CHARTER TOWNSHIP OF MUNDY

ORDINANCE NO. 222-11

AN ORDINANCE TO REGULATE AND ALLOW PRIVATE WIND ENERGY CONVERSION SYSTEMS FOR THE PURPOSE OF PROVIDING ELECTRICITY TO A RESIDENCE, FARM, BUSINESS, INSTITUTION, AND/OR INDUSTRIAL FACILITY ON THE SAME SITE SO IT MAY BE PERMITTED AS AN ACCESSORY USE TO A PRINCIPAL PERMITTED USE, ONLY WHEN MEETING THE STANDARDS OF THIS ORDINANCE, IN THAT THE CHARTER TOWNSHIP OF MUNDY RECOGNIZES THAT WIND ENERGY CONVERSION IS AN EVOLVING TECHNOLOGY, AND IT IS THE PURPOSE OF THIS ORDINANCE TO PROVIDE REASONABLE REGULATIONS FOR THE SAFE INSTALLATION OF PRIVIATE WIND ENERGY CONVERSION SYSTEMS AND TO SET FORTH STANDARDS FOR UTILITY GRID WIND ENERGY SYSTEMS. FURTHER, TO PROVIDE FOR PENALTIES AND ENFORCEMENT OF THIS ORDINANCE, ALL TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THE RESIDENTS OF THE CHARTER TOWNSHIP OF MUNDY.

THE CHARTER TOWNSHIP OF MUNDY ORDAINS:

SECTION I

DEFINITIOINS

A. “Anemometer” means an electrical or mechanical device for measuring the wind speed.

B. “Anemometer Tower” means any freestanding tower containing instrumentation such as anemometers that is designed to provide present moment wind data for use by the supervisory control and data acquisition (SCADA).

C. “Ambient Noise Level” means the sound pressure level exceeded 90% of the time.

D. “ANSI” means the American National Standards Institute.

E. “Decibel (dB)” means the unit of measure used to express the magnitude of sound pressure and sound intensity.

F. “IEC” means the International Electrotechnical Commission.

G. “ISO” means the International Organization for Standardization.

H. “On Site Wind Energy System” means a land use for generating electric power from wind and is an accessory use that is intended to primarily serve the needs of the consumer at the site.

I. “Rotor” means an element of a wind energy system that acts as a multi-bladed airfoil assembly, thereby extracting through rotation, kinetic energy directly from the wind.

J. “Shadow Flicker” means the alternating changes in light intensity caused by the moving blade of a wind energy system that casts shadows on the ground and stationary objects, such as dwelling windows.

K. “Utility Grid Wind Energy System” means a land use for generating power by use of wind at multiple tower locations in a community and includes accessory uses such as but not limited to a SCADA (supervisory control and data acquisition) Tower, electric substation, or other out-building. Such a system is designed and intended to provide electricity to the electric utility grid.

L. “Wind Energy System” means a land use for generating power by use of wind; utilizing use of a wind turbine generator and includes the turbine, blades, and tower (or base) as well as related electrical equipment. This does not include wiring to connect the wind energy system to the grid.

M. “Wind Site Assessment” means an assessment to determine the wind speeds at a specific site and the feasibility of using that site for construction of a wind energy system.

SECTION II

CONDITIONS AND REQUIREMENTS

A. All wind energy conversion systems shall be subject to the following conditions:

1. All other requirements of this Section are met.

System overall height with the blade in the vertical position

shall not exceed 60 feet above ground level at normal grade. When such system is building-mounted, the same height limit shall apply. Roof-top systems shall be exempt from rooftop mechanical screening requirements.

3. Minimum lot size for a free-standing or lattice-mounted on-site wind energy conversion system shall be one (1) acre.

4. On-site systems may be freestanding and mounted on a monopole or building-mounted or lattice-mounted systems.

5. On-site systems shall have a rated capacity of less than 100 kW and be designed to primarily serve the needs of an individual home, farm, business, or industrial use. There shall be no limit to the number of systems permitted on any individual property, so long as all other requirements contained within this Section have been met.

B. Utility grid wind energy conversion systems shall be permissible as a primary use in all agricultural and industrial districts, provided:

1. All other requirements of this Section are met.

Any and all accessory structures conform to setbacks and other requirements applying to accessory structures in the relevant zoning district.

3. System height overall with the blade in the vertical position shall not exceed 150 feet above the ground level at normal grade. When such system is building-mounted, the same height limit shall apply. Rooftop systems shall be exempt from rooftop mechanical screening requirements.

4. Utility grid systems shall have a rated capacity of less than 250 kW and be designed to provide electrical energy to the utility grid. There shall be no limit to the number of systems permitted on any individual property, so long as all other requirements contained within this Section have been met.

