NOTICE OF POSTING OF A PROPOSED ZONING TEXT AMENDMENT ORDINANCE

PLEASE TAKE NOTICE that a Tallmadge Charter Township Text Amendment Ordinance had its first reading at a meeting of the Tallmadge Charter Township Board held on September 11, 2018 and is scheduled for a second reading on October 9, 2018.

The Zoning Text Amendment Ordinance will add Chapter 16A to regulate wind energy systems, bio-fuel, anaerobic digesters, and solar power; will amend Section 18.05(b) to increase the required time for a decision of the Planning Commission; will amend Section 18.05(d) to require a certain number of plan copies and; will amend Section 20.01(b)(3) to modify the means of notification for violation of the Zoning Ordinance.

PLEASE TAKE FURTHER NOTICE that the Ordinance has been posted in the office of the Tallmadge Charter Township Clerk, Tallmadge Charter Township, 0-1451 Leonard Road, N.W., Grand Rapids, Michigan (telephone: 616-677-1248), and on the Township website at www.tallmadge.com.

Dated: September 23, 2018

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Lenore Cook, Clerk
Tallmadge Charter Township

The following Zoning Text Amendment Ordinance was introduced and a first reading completed at the Tallmadge Charter Township Board meeting on September 11, 2018.

ORDINANCE NO. 091118-1

ZONING TEXT AMENDMENT ORDINANCE

AN ORDINANCE TO AMEND THE TALLMADGE CHARTER TOWNSHIP ZONING ORDINANCE BY ADDING CHAPTER 16A CONCERNING RENEWABLE ENERGIES, AMENDING SECTION 18.05(B) – REVIEW PERIOD; AMENDING SECTION 18.05(D) – APPROVAL AND, AMENDING SECTION 20.01(B)(3) – DUTIES AND RESPONSIBILITIES, AND TO PROVIDE FOR THE EFFECTIVE DATE OF THIS ORDINANCE.

THE CHARTER TOWNSHIP OF TALLMADGE, COUNTY OF OTTAWA, AND STATE OF MICHIGAN ORDAINS:

Section 1. Renewable Energies. Section 16A shall be added to the Tallmadge Charter Township Zoning Ordinance to state in its entirety as follows.

CHAPTER 16A

RENEWABLE ENERGIES

SECTION 16A.01. PURPOSE. Renewable energies are a resource that can prevent fossil fuel emissions and reduce energy load. The purpose and intent of renewable energies is to promote the compatible use of solar, bio-fuel, anaerobic digesters, and wind to assist in decreasing the dependence of the township on non-renewable energy systems through the accommodation of proper renewable energy systems and equipment within the township. The purpose of this Chapter is to establish guidelines for siting solar, bio-fuel, anaerobic digesters, and wind energy uses. The goals are as follows.

(a) Promote the safe, effective, and efficient use of solar, bio-fuel, anaerobic digesters, and wind energy uses in order to reduce the consumption of fossil fuels in producing electricity.

(b) Preserve and protect public health, safety, welfare, and quality of life by minimizing the potential adverse impacts of solar, bio-fuel, anaerobic digesters, and wind energy uses.

(c) Establish standards and procedures by which the siting, design, engineering, installation, operation, and maintenance of solar, bio-fuel, anaerobic digesters, and wind energy uses shall be governed.

SECTION 16A.02. DEFINITIONS. As used in this Chapter, the following terms shall have the indicated meanings.

1. Ambient Sound Level. The amount of background noise at a given location prior to the installation of a wind energy turbine(s) which may include, but not be limited to, traffic, machinery, lawnmowers, human activity, and the interaction of wind with the landscape. The ambient sound level is measured on the dB(A) weighted scale as defined by the American National Standards Institute.

2. Anaerobic Digester. A facility in which microorganisms break down biodegradable material in the absence of oxygen, used for industrial or domestic purposes to manage waste and/or produce energy.

3. Anaerobic Digestion. The biochemical conversion of complex organic materials, such as manure, into methane and other byproducts in the absence of oxygen.

4. Anemometer. A temporary wind speed indicator constructed for the purpose of analyzing the potential for utilizing a wind energy turbine at a given site. This includes the tower, base plate, anchors, cables and hardware, wind direction vanes, booms to hold equipment, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resource at a given location.

5. At-home. A biofuel facility that is privately produced by the owner or tenant of a single-family dwelling.

6. Biofuel. Any renewable fuel product, whether solid, liquid, or gas, that is derived from recently living organisms or their metabolic by-products and meets applicable quality standards, including, but not limited to, ethanol and biodiesel. Biofuel does not include methane or any other fuel product from an anaerobic digester.

7. Building-Integrated Photovoltaic (BIPV) Systems. A solar energy system that consists of integrating photovoltaic modules into the building structure, such as the roof or the façade and which does not alter the relief of the roof.

8. Collective Solar. Solar installations owned collectively through subdivision homeowner associations, “adopt-a-solar-panel” programs or other similar arrangements.

9. Condominium Act. Michigan Public Act 59 of 1978, as amended.

10. Condominium Development. A development that is created under the Condominium Act.

11. Decibel. A unit of measure used to express the magnitude of sound pressure and sound intensity. Decibels shall be measured on the dB(A) weighted scale as defined by the American National Standards Institute.

12. Decommissioning. The process of terminating operation and completely removing a wind energy turbine(s) and all related buildings, structures, foundations, access roads, and equipment.

