



# **Town of Hubbard**

Dodge County, Wisconsin

## **Solar Ordinance**

**April 24, 2023**

## **Solar System Ordinance For the Town of Hubbard, Dodge County WI.**

### **1. Purpose.**

The intent of this ordinance is to preserve the health, safety and welfare of the community by promoting the safe, effective and efficient use of solar energy systems while encouraging the use of local renewable energy resources, including appropriate applications for solar energy.

### **2. Definitions.**

- A. Agrivoltaics. A solar energy system co-located on the same parcel of land as agricultural production, including crop production, grazing, apiaries or other agricultural products or services.
- B. Community-Scale Solar Energy System. A commercial solar energy system that converts sunlight into electricity for the primary purpose of serving electric demands off-site from the facility, either retail or wholesale. Community-scale systems are principal uses and projects typically cover more than 20 acres.
- C. Community Solar Garden. A solar energy system that provides retail electric power (or a financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system, also referred to as shared solar.
- D. Grid-intertie Solar Energy System. A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.
- E. Ground Mounted Solar Energy System. A solar energy system mounted on a rack or pole that rests or is attached to the ground. Ground-mount systems can be either accessory or principal uses.
- F. Large Scale Solar Energy System. A commercial solar energy system that converts sunlight into electricity for the primary purpose of wholesale sales of generated electricity. A largescale solar energy system will have a project size greater than 1 acre and is the principal land use for the parcel(s) on which it is located. A Conditional Use Permit is required for large scale solar energy system.
- G. Off-grid Solar Energy System. A photovoltaic solar energy system in which the circuits energized by the solar energy system are not electrically connected in any way to electric circuits that are served by an electric utility company.
- H. Passive Solar Energy System. A solar energy system that captures solar light or heat without transforming it to another form of energy or transferring the energy via a heat exchanger.
- I. Photovoltaic System. A solar energy system that converts solar energy directly into electricity.
- J. Renewable Energy Easement, Solar Energy Easement. An easement that limits the height or location, or both, of permissible development on the burdened land in terms of a structure or vegetation, or both, for the purpose of providing access for the benefited land to wind or sunlight passing over the burdened land, consistent with sec. 700.35 Wis. Stats.
- K. Roof-mount. A solar energy system mounted on a rack that is fastened to or ballasted on a structure roof. Roof-mount systems are accessory to the principal use.
- L. Roof Pitch. The final exterior slope of a roof calculated by the rise over the run, typically but exclusively expressed in twelfths such as 3/12, 5/12 or 12/12.

- M. Solar Access. Unobstructed access to direct sunlight on a lot or building through the entire year, including access across adjacent parcel air rights, for the purpose of capturing direct sunlight to operate a solar energy system.
- N. Solar Carport. A solar energy system of any size that is installed on a carport structure that is accessory to a parking area and which may include electric vehicle supply equipment or energy storage facilities.
- O. Solar Collector. A device, structure or a part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, usually by adding a device or design element to the building envelope.
- P. Solar Daylighting. Capturing and directing the visible light spectrum for use in illuminating interior building spaces in lieu of artificial lighting, usually by adding a device or design element to the building envelope.
- Q. Solar Energy. Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.
- R. Solar Energy System. A device, array of devices, or structural design feature, the purpose of which is to provide for generation or storage of electricity from sunlight, or the collection, storage and distribution of solar energy for space heating or cooling, daylight for interior lighting, or water heating.
- S. Solar Hot Water System. A system that includes a solar collector and a heat exchanger that heats or preheats water for building heating systems or other hot water needs, including residential domestic hot water and hot water for commercial processes.
- T. Solar Mounting Device. Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.
- U. Solar Resources. A view of the sun from a specific point on a lot or building that is not obscured by any vegetation, building, or object for a minimum of four hours between the hours of 9:00 am and 3:00 pm standard time on all days of the year and can be measured in annual watts per square meter.
- V. Viewshed. A natural or historic environment that is visible from one or more viewing points.

### **3. Permitted Accessory Use.**

Solar energy systems are a permitted accessory use in all zoning districts where structures of any sort are allowed subject to the requirements set forth below. Solar energy systems that do not meet the following standards will require a conditional use permit.

#### **A. Height.** Solar energy systems must meet the following height requirements:

1. Building-or roof-mounted solar energy systems shall not exceed the maximum allowable height in any zoning district. For the purpose of height measurement, solar energy systems other than building-integrated systems shall be given an equivalent exception to height standards as building-mounted mechanical devices or equipment.
2. Ground-or pole-mounted solar energy systems shall not exceed 15 feet in height when oriented at maximum tilt.