5. Sites must be signed and secured to provide emergency information and hazard identification.

6. Accessory structures must be screened with shrubs or other landscaping.

7. The Planning Commission may require additional studies or data to ensure compliance with the standards herein.

8. All towers shall have lightning protection.

9. Minimum lot size for a free-standing or lattice-mounted utility grid energy conversion systems district shall be one (1) acre.

10. Utility grid systems must be approved by the Planning Commission.

C. Building-mounted systems may be permitted on any size lot, provided the setbacks and height limits in subsections E & F, below, are

met.

D. The setback of the system including ancillary components from all property lines, occupied buildings, and additional towers shall be at least equal to 120% of the height of the entire system at its highest point, or the minimum building setback for the respective zoning district, whichever is greater. Such systems are permitted only in a rear or side yard.

E. All exposed moving components of a system must maintain a minimum ground clearance of twenty (20) feet.

F. The setback of any system from any existing or planned overhead public utility lines or easement shall be at least equal to 120% of the height of the entire system at its highest point. It shall be the applicant's responsibility to note the locations of utility poles and/or overhead lines/easements on a dimensioned drawing as required in this Section.

G. Systems shall not generate more that 55 dB or more than 5 dB above the ambient noise level as measured at all property lines, whichever is greater.

H. Systems shall be constructed of a material, painted, or otherwise treated so as to be non-reflective and in a non-obtrusive color (typically matte white or gray). No striping of color or any advertisement, logo, symbol, or graphic of any kind shall be visible on the blades or tower.

I. Systems shall not be illuminated. No exterior light be mounted to or atop any portion of the structure unless required per Federal Aviation Administration Regulations.

J. Wind energy conversion systems must be approved/certified by the American Wind Energy Associations (AWEA) and/or the U.S. Department of Energy.

K. All wind energy systems shall have automatic braking, governing, or a feathering system to prevent uncontrolled rotation or over speeding. All wind energy systems shall have lightning protection.

L. Towers with guy wires shall not be permitted.

M. Systems shall comply with all applicable State construction and electrical codes and Township building permit requirements. Building

permit applications for wind energy conversion systems shall be accompanied by standard drawings of the wind turbine structure, including the tower, base and footings. An engineering analysis of the tower showing compliance with the Michigan Building Code and certified by a licensed professional engineer shall also be submitted.

N. Wind energy systems must comply with applicable Federal Aviation Administration regulations, the Michigan Airport Zoning Act (Public Act 23 of 1950, MCL 259.431 et seq.) and the Michigan Tall Structures Act (Public Act 259 of 1959, MCL 259.481 et seq.) or any other state or federal regulation that applies.

O. A wind energy system connected to the electric utility grid must obtain an Interconnection and Operation Agreement or its equivalent from the utility company, demonstrating the utility company's approval of an interconnected, customer-owner generator. Interconnected systems shall comply with Michigan Public Service Commission and Federal Energy Regulatory Commission standards. Off-grid systems shall be exempt from this requirement.

P. The Building Official or Planning Commission may require a study of other acceptable demonstration of the impacts of "shadow flicker" by the proposed system. Systems shall not be permitted if shadow flicker is demonstrated to directly impact on any dwelling, or other habitable area of existing residential structure, or other existing improved property.

SECTION III

BUILDING PERMIT REQUIRED

A. Upon review of the application for a Building Permit, the Building Department will grant approval if it is found that the plan complies with in all aspects with this Ordinance and the Township Building Code.

B. In instances where new technologies render any of the regulations non-applicable, the spirit and intent of this Ordinance will apply, as determined by the Building Inspector.

C. In instances where the Building Inspector selects, the matter will be sent to the Planning Commission.

D. A variance may be sought under the conditions and requirements as set forth in the Township Zoning Ordinance, by any applicant for a wind

energy conversion system.

E. An appeal may be had from any decision made by the Building Department in the granting of a permit, or any decision made by the Planning Commission, to the Board of Appeals, under the requirements, procedures and standards as set forth in the Township Zoning Ordinance.

SECTION IV

SEVERABILITY

Should any portion of this Ordinance be held invalid for any reason, such holding shall not be construed as affecting the validity of any of the remaining portions.

SECTION V

PENALTIES

A violation of this Ordinance shall be a civil infraction subject to a fine of not less than One Hundred Dollars ($100.00) or more than Five Hundred Dollars ($500.00), together with Court costs.

SECTION VI

NUISANCE

A violation of this Ordinance shall be considered a nuisance, and other remedies as allowed by law may be pursued to abate said violation.

SECTION VII

EFFECTIVE DATE

This Ordinance shall become effective upon passage and publication.

We the undersigned Supervisor and Clerk of the Charter Township of Mundy, Genesee County, Michigan, do hereby certify that the above

ordinance was passed by the Charter Township of Mundy Board on the 13th day of December, A.D., 2010.

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DAVID L. GUIGEAR, Supervisor

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TONYA KETZLER, Clerk