13. Digester Feedstocks. Organic materials that are acceptable for inclusion within an anaerobic digester include livestock manure, waste animal feed, dead animals, yard waste or grass clippings, organic food processing waste, waste grease/trap grease, food waste intended for human consumption, by-products from ethanol, biodiesel, and algal production and other digester feedstocks that may be approved by the Director of the Michigan Department of Natural Resources and Environment or its successor agency.

14. Downwind Turbine. A wind energy turbine positioned in a manner so that the wind hits the turbine blades after it hits the tower, but which does not produce any noise from the blades interacting with the tower during rotation (i.e. a thumping noise or similar sound) beyond that produced by a similar upwind turbine.

15. Ethanol. A substance that meets the ASTM international standard in effect on the effective date of this section as the D-4806 specification for denatured fuel grade ethanol for blending with gasoline.

16. Farm. That term as defined in section 2 of the Michigan Right to Farm Act, 1981 PA 93, MCL 286.472, as amended.

17. Flush-Mounted Solar Panel. Photovoltaic panels and tiles that are installed flush to the surface of a roof and which cannot be angled or raised.

18. Freestanding or Ground-Mounted Solar Energy System. A solar energy system that is a structure directly installed in the ground and is not attached or affixed to an existing structure.

19. General Common Element. An area designated for use by all owners within a condominium development.

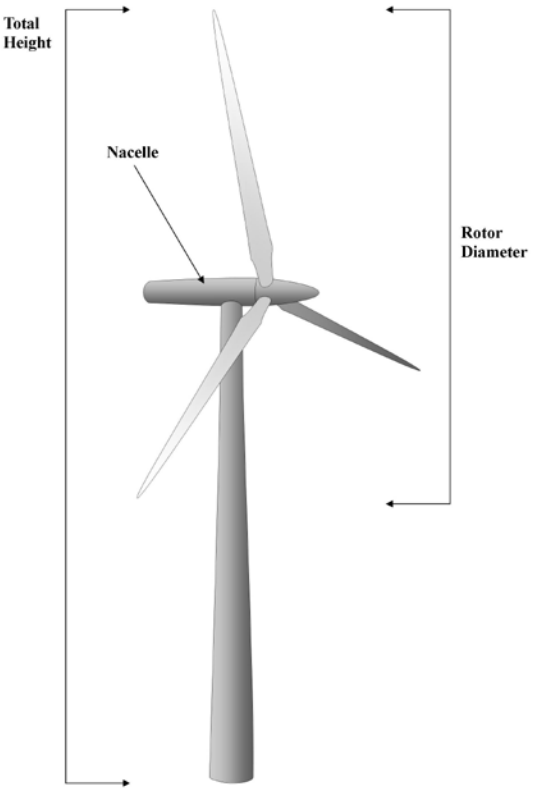
20. Large-Scale Solar. Solar photovoltaic systems that produce more than ten (10) kilowatts (kW) per hour of energy or solar-thermal systems, which provide energy for off-site consumption. On-site consumption is permitted as a secondary use.

21. Medium Wind Energy Turbine (MWET). A tower-mounted wind energy system that converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire,

inverter, batteries, or other components used in the system. The MWET has a maximum height of one hundred fifty (150) feet.

22. Nacelle. The encasement which houses all of the generating components, gear box, drive tram, and other equipment of a wind energy turbine.

23. Net-Metering. A billing arrangement that allows solar, anaerobic digesters, wind turbines, or other renewable energy systems to receive credit for excess electricity that they generate and deliver back to the grid so that they only pay for their net electricity usage at the end of a billing period from an electricity provider.



24. Occupied Building. A residence, school, hospital, church, public library, business, or any building used for public gatherings.

25. Operator. The entity responsible for the day-to-day operation and maintenance of a property and its uses.

26. Owner. The individual or entity, including any respective successors and assigns, who has an equity interest or owns a property, structure or use.

27. Photovoltaic (PV) Systems. A solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells that generate electricity whenever light strikes them.

28. Proof gallon. That term as defined in 27 Code of Federal Regulations 19.907.

29. Renewable Energy Systems. Structures, equipment, devices or construction techniques used for the production of heat, light, cooling and electricity or other forms of energy on site and may be attached to or separate from the principal structure.

30. Rooftop or Building Mounted Solar System. A solar power system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted system or as modules fixed to frames which can be tilted toward the south at an optimal angle.

31. Rotor Diameter. The cross-sectional dimension of the circle swept by the rotating blades of a wind energy turbine.

32. Shadow Flicker. The moving shadow, created by the sun shining through the rotating blades of a wind energy turbine. The amount of shadow flicker created by a wind energy

turbine is calculated by a computer model that takes into consideration turbine location, elevation, tree cover, location of all structures, wind activity, and sunlight.

33. Small-Scale Solar. Solar photovoltaic systems that produce up to ten kilowatts (kW) per hour of energy or solar-thermal systems, which serve the building to which they are attached and do not provide energy for any other buildings.

34. Small Structure-Mounted Wind Energy Turbine (SSMWET). Converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. A SSMWET is attached to a structure's roof, walls, or other elevated surface. The structure must be at least twelve (12) feet high at its highest roof point and must be secured to frost-footings or a concrete slab. The SSMWET has a maximum height of fifteen (15) feet.

35. Small Tower-Mounted Wind Energy Turbine (STMWET). A tower-mounted wind energy system that converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. The STMWET has a maximum height of one hundred twenty (120) feet.

36. Solar Access. Space open to the sun and clear of overhangs or shade including the orientation of streets and lots to the sun so as to permit the use of active and/passive solar energy systems on individual properties.