**B. Setback.** Solar energy systems must meet the accessory structure setback for the zoning district and primary land use associated with the lots on which the system is located, except as set forth below:

1. Roof-or Building - mounted Solar Energy Systems. The collector surface and mounting devices for roof mounted solar energy systems shall not extend beyond the exterior perimeter of the building on which the system is mounted.
2. Ground-mounted Solar Energy Systems. Ground-mounted solar energy systems may not extend into the side-yard or rear setback when oriented at minimum design tilt.

**C. Visibility.** Solar energy systems in residential districts shall be designed to minimize visual impacts from the public right-of-way to the extent that doing so does not significantly increase the cost or decrease the efficiency of the system as set forth in Wis. Stat. sec. 66.0401 and Wis. Stat. sec. 66.0403.

1. Aesthetic Restrictions. Roof-mount or ground-mount solar energy systems shall not be restricted for aesthetic reasons if the system is not visible from the closest edge of any public right-of-way other than an alley, or if the system meets the following standards.
  - a. Roof-mounted systems on pitched roofs that are visible from the nearest edge of the front right-of-way shall have the same finished pitch as the roof and be no more than ten inches above the roof.
  - b. Roof-mount systems on flat roofs that are visible from the nearest edge of the front right-of-way shall not be more than five feet above the finished roof and are exempt from any rooftop equipment or mechanical system screening.
2. Reflectors. All solar energy systems using a reflector to enhance solar production shall minimize glare to the greatest extent possible from the reflector affecting adjacent or nearby properties and the public right-of-way.

**D. Lot Coverage and Impervious Surface Standards.** Ground-mount systems total collector area shall not exceed twenty five percent (25%) of the building footprint of the principal structure. Ground-mount systems shall be exempt from impervious surface standards if the soil under the collector is maintained in vegetation and not compacted. Ground-mounted systems shall not count toward accessory structure limitations.

**E. Compliance with Building Code.** All solar energy system and system components must meet approval of the local building code officials, consistent with the State of Wisconsin Building Code or the Building Code adopted by the local jurisdiction and solar thermal systems shall comply with HVAC-related requirements of the Energy Code.

**F. Compliance with State Codes.** Solar energy systems shall comply with applicable State of Wisconsin Code requirements including but not limited to Wisconsin State Electric Code, Wisconsin State Plumbing Code, State of Wisconsin Building Code and the Wisconsin Building Energy Codes.

**G. Plan Approval Required.** A site plan for review shall be provided prior to the installation of any solar energy system requiring a building permit.

1. Plan Application. Plan applications for solar energy systems shall be accompanied by to-scale horizontal and vertical (elevation) drawings. The drawings must show the location of the system on the building or on the property for a ground-mount system, including the property lines and show required set-backs are met for zoning compliance.

2. Plan Approval. Applications that meet the design requirements of this ordinance shall be granted administrative approval by the Zoning Administrator and shall not require Planning Commission review. Plan approval does not indicate compliance with any state law or administrative code, such as building code or electric code.

#### **4. Principle Uses.**

The Town of Hubbard encourages the development of commercial or utility scale solar energy systems where such systems do not conflict with current and future land use and do not pose a threat or substantial risk to the public health, safety or welfare. Ground-mounted solar energy systems that are the principal use on the development lot or lots are conditional uses in selected districts.

**A. Set Back.** Community-and large-scale solar energy systems must meet the following setbacks:

1. Property line setback for buildings or structures in the district in which the system is located except as set forth in sub. A.4 below.
2. Roadway setback of 150 feet from the ROW centerline of State highways and CSAHs, 100 feet from other roads, except as otherwise determined in A.4 above.
3. Setback distances should be measured from the edge of the solar energy system array, excluding security fencing, screening or berm.
4. All setbacks can be reduced by 50% if the system is fully screened from the setback point of measurement.

**B. Screening.** Community-and large-scale solar shall be screened from existing residential dwellings.

1. A screening plan shall be submitted that identifies the type and extent of screening.
2. Screening shall not be required along property lines within the same zoning district, except where the adjoining lot has an existing residential use.
3. The Town may require screening where it determines there is a clear community interest in maintaining a viewshed.
4. Perimeter fencing for the site shall not include barbed wire or woven wire designs.

