West Sadsbury Township Zoning Amendment – Solar Energy Systems

Section 1232 – Solar Energy Systems

1. Purpose. It is the purpose of this section to permit the safe, effective and efficient use of solar energy and to reduce the on-site consumption of utility supplied energy while protecting the health, safety and welfare of adjacent and surrounding land uses through appropriate zoning and land use controls. This section is intended to accomplish the following:

   A. To provide for appropriate locations and development of solar energy systems.

   B. To protect West Sadsbury Township's natural environment by permitting solar energy systems.

   C. To minimize adverse nuisance and visual impacts of solar energy systems through careful design and siting techniques.

   D. To avoid potential damage to adjacent properties through engineering and careful siting for solar energy systems.

   E. To permit the location of solar energy systems in areas not immediately adjacent to or adversely affecting residential uses.

   F. To promote the effective utilization of renewable energy sources.

2. Accessory Solar Energy Systems and Principal Solar Energy Systems shall be subject to the following requirements. Energy produced by an Accessory Solar Energy System shall be primarily for personal use on the property where the system is located. Energy produced in excess of personal needs on the property may be sold to a local electric provider, but only as an ancillary and secondary result of the solar energy system. A Principal Solar Energy System is an area of land or other area used for a solar collection system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for off-site use.

3. Accessory Solar Energy Systems. Accessory systems are permitted in all zoning districts subject to the regulations below:

   A. A solar energy system shall be considered accessory only if it supplies electrical or thermal power primarily for on-site use, except that net metering shall be permitted per state law. Energy produced by a solar energy system shall be primarily for personal use on the property where the system is located. Energy produced in excess of personal needs on the property may be sold to a public electric distribution utility, but only as an ancillary and secondary result of the solar energy system.

   B. The owner of the accessory solar energy source shall provide written confirmation that the public electric distribution utility has been informed of the customer's intent to install an interconnected customer-owned generator and that such connection meets applicable state and federal regulations. Off-grid systems shall be exempt from this requirement.

   C. To the greatest extent feasible, accessory solar energy systems shall be roof mounted, or located on existing impervious surface. The applicant must demonstrate that roof mounting is infeasible prior to any application for a ground-mounted system.

   D. Where accessory ground-mounted systems are permitted, such system shall meet the following:

      (1) No ground mounted system and associated mechanical equipment shall be located in a front yard of any zoning district, except on farm parcels in the Ag District, where ground

mounted systems may be located in a front yard, but shall be set back a minimum of 100 feet from the street line.

(2) Ground mounted systems and associated mechanical equipment shall meet the side and rear setbacks for the underlying district.

(3) The surface area of a ground-mounted system, including all mounting, collection, and distribution equipment shall be calculated as part of overall lot coverage. The surface area of a ground mounted system shall not exceed 500 square feet. If additional panels are needed to meet existing or projected average monthly demand of the house, or other use being supplied with solar energy, additional panels may be added but shall not exceed lot coverage requirements and shall not exceed the number of panels needed to meet the average monthly demand for personal use. Calculations for average monthly demand shall be reviewed and confirmed by the Zoning Officer and/or the Township Engineer prior to installation of additional solar panels.

(4) Ground mounted systems shall not exceed 10 feet in height.

(5) Where a ground-mounted solar energy system is proposed to be located in a residential zoning district and/or adjacent to a residential use, such system and associated mechanical equipment shall be screened from view from adjacent properties in the neighborhood. Screening may be accomplished by vegetation, fences, or walls in accordance with the terms of this chapter. The Township may require the applicant to submit a glare study, in sufficient detail to determine whether screening will be required, and may further require such study to address specific areas of concern, such as road segments or neighborhoods that could be particularly susceptible to glare from the proposed system.

(6) All wiring for ground-mounted solar energy systems carrying electric current shall, to the maximum extent practicable, be buried underground to ensure safety. All wiring shall comply with the applicable version of the National Electric Code.

E. Roof mounted systems shall be in accordance with the following requirements:

(1) A roof-mounted solar energy system may be mounted on a principal or accessory building. The system shall in no place hang off or extend beyond the edge of the roof. For sloped roofs, the system shall not extend higher than the current peak of the roof. For flat roofs, the system shall not extend higher than five (5) feet vertically above the roof and shall not be higher than the maximum allowable height for buildings in the applicable zoning district. The system shall not be placed on a front roof unless the Zoning Officer determines that this represents the only feasible location where a solar energy system would be functional and also determines that this would not adversely impact adjacent properties.