37. Solar Collector. A solar photovoltaic cell, panel, or array, or solar hot air or water collector device, which relies upon solar radiation as an energy source for the generation of electricity or transfer of stored heat.

38. Solar Energy Equipment/System. Solar collectors, controls, energy storage devices, heat pumps, heat exchangers and other materials, hardware or equipment necessary to the process by which solar radiation is collected, converted into another form of energy, stored, protected from unnecessary dissipation and distributed. Solar systems include solar thermal, photovoltaic and concentrated solar.

39. Solar Panel. A device for the direct conversion of solar energy into electricity.

40. Solar Storage Battery. A device that stores energy from the sun and makes it available in an electrical form.

41. Solar-Thermal Systems. A system that directly heats water or other liquid using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water and heating pool water.

42. Total Height. The vertical distance measured from the ground level at the base of the tower to the uppermost vertical extension of any blade or antenna, or the maximum height reached by any part of a wind energy turbine, wireless communications facility or other structure permitted by this Ordinance.

43. Tower. A freestanding monopole that supports a wind energy turbine, wireless communications facility or other structure permitted by this Ordinance.

44. Upwind Turbine. A wind energy turbine positioned in a manner so that the wind hits the turbine blades before it hits the tower in order to avoid the thumping noise which can occur if the wind is disrupted by hitting the tower before the blades.

45. Wind Energy Turbine (WET). Any structure-mounted, small, medium, or large wind energy conversion system that converts wind energy into electricity through the use of a wind generator and includes the nacelle, rotor, tower, and pad transformer, if any.

SECTION 16A.03. TEMPORARY USES. Anemometers are permitted in all zoning districts as a temporary use, in compliance with this Section and applicable WET regulations.

(a) The construction, installation, or modification of an anemometer tower shall require a building permit and shall conform to all applicable local, state, and federal safety, construction, environmental, electrical, and communication requirements.

(b) An anemometer shall be subject to the minimum requirements for height, setback, separation, location, safety requirements, and decommissioning that correspond to the size of the WET that is proposed to be constructed on the site.

(c) An anemometer shall be permitted for no more than thirteen (13) months.

SECTION 16A.04. PERMITTED PRINCIPAL USES.

A. Wind Energy Turbines

(a) A small structure-mounted wind energy turbine shall be considered a permitted use in all zoning districts and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

(b) A small tower-mounted wind energy turbine shall be considered a permitted use in the Agricultural District and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

(c) The above permitted uses are subject to the following minimum requirements.

1. Siting and Design Requirements.

a. Upwind turbines and downwind turbines are permitted.

b. Visual Appearance.

i. A SSMWET or STMWET, including accessory buildings and related structures, shall be a non-reflective, non-obtrusive color (e.g. white, gray, black). The appearance of the turbine, tower, and any ancillary facility shall be maintained throughout the life of the SSMWET or STMWET.

ii. A SSMWET or STMWET shall not be artificially lighted, except to the extent required by the Federal Aviation Administration ("FAA") or other applicable authority, or otherwise necessary for reasonable safety and security.

iii. A SSMWET or STMWET shall not be used for displaying any advertising (including flags, streamers, or decorative items), except for identification of the turbine manufacturer.

c. Ground Clearance. The lowest extension of any blade or other exposed moving component of a SSMWET or STMWET shall be at least fifteen (15) feet above the ground (at the highest point of the natural grade within thirty (30) feet of the base of the tower) and, in addition, at least fifteen (15) feet above any outdoor surfaces intended for human use, such as balconies or roof gardens, that are located directly below the SSMWET or STMWET.

d. Noise. Noise emanating from the operation of a SSMWET or STMWET shall not exceed, at any time, the lowest ambient sound level that is permitted by Section 3.21(c) of this Ordinance.

e. Vibration. Vibrations shall not be produced which are humanly perceptible beyond the lot on which a SSMWET or STMWET is located.

f. Guy Wires. Guy wires shall not be permitted as part of the SSMWET or STMWET.

2. Small Structure-Mounted Wind Energy Turbine Dimensional Requirements.

a. Height. The height of a SSMWET shall not exceed fifteen (15) feet as measured from the highest point of the roof, excluding chimneys, antennae, and other similar protuberances.

b. Setback. The setback of the SSMWET shall be that of the requirements of the zoning district in which it is located and the structure on which it is located. The setback shall be measured from the furthest outward extension of all moving parts.

c. Quantity. No more than three (3) SSMWETs shall be installed on any lot.

d. Separation. If more than one (1) SSMWET is installed, a minimum distance equal to the height of the highest SSMWET must be maintained between the base of each SSMWET.

3. Small Tower-Mounted Wind Energy Turbine Dimensional Requirements.

a. Height. The total height of a STMWET shall not exceed one hundred twenty (120) feet.

b. Occupied Building Setback. The setback from all occupied buildings on the applicant's lot shall be a minimum of twenty (20) feet measured from the base of the tower.

c. Other Setbacks. The setback shall be minimally equal to the total height of the STMWET, as measured from the base of the Tower, from the property line, public right-of-way, public easement, or overhead public utility lines. This setback may be reduced if the applicant provides a registered engineer's certification that the WET is designed to collapse, fall, curl, or bend within a distance or zone shorter than the height of the wind turbine but in no instance shall the setback be less than that of the requirements of the zoning district in which it is located.

d. Quantity. No more than one (1) STMWET shall be installed on any lot.

e. Electrical System. All electrical controls, control wiring, grounding wires, power lines, and system components shall be placed underground within the boundary of each lot at a depth designed to accommodate the existing land use to the maximum extent

practicable. Wires necessary to connect the wind generator to the tower wiring are exempt from this requirement.

