

Proposed Amendments

Original Language:

General Standards. The following standards shall apply to all Testing Facilities, Private and Commercial WECS in Shiawassee County unless otherwise specifically noted:

- A. Property Line Setbacks. All Testing Facilities, private and commercial WECS turbines must be setback from a non-participating property lines a distance equal to or greater than one hundred fifty percent (150%) of the height of the WECS from the base of the structure to the nearest non-participating property line. All Testing Facilities, private and commercial WECS turbines must be setback from the base of the structure to a participating property line a distance equal to or greater than the required minimum setback for a principal structure in that district.
- B. Structure Setbacks. All commercial WECS turbines must be setback a distance equal to or greater than two hundred (200) percent of the height of the WECS turbine from the base of the structure to the exterior wall of a principal structure on a non-participating parcel that is currently used for residential, commercial or assembly purposes. All commercial WECS turbines must be setback one hundred (100) percent of the height from the base of the structure to the exterior wall of a principal structure on a participating parcel that is used for residential, commercial or assembly purposes.
- C. Public Right-of-Way. All commercial WECS turbines must be setback a distance equal to or greater than one hundred (100) percent of the height of the WECS from the base of the structure to a public road right-of-way.

Proposed Amendment:

Provided below are recommended amendments to the existing language regarding setbacks. Due to the existing language being substantially consistent with the provisions of other communities in our review, staff is providing only one (1) option as opposed to two (2) options previously provided as part of this process.

4. General Standards. The following standards shall apply to all Testing Facilities, Private and Commercial WECS in Shiawassee County unless otherwise specifically noted:

- A. Property Line Setbacks. Testing facilities, private and Commercial WECS shall not be subject to property line setbacks between participating parcels. All Testing Facilities, private and commercial WECS turbines shall maintain a setback from a non-participating property line a distance equal to or greater than one hundred fifty percent (150%) of its height as measured from the base of the structure to the nearest non-participating property line.
- B. Principal Structure Setbacks. All testing facilities, private and commercial WECS turbines shall

maintain a setback equal to or greater than two hundred (200) percent of its height as measured from the base of the structure to the exterior wall of a principal structure on a non-participating parcel that is currently used for residential, commercial or assembly purposes. All commercial WECS turbines must be setback a distance equal to or greater than two hundred (200) percent of the height of the WECS turbine from the base of the structure to the exterior wall of an inhabited structure on a non-participating parcel that is currently used for residential, commercial or assembly purposes. All testing facilities, private and commercial WECS shall maintain a setback one hundred (100) percent of its height as measured from the base of the structure to the exterior wall of a principal structure on a participating parcel that is used for residential, commercial or assembly purposes. The Planning Commission may, at its discretion, require a setback not to exceed the above setbacks for principal structures, for accessory structures depending on the current use of such structures and potential impact to the use of those accessory structures. Where a testing facility, private or commercial WECS is located within the vicinity (less than ½ mile) of a school, hospital, church, public library, city, village or self-zoned township, the Planning Commission may require that a greater setback be maintained but shall not exceed four hundred (400) percent of its height from the principal structures used for such purposes or within those areas as described.

- C. Public Rights-of-Way. All testing facilities, private and commercial WECS turbines must be setback a distance equal to or greater than one hundred (100) percent of the height of the WECS from the base of the structure to a public road or railroad right-of-way. No setback is required from a drain right-of-way.
- D. Existing Utility Lines. All testing facilities, private or commercial WECS turbines must be setback a distance equal to or greater than one hundred (100) percent of the height of a WECS from the base of the structure to an above-ground public electric power line, telephone line and/or gas transmission line unless said utility owner provides a waiver of such setback.

Staff Comment: Setbacks are designed to minimize the potential impact of proposed development on adjacent property and to protect the personal use and enjoyment of property near potential development. The standards set forth above reflect a review of setback standards for utility-scale commercial wind developments from nineteen (19) communities across Michigan. Of these communities, all required some type of property line and right-of-way setback; however, the intensity of the setback standards varied significantly. However, there was notable consensus among municipal ordinances addressing non-participating property line setbacks. Of the nineteen (19) communities assessed, eight (8) required a setback of one hundred and fifty (150) percent of the total height of a turbine to the nearest non-participating property line. Other standards consistently by the communities surveyed were right-of-way setbacks, participating property line setbacks, inhabited structure setbacks, and utility line setbacks. All of which varied between one (1) times the total height of a turbine to five (5) times the total height of a turbine.

Overall, due to the rather inconsistent nature of the setback standards within the communities evaluated, this proposal also relies upon recommendations from the *Sample Zoning for Wind Energy Systems*, produced by Michigan State University and the Greening Michigan Institute. The article suggests that “a

setback equal to the tower's height should be adequate, but some communities require 1½ or 2 or 3 times the tower height as the initial setback” (2017, page 16). In Shiawassee County, a setback of one (1) times the total tower height would be six hundred (600) feet at the maximum height allowed under current standards, while a setback of three (3) times the total tower height would be a one thousand eight hundred (1800) feet. In developing the recommended amendments, it was found that the current language used by Shiawassee County was within reason given other community standards and suggested requirements from Michigan State University. An additional setback may be required to satisfy other Ordinance provisions, such as noise and shadow flicker, as previously discussed.