. Thorne, "Propagation thresholds and measurement of infrasonic to establish separation distances from wind farm turbines to residences," in INTER-NOISE and NOISE-CON Congress and Conference Proceedings, 2014, vol. 249, pp. 4084-4093.

R. Thorne and D. Shepherd, "Wind turbine noise: why accurate prediction and measurement matter," Paper Number 73, Proceedings of ACOUSTICS 2011 2-4 November 2011, Gold Coast, Australia.

N. W. Watch, "Éoliennes, Sons et Infrasons: Effets de l'Éolien Industriel Sur La Santé des Hommes [Wind turbines, noise, and infrasound: effects of industrial wind energy on human health]," National Wind Watch. [Online]. Available: <https://www.wind-watch.org/documents/eoliennes-sons-et-infrasons-effets-de-leolien-industriel-sur-la-sante-des-hommes-wind-turbines-noise-and-infrasound-effects-of-industrial-wind-energy-on-human-health/>. [Accessed: 23-Sep-2019].

K. P. Waye, J. Bengtsson, R. Rylander, F. Hucklebridge, P. Evans, and A. Clow, "Low frequency noise enhances cortisol among noise sensitive subjects during work performance," Life sciences, vol. 70, no. 7, pp. 745-758, 2002.

M. Weichenberger et al., “Altered cortical and subcortical connectivity due to infrasound administered near the hearing threshold–Evidence from fMRI,” PLOS one, vol. 12, no. 4, p. e0174420, 2017.

“Windfarms: 1,600 miscarriages,” World Council for Nature, 07-Jun-2014.

“Windfarms and birth defects | World Council for Nature.” [Online]. Available: <http://wcnf.org/2014/03/31/windfarms-vertebrates-and-reproduction/>. [Accessed: 26-Mar-2016].

“Wind Turbine Noise: An independent assessment of sound quality | Rand Acoustics.” [Online]. Available: <http://randacoustics.com/wind-turbine-sound/wind-turbines-published-articles/wind-turbine-noise-an-independent-assessment-of-sound-quality/>. [Accessed: 26-Mar-2016].

World Health Organization Environmental Noise Guidelines for the European Region (2018)

World Health Organization Night Noise Guidelines for Europe (2009)

World Health Organization Guidelines for community noise (1999)

Xie et al., “Sleep Drives Metabolite Clearance from the Adult Brain,” Science, vol. 342, no. 6156, pp. 373–377, Oct. 2013. (Editorial: Loss of sleep causes health risks by itself)

Zajamšek, Branko, et al. “Characterisation of Wind Farm Infrasound and Low-Frequency Noise.” Journal of Sound and Vibration, vol. 370, May 2016, pp. 176–190, www.sciencedirect.com/science/article/pii/S0022460X16001176?via%3Dihub, 10.1016/j.jsv.2016.02.001. Accessed 2 Oct. 2019.

Setbacks

K. Haugen, “INTERNATIONAL WIND ENERGY POLICIES 1 International Review of Policies and Recommendations for Wind Turbine Setbacks from Residences: Setbacks, Noise, Shadow Flicker, and Other Concerns,” Minnesota Department of Commerce: Energy Facility Permitting, 2011.

S. Larwood and van D. C. P., “Permitting Setback Requirements for Wind Turbines in California,” California Energy Commission, Public Interest Energy Research Program, CEC-500-2005-184, Nov. 2006.

M. Ragheb, “SAFETY OF WIND SYSTEMS,” 2019.

J. Renström, "Modeling of Ice Throws from Wind Turbines," Department of Earth Sciences, Uppsala University, 2015.

J. Rogers, N. Slegers, and M. Costello, "A method for defining wind turbine setback standards," *Wind Energy*, vol. 15, no. 2, pp. 289–303, Apr. 2011.

P. J. Tavner, J. Xiang, and F. Spinato, "Reliability analysis for wind turbines," *Wind Energy*, vol. 10, no. 1, pp. 1–18, Jan. 2007.