4. Permit Application Requirements. All of the following information shall be included in an application for a SSMWET or a STMWET.

   a. Name of lot owner(s), address, and parcel number.

   b. A site plan in accordance with Section 18.04 of this Ordinance, which shall also include maps (drawn to scale) showing the proposed location of all components and ancillary equipment of the SSMWET(s) or STMWET, lot lines, physical dimensions of the lot, existing building(s), setback lines, right-of-way lines, public easements, overhead utility lines, sidewalks, non-motorized pathways, roads and contours. The site plan must also include adjoining properties as well as the location and use of all structures.

   c. The proposed type and height of the SSMWET or STMWET to be constructed; this shall include the manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated generating capacity, dimensions, rotor diameter, and a description of ancillary facilities.

   d. Documented compliance with the noise requirements set forth in this Ordinance.

   e. Documented compliance with applicable local, state and national regulations including, but not limited to, all applicable safety, construction, environmental, electrical, communication, and FAA requirements.

   f. Proof of the applicant's liability insurance.

   g. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned generator and that such connection has been approved. Off-grid systems shall be exempt from this requirement.

   h. Other relevant information as may be reasonably requested.

   i. Signature of the applicant.

   j. Total proposed number of SSMWETs.

k. A description of the methods that will be used to perform maintenance on the STMWET and the procedures for lowering or removing the STMWET in order to conduct maintenance.

5. Safety Requirements.

a. If the SSMWET or STMWET is connected to a public utility system for net-metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's then-current service regulations, meeting federal, state, and industry standards applicable to wind power generation facilities, and the connection shall be inspected by and subject to the approval of the appropriate public utility.

b. The SSMWET or STMWET shall be equipped with an automatic braking, governing or feathering system to prevent uncontrolled rotation, over-speeding, and excessive pressure on the tower structure, rotor blades and other wind energy components unless the manufacturer certifies that a braking system is not necessary.

c. A clearly visible warning sign regarding voltage shall be placed at the base of the SSMWET or STMWET.

d. The structural integrity of the SSMWET or STMWET shall conform to the design standards of the International Electrical Commission, specifically IEC 61400-1, "Wind Turbine Safety and Design," IEC 61400-2, "Small Wind Turbine Safety," IEC 61400-22, "Wind Turbine Certification," and IEC 61400-23, "Blade Structural Testing," or any similar successor standards.

6. Signal Interference. The SSMWET or STMWET shall not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, or emergency communication systems.

7. Decommissioning.

a. The SSMWET or STMWET owner(s) or operator(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the owner(s) or operator(s) of the SSMWET or STMWET, and for a good cause, the Township Board may grant a reasonable extension of time. The SSMWET or STMWET will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12)

months. All decommissioning expenses are the responsibility of the owner(s) or operator(s).

b. If the SSMWET or STMWET owner(s) or operator(s) fails to complete decommissioning within the period prescribed above, the Township Board may designate a contractor to complete decommissioning with the expense thereof to be charged to the violator and/or to become a lien against the lot . If the SSMWET or STMWET is not owned by the property owner(s), an irrevocable letter of credit must be provided to the Township for the cost of decommissioning each SSMWET or STMWET.

c. In addition to the decommissioning requirements listed above, the STMWET shall also be subject to the following:

i. Decommissioning shall include the removal of each STMWET, buildings, electrical components, and any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade.

ii. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s) or operator(s). If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

B. Bio-Fuel

1. A biofuel production facility with an annual production capacity of not more than 100,000 gallons of biofuel is a permitted use of property if all of the following requirements are met:

a. The biofuel production facility is located on a farm.

b. The biofuel production facility is located not less than one hundred (100) feet from the boundary of any contiguous property under different ownership than the property on which the biofuel production facility is located.

c. On an annual basis, not less than twenty-five (25%) of the feedstock for the biofuel production facility is produced on the farm where the biofuel production facility is located, and not less than twenty-five

(25%) of the biofuel or another product or by-product produced by the biofuel production facility is used on that farm.

2. At-home biofuel production with an annual production capacity of not more than one thousand (1,000) gallons of biofuel for each passenger vehicle or light truck registered at the property is a permitted use on a residential property, if all of the following requirements are met:

    a. Each passenger vehicle or light truck is operable, licensed to the owner or tenant of the property on which the At-home facility is located and is otherwise road worthy.

    b. The parcel on which the At-home biofuel production occurs is at least one (1) acre in area.

    c. The building or buildings in which the biofuel production is located shall be at least one hundred (100) feet from any adjacent principal or accessory building on a separate property.

    d. All biofuel produced on the property shall never be sold, distributed or otherwise used by any other vehicle than those registered at the property and meet the aforementioned requirements.

    e. An operation plan shall be submitted to the Zoning Administrator providing detail regarding at least the following and any other information requested by the township:
        i. The registered vehicle(s)
        ii. Expected gallon production
        iii. The building or buildings utilized for the at-home biofuel operation
        iv. A site plan showing setbacks, parking, storage of fuel and surrounding uses.