**C. Ground cover and buffer areas.** The following provisions shall apply to the clearing of existing vegetation and establishment of vegetated ground cover. Additional site-specific conditions may apply as required by the Town of Hubbard.

1. Large-scale removal of mature trees on the site is discouraged. The Town of Hubbard may set additional restrictions on tree clearing or require mitigation for cleared trees.
2. The applicant shall submit a vegetative management plan prepared by a qualified professional. The Town of Hubbard may require the plan to be reviewed by a natural resources agency or authority, such as the Wisconsin Department of Natural Resources, County Land and Water Conservation Department, Natural Resources Conservation Service or private environmental consulting firm. The plan shall identify: the person or agency who is responsible for the plan development, the conservation, habitat, eco-system or agricultural goals, which may include – providing habitat for pollinators such as bees and monarch butterflies, providing habitat for wildlife such as upland nesting birds and other wildlife, establishing vegetation for livestock grazing, reducing on-site soil erosion and improving or protecting surface and ground water-quality, stormwater runoff management, intended methods and schedules for management of the entire property on an annual basis.

3. Vegetative mix for the site shall include annual and perennial seed species for establishment with a mix of perennial grasses and wildflowers that will preferably result in a short stature prairie with diversity of forbs or flowering plants that bloom throughout the growing season. Shrubs may be used in buffer areas as appropriate for visual screening. Plant species should be native to Wisconsin, but where appropriate to the vegetative management plan goals, may also include other naturalized and non-invasive species which provide habitat for pollinators and wildlife and/or other ecosystem services. The management methods and schedules must be identified for how the vegetation will be managed on an annual basis with permanent vegetation required for the full operational life-span of the solar energy system. Inter-seeding may be required to maintain vegetative cover. Plant material must not have been treated with systemic insecticides, particularly neonicotinoids.

**D. Power Lines.** Power and communication lines running between banks of solar panels and to nearby electric substations or interconnections with buildings shall be buried underground unless otherwise approved by the Town Zoning Administrator.

**E. Fencing.** Perimeter fencing for the site shall not include barbed wire or woven wire designs, and shall be the preferable use for wildlife-friendly fencing standards that include clearance at the bottom. Alternative fencing can be used if the site is incorporating Agrivoltaics.

**F. Stormwater or NPDES.** Solar systems are subject to Model Community's stormwater management and erosion and sediment control provisions and NPDES permit requirements. Solar collectors shall not be considered impervious surfaces if the project complies with ground cover standards.

**G. Other Standards and Codes.** All community and large-scale solar farms shall be in compliance with all applicable local, state and federal regulatory codes, including the State of Wisconsin Uniform Building Code, as amended, and the National Electric Code, as amended.

**H. Plan Approval Required.** A detailed site plan for review shall be provided prior to the installation of any community or large-scale solar energy system.

1. Plan Application. Plan applications for community and large-scale solar energy systems shall include to-scale horizontal and vertical (elevation) drawings, and shall show locations of all solar arrays, other structures, property lines, rights-of-way, service roads, floodplains, wetlands and other protected natural resources, topography, electric equipment, and all other characteristics requested by the Town Zoning Administrator. The site plan should show all zoning districts and overlay districts.

2. Plan Approval. All applications for community and large-scale solar energy systems shall be presented to the Town Planning Commission for its review and approval. Plan approval does not indicate compliance with any state law or administrative code.

**I. Agricultural Protection.** Solar systems must comply with site assessment or soil identification standards that are intended to identify agricultural soils. The Town of Hubbard may require mitigation for use of prime soils for solar array placement, including the following:

1. Demonstrating co-location of agricultural uses (Agrivoltaics) on the site.

2. Using an interim use or time-limited CUP that allows the site to be returned to agriculture at the end of life of the solar installation.

**J. Decommissioning Plan Required.** A decommissioning plan shall be required to ensure that facilities are properly removed after their useful life.

1. Decommissioning of the system must occur in the event the project is not in use for 12-consecutive months.
2. The plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation and assurances that financial resources will be available to fully decommission the site.
3. The Town of Hubbard may require the posting of a bond, letter of credit or the establishment of an escrow account to ensure proper decommissioning.

Approved and adopted by the Town Board of the Town of Hubbard on this \_\_\_\_\_ day of \_\_\_\_\_ 2023.

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Daniel Guenterberg, Chairman

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James E. Persha, Supervisor #1

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David Feller, Supervisor #2

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Carrie Neu, Clerk