D. Wahl and P. Giguere, "Ice Shedding and Ice Throw–Risk and Mitigation," General Electric Wind Application Engineering Group of GE Energy, 2006.

"Wind Turbine Accident and Incident Compilation," 27-Sep-2019. [Online]. Available: <http://www.caithnesswindfarms.co.uk/fullaccidents.pdf>. [Accessed: 12-Oct-2019].

"Appendix A - SWPPP - vestasv90-100_safetymanual.pdf." [Online]. Available: https://docs.wind-watch.org/vestasv90-100_safetymanual.pdf. [Accessed: 12-Oct-2019].

Array Loss

R. Budny and A. Crowther, "Meet The Achilles Heel Behind Most Gearbox Failures," north american WINDPOWER. [Online]. Available: https://www.nawindpower.com/online/issues/NAW1505/FEAT_01_Meet-The-Achilles-Heel-Behind-Most-Gearbox-Failures.html. [Accessed: 07-Oct-2019].

N. Sharpley, "Understanding the root causes of axial cracking in wind turbine gearbox bearings," *Windpower Engineering & Development*, 11-Apr-2014. [Online]. Available: <https://www.windpowerengineering.com/understanding-root-causes-axial-cracking-wind-turbine-gearbox-bearings/>. [Accessed: 07-Oct-2019].

Fire and Lightning

Alltec, Inc., "Why Protecting Wind Turbines from Lightning is Critical"

C. W. Dodd, T. McCalla Jr, and J. G. Smith, "How to protect a wind turbine from lightning," NASA, Final Technical Report 19840002593, Sep. 1983.

M. Froese, "Damage control: Effects of near-lightning strikes on turbine blades," *Windpower Engineering & Development*, 22-Apr-2015. [Online]. Available:

<https://www.windpowerengineering.com/damage-control-effects-of-near-lightning-strikes-on-turbine-blades/>. [Accessed: 09-Oct-2019].

D. Leick, "How Lightning Safety Practices Differ in Wind Energy, Sports and Construction Applications," presented at the 21st International Lightning Detection Conference, Orlando, Florida, USA, 2010.

Flicker

P. Brinckerhoff, "Update of UK Shadow Flicker Evidence Base," Department of Energy and Climate Change, London, UK, Final Report.

G. Harding, P. Harding, and A. Wilkins, "Wind turbines, flicker, and photosensitive epilepsy: characterizing the flashing that may precipitate seizures and optimizing guidelines to prevent them," *Epilepsia*, vol. 49, no. 6, pp. 1095-1098, Jun. 2008.

P. Marks, "Smart sensors stop flickering wind turbines," *New Scientist*, no. 2834, 15-Oct-2011.

Foundation Cracks

M. Currie, M. Saafi, C. Tachtatzis, and F. Quail, "Structural health monitoring for wind turbine foundations," *Proceedings of the Institution of Civil Engineers - Energy*, vol. 166, no. 4, pp. 162-169, Nov. 2013.

M. Hassanzadeh, "Cracks in onshore wind power foundations Causes and consequences," *Elforsk*, Stockholm, Elforsk Rapport 11:56, Jan. 2012.

F. Miceli, "Cracks in onshore wind turbines foundation," *Wind farms construction*, 20-Sep-2012.

Horses

"Wind Turbine experiences; 2012 survey results." The British Horse Society, 2012.

Host Community Agreements

<https://poseidon01.ssrn.com/delivery.php?ID=25406706812602100212100109402209510502201403802100200510812407102802107600102707712003303601803412200006003011300500508701300102508502807706009709509411>

[1016080095013024127003120069104073115113080025002106113117104115075126015083108079028109122098&EXT=pdf](https://www.utilitydive.com/news/new-york-announces-14b-renewables-funding-as-largest-single-state-commitm/518846/)

NY's push for renewables

<https://www.utilitydive.com/news/new-york-announces-14b-renewables-funding-as-largest-single-state-commitm/518846/>

"New York announces \$1.4B renewables funding as largest single state commitment | Utility Dive." [Online]. Available: <https://www.utilitydive.com/news/new-york-announces-14b-renewables-funding-as-largest-single-state-commitm/518846/>. [Accessed: 01-Oct-2019].