C. Anaerobic Digesters

1. An anaerobic digester facility is a permitted use of property if all of the following requirements are met:

    a. On an annual basis, more than fifty percent (50%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.

    b. An anaerobic digester shall meet the following minimum isolation distances:

i. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.

ii. Two (2) feet above the seasonal high water table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a.

iii. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan department of environmental quality, pursuant to the program established under the Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

iv. Two hundred (200) feet from nearest non-farm residence.

c. Operators of an anaerobic digester must be qualified under the State of Michigan with both of the following:

i. Complete the Michigan-on-farm anaerobic digester operator certification course.

ii. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.

d. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

D. Solar

1. Small-Scale Solar energy collectors shall be permitted only to provide power for use by owners, lessees, tenants, residents or other occupants of the premises on which they are erected but nothing contained in this provision shall be construed to prohibit Collective Solar installations or the sale of excess power through a net billing or net-metering arrangement.

2. Solar Energy Equipment and Solar Energy Systems shall be permitted only if they are determined to not present any unreasonable safety risks, including but not limited to, the following:

    a. Weight load
    b. Wind resistance
    c. Ingress and egress in the event of fire or other emergency

3. No Small Scale solar energy system or device shall be installed or operated except in compliance with this Section.

4. No solar panel shall create glare, reflection or any other deflection of light on any adjacent property below the maximum height established for each district.

5. Building-Integrated Photovoltaic Systems and Solar-Thermal Systems are permitted in all zoning districts.

6. Rooftop and Building-Mounted Solar Collectors are permitted in all zoning districts subject to the following condition:

    a. The maximum height of the zoning district in which the rooftop and building-mounted solar collectors are located shall not apply provided that such structures are erected only to such height as is reasonably necessary to accomplish the purpose for which they are intended to serve and that such structures do not obstruct solar access to adjacent and neighboring properties.

7. Free-Standing and Ground-Mounted Solar Collectors are permitted as accessory structures in all zoning districts, subject to the following conditions:

    a. The location of the solar collectors shall meet all applicable setback requirements for accessory structures in the zoning district in which it is located.
    b. All solar collectors shall be adequately screened with architectural features or landscaping such as berms, trees or bushes that prevent their visible exposure to any right-of-way and preserves the character

of the property and surrounding area. An architectural or landscaping plan shall be submitted for approval to the Zoning Administrator.

c. Solar energy equipment shall be located in a manner that does not shade any adjacent property at any time of the daylight hours.

8. Safety

a. All solar collector installations shall be performed by a qualified solar installer.
b. Any connection to the public utility grid must be inspected by the appropriate public utility.
c. Solar energy systems shall be maintained in good working order.
d. If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the State of Michigan Building Code, currently in effect, when in use. Any solar storage batteries that are no longer used shall be disposed of in accordance with the laws, regulations and ordinances of the State of Michigan and the Township or any other applicable enforcing agency.
e. If a solar collector ceases to perform its originally intended function for more than twelve (12) consecutive months, the owner of the property shall remove the collector, mount and associated equipment no later than ninety (90) days after the end of the twelve (12) month period.

SECTION 16A.05. PERMITTED SPECIAL USES WITH CONDITIONS.

A. Wind Energy Turbines

(a) A small tower-mounted wind energy turbine (STMWET) shall be considered a special use in all zoning districts, except the Agricultural District, and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

STMWETs shall comply with Section 16A.04 above, the site plan review requirements in Chapter 18, and the special use requirements in Chapter 19 of this Ordinance.

(b) A MWET shall be considered a special use in the Agricultural District, Commercial Service District, General Commercial District, Industrial District, Planned Unit Development District and in condominium developments that are approved after the effective date of the ordinance adding this Section to the Ordinance.

(c) The special uses listed in subsection (b) above are subject to the following minimum requirements.

1. Siting and Design Requirements.

a. Upwind turbines and downwind turbines are permitted,

b. The design of a MWET shall conform to all applicable industry standards.

c. Visual appearance.

i. Each MWET, including accessory buildings and other related structures, shall be mounted on a tubular tower and a non-reflective, non-obtrusive color (e.g. white, gray, black). The appearance of turbines, towers and buildings shall be maintained throughout the life of the MWET.

ii. Each MWET shall not be artificially lighted, except to the extent required by the FAA or other applicable authority, or otherwise necessary for reasonable safety and security.

iii. No MWET may be used for displaying any advertising (including flags, streamers, or decorative items), except for reasonable identification of the turbine manufacturer or operator(s).

d. Vibration. A MWET shall not produce vibrations humanly perceptible beyond the lot on which it is located.

e. Shadow Flicker. The MWET owner(s) and/or operator(s) shall conduct an analysis on potential shadow flicker at any occupied building with direct line-of-sight to the MWET, and at the buildable area of any vacant adjacent lot with direct line-of-sight to the MWET that could accommodate an occupied building. The analysis shall identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sun-rise to sun-set over the course of a year. The analysis shall identify situations where shadow flicker may affect the occupants of the buildings for more than thirty (30) hours per year, and describe measures that shall be taken to eliminate or mitigate the problems. Shadow Flicker on a building shall not exceed thirty (30) hours per year. The Township shall be provided with a copy of this analysis, and the Township reserves the right to require this analysis to be updated as reasonably necessary.

f. Guy Wires. Guy wires shall not be permitted as part of the MWET.

g. Electrical System. All electrical controls, control wiring, grounding wires, power lines, and all other electrical system components of the MWET shall be buried underground within the boundary of each lot at a depth designed to accommodate the existing land use to the maximum extent practicable., and to comply with the applicable electrical code. Wires necessary to connect the MWET to the tower wiring are exempt from this requirement.

h. Noise. Any noise emanating from the operation of a MWET shall not exceed, at any time, the lowest ambient sound level that is permitted by Section 3.21(c) of this Ordinance.