(2) An applicant for any roof-mounted solar energy system with a pitch different from the roof (not flush-mounted) must, as part of the building permit application, submit justification for the proposed design and demonstrate: [i] how the design will accommodate potential impact from snow and wind; and [ii] how any potential off-site impact from glare will be mitigated. Such documentation shall be prepared by a professional or professionals qualified to provide such opinion and acceptable to the Township.

(3) For any proposed roof-mounted solar energy system, the building permit application shall include certification of the structural integrity of the roof, prepared by a professional or professionals qualified to provide such opinion and acceptable to the Township.

(4) For roof-mounted systems, reasonable efforts shall be made to make the wiring and hardware blend in with the roof and building facade.

F. All power transmission lines from a solar energy system to any building shall be located underground.

G. Felling of healthy, mature trees in order to provide solar access is limited to 10% of the lot area up to a maximum of 0.5 acres that may be cleared. The proposed solar panels and equipment shall be located within the cleared area.

H. Accessory solar energy systems shall meet the general requirements listed in Subsection 4.

4. Principal Solar Energy Systems.

A. A Principal Solar Energy System shall be permitted in the Industrial and Agricultural Districts when approved by the Board of Supervisors as a Conditional Use.

B. Where a principal solar energy system is proposed in the Ag District, the applicant shall demonstrate that:

(1) The area proposed for the principal solar energy system does not consist of more than 10% of Prime Agricultural Soils, as defined in Section 802.10, and is generally unsuitable for agricultural purposes.

(2) To the greatest extent feasible, primary solar energy systems shall be roof mounted, or located on an existing impervious surface. The applicant must demonstrate that roof mounting is infeasible prior to any application for a ground-mounted system.

(3) The ground mounted system and associated mechanical equipment may be located in a front yard, but shall be set back a minimum of 100 feet from the street line.

C. Ground-mounted Principal solar energy systems shall not exceed 15 feet in height above the ground surface.

D. The applicant shall provide a summary of operations to the Township at the time of the conditional use hearing. Such summary shall include, but not be limited to: approximate generating capacity of the solar energy system; approximate number, representative types, and dimensions (including height when installed) of the Photovoltaic (PV) panels and racking/mounting system; approximate location and arrangement of the PV modules and arrays on the site; approximate description, dimensions, and location of all ancillary equipment, buildings and structures, including all distribution or transmission lines.

E. All solar panels, equipment and accessory structures shall be enclosed by a fence, barrier or other appropriate means to prevent unauthorized persons or vehicles from entering that area of the property. Such fencing shall be a minimum of eight feet high. Full screening of the solar panels, equipment and accessory structures shall be provided when installed adjacent to a residential district or residential use.

F. Clearly visible, warning signs shall be placed around the perimeter of the property and at the facility entrance to inform individuals of the potential voltage hazards.

G. Facilities shall not have any artificial lighting beyond that required by any applicable federal or state laws.

H. In order to determine that a proposed use or activity complies with the above standards, the Township may, at the expense of the applicant:

(1) Require the submission of impartial expert opinions or judgments from official agencies or private consultants.

(2) Require the submission of written assurances from the applicant.

(3) Require compliance with certain tests or provision of whatever safeguards may be considered necessary.

I. All principal solar energy systems shall comply with bulk and area requirements for the underlying zoning district.

J. Principal solar energy systems may be permitted on any Township-owned property at the sole discretion of the Board of Supervisors.

K. The following shall be included in any application for conditional use approval:

(1) An application for a principal solar energy system that is to be connected to the electric grid may not be approved until written evidence is provided to the Township showing a written notice has been provided to the local electrical distribution utility company notifying them of the applicant's intentions to build an interconnected customer-owned principal solar energy system and confirmation of compliance with federal and state requirements.

(2) If the applicant is not the property owner, an affidavit or other satisfactory evidence of agreement between the applicant and property owner confirming that the former has the permission to apply for conditional use approval is required.

(3) The applicant shall provide any other relevant studies, reports, or approvals as may be reasonably requested by the Township.

(4) A decommissioning plan, detailing the expected duration of the principal solar energy system and how the facility will be deconstructed once it is no longer in use, shall accompany the application. The applicant shall provide financial security in a form and amount suitable to the Township to guarantee the removal of the equipment when its useful lifespan has been reached.