P.E. Salkin, Host Community Agreements for Wind Farm Development (March/April 2009). New York Zoning Law & Practice Report Vol. 9, No. 5, March/April 2009. Available at SSRN: <https://ssrn.com/abstract=1410904>

Moratoria

J. A. Coon, "LAND USE MORATORIA," Division of Local Government Services, New York Department of State, 2010.

Property Value

W. Gulden, "Critique of The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis," Feb. 2010.

M. D. Heintzelman and C. M. Tuttle, "Values in the Wind: A Hedonic Analysis of Wind Power Facilities," Land Economics, vol. 88, no. 3, pp. 571-588, Aug. 2012.

B. Hoen, R. Wiser, P. Cappers, M. Thayer, and G. Sethi, "The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis," Lawrence Berkeley National Lab. (LBNL), Berkeley, CA (United States), LBNL-2829E, Dec. 2009.

C. U. Jensen, T. E. Panduro, and T. H. Lundhede, "The Vindication of Don Quixote: The Impact of Noise and Visual Pollution from Wind Turbines," Land Economics, vol. 90, no. 4, pp. 668-682, Nov. 2014.

M. S. M. C.-J. 8 and 2010 Property Values Illinois, "WindAction | Testimony of Michael McCann on property value impacts in Adams County IL." [Online]. Available: <http://www.windaction.org/posts/26696-testimony-of-michael-mccann-on-property-value-impacts-in-adams-county-il#.XaElfWes4W1>. [Accessed: 12-Oct-2019].

M. S. McCann, "Re: The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis," 14-Dec-2009.

Y. Sunak and R. Madlener, "The Impact of Wind Farms on Property Values: A Geographically Weighted Hedonic Pricing Model," SSRN Electronic Journal, 2012.

SEQR

"The SEQR Handbook," Third Edition 2010 and Draft Fourth Edition 2019, Division of Environmental Permits New York State Department of Environmental Conservation

Stray Voltage

D. Reinemann and J. Heinzen, "Wind Turbines and Farm Stray Voltage," Feb-2014. [Online]. Available: <https://mrec.org/files/2014/03/WindTurbinesStrayVoltage-pages.pdf>. [Accessed: 12-Oct-2019].

M. Sagrillo, "Residential Wind Systems and 'Stray Voltage'," Windletter, The Monthly News Letter of the American Wind Energy Association, vol 23, no. 6, June 2004,

Town Wind Laws and Related Reports

Marne Sussman and Jason James, "Model Municipal Wind Siting Ordinance," draft of January 12, 2012, Center for Climate Change Law at Columbia Law School, [Online]. Available:
http://columbiaclimatelaw.com/files/2016/10/Model_Municipal_Wind_Siting_Ordinance.pdf

"Report from the Town of Bethany Wind Turbine Study Committee," [Online]. Available: <https://townofbethany.com/document-center/wind-energy-information/304-wind-turbine-committee-report/file.html>
Carteret County Tall Structures Ordinance (Rev 2-26-14), [Online]. Available: http://wiseenergy.org/Energy/MillPond/Carteret_Tall_Structures_Ordinance.pdf

Town of Clayton, New York Local Law No. 5 of the year 2016, "Wind Energy Facilities Law," [Online]. Available: https://townofclayton.com/wp-content/uploads/2016/08/Local_Law_BEW-FINAL_8-21-16_rev.pdf

Town of Enfield, Tompkins County, New York, Local Law Number 1 of 2009, "Wind

Energy Facilities Local Law,” [Online]. Available: <http://townofenfield.org/wp-content/uploads/2015/03/Wind-Energy-Facilities-Local-Law-1-2009.pdf>

“Town of Freedom Wind Turbine Ordinance,” dated 11/16/2012, and Enacted Nov.17, 2015 by the Town of Freedom, Maine