2. Dimensional Requirements.

a. Location. The MWET shall only be located in a general common element if it is located in a condominium development. If a MWET is located on a lot with an occupied building, it shall only be located in the rear yard; however, it may be located in a side yard if it is set back at least one hundred fifty (150) feet from the front lot line as measured from the base of the tower.

b. Height. The Total height of a MWET shall not exceed one hundred and fifty (150) feet.

c. Ground Clearance. The lowest extension of any blade or other exposed moving component of a MWET shall be at least fifteen (15) feet above the ground (at the highest point of the grade level within fifty (50) feet of the base of the tower) and, in addition, at least fifteen (15) feet above any outdoor surfaces intended for human occupancy, such as balconies or roof gardens, that are located directly below the MWET.

d. Quantity. No more than one (1) MWET shall be installed for every two and one-half (2.5) acres of land included in the lot.

e. Setback and Separation.

i. Occupied Building Setback. The setback from all occupied buildings on the applicant's lot shall be a minimum of twenty (20) feet measured from the base of the tower.

ii. Property Line Setbacks. With the exception of the locations of public roads (see below), drain rights-of-way and lots with occupied buildings (see above), the internal property line setbacks shall be minimally equal to the total height of the MWET as measured from the base of the tower. This setback may be reduced to a distance agreed upon as part of the special use permit if the applicant provides a registered engineer's certification that the WET is designed to collapse, fall, curl, or bend within a distance or zone shorter than the height of the WET but in no instance shall the setback be less than that of the requirements of the zoning district in which it is located.

iii. Private or Public Road Setback. Each MWET shall be set back from the nearest private or public road a minimum distance equal to the total height of the MWET, determined at the nearest boundary of the underlying right-of-way for such private or public road.

iv. Communication and Electrical Lines. Each MWET shall be set back from the nearest above-ground public electric power line or telephone line a minimum distance equal to one and one-half (1.5) times the total height of the MWET, as measured from the base of the tower, determined from the existing power line or telephone line.

v. Tower Separation. MWET tower separation shall be based on industry standard and manufacturer recommendation.

3. Safety Requirements.

a. If the MWET is connected to a public utility system for net-metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's then-current service regulations applicable to wind power generation facilities, and the connection shall be inspected by the appropriate public utility.

b. The MWET shall be equipped with an automatic braking or governing system to prevent uncontrolled rotation, over-speeding, and excessive pressure on the tower structure, rotor blades and other wind energy components unless the manufacturer certifies that a braking system is not necessary.

c. Security measures must be in place to prevent unauthorized trespass and access. Each MWET shall not be climbable up to fifteen (15) feet above ground surfaces. All access doors to MWETs and electrical equipment shall be locked and/or fenced as appropriate, to prevent entry by non-authorized person(s).

d. All spent lubricants, cooling fluids, and any other hazardous materials shall be properly and safely removed in a timely manner.

e. Each MWET shall have one (1) sign, not to exceed two (2) square feet in area, posted at the base of the tower and on the security fence if applicable. The sign shall contain at least the following:

i. Warning high voltage;

ii. Manufacturer's and owner/operator's name;

iii. Emergency contact numbers (list more than one [1] number).

f. The structural integrity of the MWET shall conform to the design standards of the International Electrical Commission, specifically IEC 61400-1, "Wind Turbine Safety and Design," IEC 61400-22, "Wind Turbine Certification," and IEC 61400-23, "Blade Structural Testing," or any similar successor standards.

4. Signal Interference. The MWET shall not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, or emergency communication systems.

5. Decommissioning.

a. The MWET owner(s) or operator(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the owner(s) or the operator(s) of the MWET, and for a good cause, the Township Board may grant a reasonable extension of time. Each MWET will be presumed to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. The end of its useful life may also be established by other facts and circumstances determined by the Township. All decommissioning expenses are the responsibility of the operator(s), unless specifically assigned to the owner(s).

b. Decommissioning shall include the removal of each MWET, buildings, electrical components, and streets to a depth of sixty (60) inches, as well as any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade. Following removal, the location of any remaining MWET foundation shall be identified on a map as such and recorded with the deed to the lot with the County Register of Deeds.

c. All access streets to the MWET shall be removed, cleared, and graded by the MWET owner(s), unless the property owner(s) requests, in writing, a desire to maintain the access street. The Township will not be assumed to take ownership of any access street except through official action of the Township Board.

d. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s) of the MWET. If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

e. If the MWET owner(s) or operator(s) fails to complete decommissioning within the period prescribed above the Township may designate a contractor to complete decommissioning with the expense thereof to be charged to the violator and/or to become a lien against the lot. If the MWET is not owned by the lot owner(s), an irrevocable letter of credit must be provided to the Township for the cost of decommissioning each MWET.