(5) Solar panels shall be placed such that concentrated solar radiation or glare shall not be directed onto nearby properties or roadways. The Township may require the applicant to submit a glare study in sufficient detail to demonstrate that this standard can be met. The glare study shall be consistent with the terms of Section 1232.5.J of this section and may be a basis to deny the conditional use application if deemed inadequate by the Board of Supervisors.

(6) A principal solar energy system shall be sited in such a way that it presents no threat to traffic or to public health and safety.

L. All principal solar energy systems shall meet the general requirements in Subsection 3 below.

5. General Requirements.

A. Advertising on solar energy systems, other than reasonable identification of manufacturer and operator, is prohibited. This includes any signage, streamers, ribbons, flags, banners, or similar materials, but does not include the posting of appropriate warning signs.

B. Solar panels shall be located in a manner that will prevent glare toward adjacent properties and occupied structures, as well as toward any oncoming traffic.

C. All solar energy systems shall be professionally constructed and shall be installed in accordance with all applicable codes, regulations, and manufacturer's specifications. Solar energy systems shall be certified by Underwriters Laboratories, Inc., and the National Renewable Energy Laboratory, the Solar Rating and Certification Corporation, or other certifying agency determined acceptable by the Township. The Township reserves the right to deny a building permit for proposed solar energy systems deemed to have inadequate certification.

D. Decommissioning of Solar Energy System. The applicant shall sign an agreement stating that when all reasonable uses of the panels have expired they will be promptly removed at the applicant's expense. The agreement shall be written in language acceptable to the Township Solicitor and shall, at the request of the Township, include a financial security of a type and amount acceptable to the Township for estimated expenses of removal. Decommissioning shall include removal of all systems, equipment, buildings, cabling, electrical components, foundations and other associated facilities upon expiration of the useful life but in no event later than six months from notification by West Sadsbury Township.

E. A building permit specific to a solar energy system is required for the installation of any such system greater than 20 square feet. The applicant shall reimburse the Township for any administrative costs and engineering and legal fees incurred during the application process, and for inspection costs incurred by the Township during installation of the system

F. The local electric distribution utility company shall be contacted concerning the connection of a system to the grid and to address any further issues. The applicant shall provide written proof to the Township as part of the permit application that the local electric distribution utility company was contacted and informed of the applicant's intent to install a solar energy system and coordination with the public utility has taken place. Contacting the local electric company is not necessary for off-grid systems.

G. The surface area of a ground-mounted solar energy system shall be considered impervious surface and subject to the applicable terms of this chapter. The surface area of the panel or panel array shall be calculated as the area of the shadow cast on the ground by the panel(s) with the sun directly overhead. Impervious areas constructed as part of the solar installation that are outside of the calculated shadow area shall be added to the impervious calculation to determine total impervious area.

H. Passive solar energy systems installed during the construction of a building that do not include solar panels are not subject to the terms of this section. If improvements are being made to a building to increase its use of passive solar energy, the Township shall be contacted prior to construction to determine if a building permit will be required.

I. Solar energy systems installed prior to enactment of this section are not required to comply with the terms of this section. However, any expansion of these systems at any point shall then require the updated system to be in compliance with this section.

J. Where a ground-mounted solar energy system is proposed to be located in a residential zoning district and/or adjacent to a residential use, such system and associated mechanical equipment shall be screened from view from adjacent properties in the neighborhood. Screening may be accomplished by vegetation, fences, or walls in accordance with the terms of this chapter. The Township may require the applicant to submit a glare study, in sufficient detail to determine whether additional screening will be required, and may further require such study to address specific areas of concern, such as road segments or neighborhoods that could be particularly susceptible to glare from the proposed system.

K. Before any construction can commence on any solar energy system, the property owner must acknowledge through a recorded agreement between the applicant and West Sadsbury Township that he/she is the responsible party for owning and maintaining the solar energy system. The agreement shall be written in language acceptable to the Township Solicitor and shall at the request of the Township include the posting of financial security in the form and amount acceptable to the Township for estimated expenses of removal. The agreement shall include that if the solar energy system is abandoned or is in a state of disrepair, it shall be the responsibility of the property owner to remove or maintain the solar energy system.

ADD to Section 202

SOLAR ENERGY SYSTEM - An energy conversion system or device, including any structural design features and all appurtenances and parts thereof, whose primary purpose is to provide for the collection, storage and distribution of solar energy for space heating or cooling, for water heating and/or for electricity.