Wind Energy Facility Local Law for Town of Hammond, Local Law No. 1 of 2009, [Online]. Available: <https://townofhammondny.com/wp-content/uploads/2018/08/2009-LL-1-wind-energy-facilities.pdf>

Local Law No. 2 of 2011 of the Town of Hammond, NY to Amend and Restate in its entirety Local Law No. 1 of the Year 2009, Wind Energy Facilities, [Online]. Available: <https://townofhammondny.com/wp-content/uploads/2016/02/LL-2-2011-Amend-and-Restate-in-its-entirety-LL-1-of-the-Year-2009-WInd-Energy-Facilities.pdf>

Proposed Local Law No. 1 of 2015, “Wind Energy Facilities Local Law of the Town of Catlin, New York,” [Online]. Available: <https://lincoln.ne.gov/city/plan/dev/wind/working-group-info/Catlin-Local-Law-Proposed-Draft.pdf>

“Findings and Recommendations of the Town of Orleans Citizens Wind Committee, Parts I and II”, [Online]. Available: https://www.townoforleans.com/uploads/3/9/3/0/39304171/orleans_wind_report_pt.1.pdf ; https://www.townoforleans.com/uploads/3/9/3/0/39304171/orleans_part_two_sept_2009.pdf

Parishville, New York Local Law No. 1 of 2017, entitled “WIND ENERGY FACILITY LAW OF THE TOWN OF PARISHVILLE, NEW YORK,” [Online]. Available: http://www.parishvilleny.us/uploads/3/7/1/5/37155101/2017_wind_final.pdf

Local Law No. 2 of the Year 2018, A local law regulating wind energy facilities, [Online]. Available: <http://www.townofrichland.org/forms/miscdocs/doc01614420181114130004.pdf>

Part II: General Legislation/Zoning, Article VI, Special Use Permits , §200-50 – Antennas, towers, windmills and solar energy systems of the Code of the Town of Richmond, NY, [Online]. Available: <https://ecode360.com/12721413>

§205-43.5 – Commercial/Industrial Wind Energy Conversion Systems of the Code of the Town of Somerset, NY, [Online]. Available: <https://ecode360.com/31074077>

Zoning Local Law of the Town of Yates, Orleans County, New York, [Online]. Available: <http://www.townofyates.org/Forms/Yates%20Zoning%20Book>

Article 10 Proceedings

CASE 14-F-0490 - Application of Cassadaga Wind LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 to Construct a Wind Energy Project, *“Recommended Decision by Presiding Examiner Dakin D. Lecakes, Administrative Law Judge, Department of Public Service and Associate Examiner P. Nicholas Garlick, Administrative Law Judge, Department of Environmental Conservation”* on behalf of the New York State Board on Electric Generation Siting and the Environment, November 8, 2017, Matter 14-02216/ Case14-F-0490, [Online]. Available at: <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=14-F-0490&submit=Search+by+Case+Number>

CASE 16-F-0328 - Application of Number Three Wind LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 to Construct a Wind Energy Project, *“Recommended Decision by Presiding Examiner Maureen F. Leary, Administrative Law Judge of the Department of Public Service, and Associate Examiner Molly T. McBride, Administrative Law Judge of the Department of Environmental Conservation”* on behalf of the New York State Board on Electric Generation Siting and the Environment, August 22, 2019, Matter 16-01103/ Case16-F-0328, [Online]. Available at: <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-F-0328&submit=Search>

CASE 15-F-0122 - Application of Baron Winds, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 to Construct a Wind Energy Project, *“Recommended Decision by Co-Presiding Examiners Anthony Belsito and James A. Costello, Administrative Law Judges of the Department of Public Service, and Associate Examiner Maria E. Villa, Administrative Law Judge of the Department of Environmental Conservation,”* on behalf of the New York State Board on Electric Generation Siting and the Environment, May 24, 2019, Matter 15-00516/ Case 15-F-0122, [Online]. Available at: <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=15-F-0122&submit=Search>