6. Site Plan Requirements.

a. Site Plan Drawing. All applications for a MWET special land use permit shall be accompanied by a site plan in accordance with Section 18.04 of this Ordinance.

b. Site Plan Documentation. The following documentation shall be included with the site plan:

i. The contact information for the owner(s) and operator(s) of the MWET as well as contact information for all lot owners on which the MWET is located.

ii. A copy of the lease, or recorded document, with the landowner(s) if the applicant does not own the land for the

proposed MWET, with a statement from the landowner(s) of the leased site that the landowner(s) will abide by all applicable terms and conditions of the special use permit, if approved.

iii. In the case of a condominium development, a copy of the condominium development's master deed and bylaws addressing the legal arrangement for the MWET.

iv. The proposed number, representative types and height of each MWET to be constructed; including their manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated capacity, rotor diameter, and a description of ancillary facilities.

v. Documents confirming specifications for MWET tower separation.

vi. Documented compliance with the noise and shadow flicker requirements set forth in this Ordinance.

vii. Engineering data concerning construction of the MWET and its base or foundation, which may include, but not be limited to, soil boring data.

viii. A certified registered engineer's certification that the MWET meets or exceeds the manufacturer’s construction and installation standards.

ix. Anticipated construction schedule.

x. A copy of the maintenance and operation plan, including anticipated regular and unscheduled maintenance, and a description of the procedures that will be used for lowering or removing the MWET to conduct maintenance (if applicable).

xi. Documented compliance with applicable local, state and national regulations, including but not limited to all applicable safety, construction, environmental, electrical, and communication regulations. MWETs shall comply with Federal Aviation Administration (FAA) standards, and specifically including compliance with the Michigan Airport

Zoning Act, Michigan Tall Structures Act, and any applicable airport overlay zone regulations.

xii. Proof of applicant's liability insurance.

xiii. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned generator and that such connection has been approved (off-grid systems shall be exempt from this requirement).

xiv. Other relevant information as may be requested by the Planning Commission to ensure compliance with the requirements of this Ordinance.

xv. Following the completion of construction, the applicant shall certify that all construction is completed pursuant to the special use permit.

xvi. A written description of the anticipated life of each MWET; the estimated cost of decommissioning; the method of ensuring that funds will be available for decommissioning and site restoration; and removal and restoration procedures and schedules that will be employed if the MWET(s) become inoperative or non-functional.

xvii. The applicant shall submit a decommissioning plan that will be carried out at the end of the MWET's useful life, and shall describe any agreement with the landowner(s) regarding equipment removal upon termination of the lease.

xviii. The Township reserves the right to review all maintenance plans and irrevocable letters of credit under this Ordinance to ensure that all conditions of the permit are being followed.

xix. A statement indicating what hazardous materials will be used and stored on the site.

xx. A study assessing any potential impacts on the natural environment, including, but not limited to, assessing the potential impact on endangered species, eagles, birds or other wildlife, wetlands and fragile ecosystems (the study

shall conform to state and federal wildlife agency recommendations based on local conditions).

xxi. Signature of the applicant.

7. Certification and Compliance.

a. The Township must be notified of a change in ownership of a MWET or a change in ownership of the property on which the MWET is located.

b. The Township reserves the right to inspect any MWET in order to ensure compliance with the Ordinance. Any cost associated with the inspections shall be paid by the owner/operator of the WET.

B. Bio-Fuel

1. A biofuel production facility with an annual production capacity of not more than one hundred thousand (100,000) gallons of biofuel that meets the requirements of subsection 16A.04B(1)(a) and (b) but that does not meet the requirements of subsection 16A.04B(1)(c).

2. A biofuel production facility with an annual production capacity of more than one hundred thousand (100,000) gallons but not more than five hundred thousand (500,000) gallons of biofuel that meets the requirements of subsection 16.04B(1)(a) and (b).

3. An application for special land use approval for a biofuel production facility described in subsection (1) or (2) above shall include all of the following:

a. A site plan as required under Section 18.04, including a map of the property and existing and proposed buildings and other facilities.

b. A description of the process to be used to produce biofuel.

c. The number of gallons of biofuel anticipated to be produced annually.

d. An emergency access and fire protection plan that has been reviewed and approved by the appropriate responding police and fire departments.

e. For an ethanol production facility that will produce more than ten thousand (10,000) proof gallons annually, completed United States Department of the Treasury, Alcohol and Tobacco Tax and Trade

Bureau, forms 5000.29 (environmental information) and 5000.30 (supplemental information on water quality considerations under 33 USC 1341(a)), or successor forms, required to implement regulations under the national environmental policy act of 1969, 42 USC 4321 to 4347, and the federal water pollution control act, 33 USC 1251 to 1387.

f. Information that demonstrates that the biofuel production facility will comply with the requirements of subsection (1) or (2) above and (5) below.

g. Any additional information requested by the Township.

4. Special land use approval of a biofuel production facility described in subsection (1) or (2) above shall be made expressly conditional on the facility's meeting all of the following requirements before the facility begins operation and no additional requirements:

a. Buildings, facilities, and equipment used in the production or storage of biofuel comply with local, state, and federal laws.

b. The owner or operator of the biofuel production facility provides the local unit of government with proof that all necessary approvals have been obtained from the department of environmental quality and other state and federal agencies that are involved in permitting any of the following aspects of biofuel production:

i. Air pollution emissions.

ii. Transportation of biofuel or additional products resulting from biofuel production.

iii. Use or reuse of additional products resulting from biofuel production.

iv. Storage of raw materials, fuel, or additional products used in, or resulting from, biofuel production.

c. The biofuel production facility includes sufficient storage for both of the following:

i. Raw materials and fuel.

ii. Additional products resulting from biofuel production or the capacity to dispose of additional products through land application, livestock consumption, sale, or other legal use.

C. Anaerobic Digesters

1. An anaerobic digester facility is a permitted special use of property if all of the following requirements are met:

a. On an annual basis, not less than ten percent (10%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.

b. An application for special land use approval for an Anaerobic Digester facility shall include a site plan in accordance with Section 18.04 of this ordinance and shall include all of the following:

c. An anaerobic digester shall meet the following minimum isolation distances:

i. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.

ii. Two (2) feet above the seasonal high water table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a.

iii. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan department of environmental quality, pursuant to the program established under the Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

iv. Two hundred (200) feet from nearest non-farm residence.

d. Operators of an anaerobic digester must be qualified under the State of Michigan with both the following:

i. Complete the Michigan-on-farm anaerobic digester operator certification course.
ii. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.

e. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

D. Solar

1. Large-Scale Solar energy collectors shall be permitted as a special use only to provide power for off-site consumption. On-site consumption is permitted as a secondary use.

2. An application for special land use approval for a Large-Scale Solar facility shall include a site plan in accordance with Section 18.04 of this ordinance and shall include all of the following:

3. Solar Energy Equipment and Solar Energy Systems shall be permitted only if they are determined to not present any unreasonable safety risks, including but not limited to, the following:

a. Weight load
b. Wind resistance
c. Ingress and egress in the event of fire or other emergency

4. No Large Scale Solar energy system or device shall be installed or operated except in compliance with this Section.

5. No solar panel shall create glare, reflection or any other deflection of light on any adjacent property below the maximum height established for each district.

6. Building-Integrated Photovoltaic Systems and Solar-Thermal Systems are permitted.

7. Rooftop and Building-Mounted Solar Collectors are permitted, subject to the following condition:

    a. The maximum height of the zoning district in which the rooftop and building-mounted solar collectors are located shall not apply provided that such structures are erected only to such height as is reasonably necessary to accomplish the purpose for which they are intended to serve and that such structures do not obstruct solar access to adjacent and neighboring properties.

8. Free-Standing and Ground-Mounted Solar Collectors are permitted, subject to the following conditions:

    a. The location of the solar collectors shall meet all applicable setback requirements for principal structures in the zoning district in which it is located.
    b. All solar collectors shall be adequately screened with architectural features or landscaping such as berms, trees or bushes that prevent their visible exposure to any right-of-way and preserves the character of the property and surrounding area. An architectural or landscaping plan shall be submitted as part of site plan review.
    c. Solar energy equipment shall be located in a manner that does not shade any adjacent property at any time of the daylight hours.

9. Safety

    a. All solar collector installations shall be performed by a qualified solar installer.
    b. Any connection to the public utility grid must be inspected by the appropriate public utility.
    c. Solar energy systems shall be maintained in good working order.
    d. If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the State of Michigan Building Code, currently in effect, when in use. Any solar storage batteries that are no longer used shall be disposed of in accordance with the laws, regulations and ordinances of the State of Michigan and the Township or any other applicable enforcing agency.
    e. If a solar collector ceases to perform its originally intended function for more than twelve (12) consecutive months, the owner of the property

shall remove the collector, mount and associated equipment no later than ninety (90) days after the end of the twelve (12) month period.

Section 2. Review Period. Section 18.05(b) of the Tallmadge Charter Township Zoning Ordinance shall be restated in its entirety as follows.

Section 18.05(b)

Review Period. The Planning Commission shall render a decision on a site plan within one-hundred twenty (120) days of its initial review of the site plan, unless an extension of time is agreed to by the Planning Commission and the applicant.

Section 3. Approval. Section 18.05(d) of the Tallmadge Charter Township Zoning Ordinance shall be restated in its entirety as follows.

Section 18.05(d)

Approval. Upon approval of a site plan, three (3) copies of the plan shall be signed and dated by the Planning Commission. One (1) copy of the plan shall be retained by the applicant, one (1) copy shall be retained by the Township Clerk, and one (1) copy shall be submitted to the Building Inspector as part of the building permit review process.

Section 4. Duties and Responsibilities. Section 20.01(b)(3) of the Tallmadge Charter Township Zoning Ordinance shall be restated in its entirety as follows.

Section 20.01(b)(3)

If the Zoning Administrator shall find that any of the provisions of this Ordinance are being violated, the Administrator shall notify the persons responsible for such violations. The Administrator shall order discontinuation of illegal uses of land, buildings, or structures; removal of illegal buildings or structures; discontinuation of any illegal work being done; or shall take any other action authorized by this Ordinance to insure compliance with, or prevent violations of, its provisions.

Section 5. Effective Date. This amendment to the Tallmadge Charter Township Zoning Ordinance was approved and adopted by the Township Board of Tallmadge Charter Township, Ottawa County, Michigan on _____, 2018, after a public hearing as required pursuant to Michigan Act 110 of 2006, as amended; after introduction and a first reading on _____, 2018, and after posting and publication following such first reading as required by Michigan Act 359 of 1947, as amended. This Ordinance shall be effective on _____, 2018, which date is the eighth day after publication of a Notice of Adoption and Posting of the Zoning Amendment Ordinance in the _____, as required by Section 401 of Act 110, as amended. However, this effective date shall be extended

as necessary to comply with the requirements of Section 402 of Act 110, as amended.

_____	_____
James VanEss, Township Supervisor	Lenore Cook, Township Clerk

CERTIFICATE

I, Lenore Cook, the Clerk for the Charter Township of Tallmadge, Ottawa County, Michigan, certify that the foregoing Tallmadge Charter Township Zoning Text Amendment Ordinance was adopted at a regular meeting of the Township Board held on _____, 2018. The following members of the Township Board were present at that meeting: _____ _____. The following members of the Township Board were absent: _____.

The Ordinance was adopted by the Township Board with members of the Board _____ _____ voting in favor and members of the Board _____ _____ voting in opposition. Notice of Adoption of the Ordinance was published in the _____ on _____, 2018.

_____
Lenore Cook, Clerk
Tallmadge Charter Township