O R D I N A N C E N O.: Z-11—2024-25

TO THE HONORABLE, THE OUTAGAMIE COUNTY BOARD OF SUPERVISORS

LADIES AND GENTLEMEN: ***MAJORITY***

The Agriculture, Extension Education, Zoning and Land Conservation Committee is requesting to amend the County Code of Ordinances as pertains to Chapter 54, Zoning; Article I. In General; Section 54-4 Definitions, Article III. District Regulations; Division 2, Section 54-100 Permitted principal uses and structures, Section 54-101 Permitted accessory uses and structures, Section 54-102 Special exception uses and structures; Division 3, Section 54-128 Permitted principal uses and structures, Section 54-129 Permitted accessory uses and structures, Section 54-130 Special exception uses and structures; Division 4, Section 54-154 Permitted principal uses and structures, Section 54-155 Permitted accessory uses and structures, Section 54-156 Special exception uses and structures; Division 7, Section 54-233 Permitted principal uses and structures, Section 54-234 Permitted accessory uses and structures, Section 54-235(b) Special exception uses and structures; Division 8, Section 54-259 Permitted principal uses and structures, Section 54-261 Special exception uses and structures; Division 9, Section 54-279 Permitted principal uses and structures, Section 54-280 Permitted accessory uses and structures, Section 54-281 Special exception uses and structures; Division 10, Section 54-306 Permitted principal uses and structures, Section 54-307 Permitted accessory uses and structures, Section 54-308 Special exception uses and structures; Article IV. Supplementary District Regulations; Division 4, Subdivision 1, Section 54-445 Purpose and intent, Section 54-446 Restriction limited; Subdivision 2, Section 54-447 General standards; Subdivision 3, Section 54-448 General Standards, Section 54-449 Special exception permit requirements; Subdivision 4, Section 54-450 General, Sections 54-451- 54-470 Reserved.

NOW THEREFORE, the undersigned members of the Agriculture, Extension Education, Zoning and Land Conservation Committee recommend adoption of the following ordinance.

BE IT ORDAINED, that the Outagamie County Board of Supervisors does amend Chapter 54, Section 54-4- Definitions; Section 54-100- Permitted principal uses and structures; Section 54-101- Permitted accessory uses and structures; Section 54-102- Special exception uses and structures; Section 54-128- Permitted principal uses and structures; Section 54-129- Permitted accessory uses and structures;

Section 54-130- Special exception uses and structures; Section 54-154- Permitted principal uses and structures; Section 54-155- Permitted accessory uses and structures; Section 54-156- Special exception uses and structures; Section 54-233- Permitted principal uses and structures; Section 54-234- Permitted accessory uses and structures; Section 54-235(b)- Special exception uses and structures; Section 54-259- Permitted principal uses and structures; Section 54-261- Special exception uses and structures; Section 54-279- Permitted principal uses and structures; Section 54-280- Permitted accessory uses and structures; Section 54-281- Special exception uses and structures; Section 54-306- Permitted principal uses and structures; Section 54-307- Permitted accessory uses and structures; Section 54-308- Special exception uses and structures; Section 54-445- Purpose and intent; Section 54-446- Restriction limited; Section 54-447- General standards; Section 54-448- General standards; Section 54-449- Special exception permit requirements; Section 54-450- General; Sections 54-451- 54-470- Reserved, of the Outagamie County Code of Ordinances to read as follows (additions are in **bold and underlined**):

Chapter 54 – Zoning

…

ARTICLE 1. – IN GENERAL

…

Sec. 54-4- Definitions

Accessory- Scale Solar Energy System- A private or commercial solar energy system less than 100 megawatts that converts sunlight into electricity for the purpose of serving on-site electric demands only. Accessory-scale systems are accessory to permitted/permissible principal uses for the parcel on which it is located.

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.

Battery Energy Storage System (BESS)- Electrochemical devices that charge, or collect, energy from the electric grid or a generation facility, store that energy, and then discharge that energy at a later time to provide electricity or other electric grid services.

Building-integrated Solar Energy Systems- A solar energy system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. Building-integrated systems include, but are not limited to, photovoltaic or hot water solar energy systems that are contained within roofing materials, windows, skylights, and awnings.

Community-Scale Solar Energy System- A commercial solar energy system less than 100 megawatts 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 have a project size equal to, or less than, 20 acres.

Grid-intertie Solar Energy System- A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.

Ground-mount- 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.

Kilowatt (KW)- A unit of power equal to one thousand watts.

Large-Scale Solar Energy System- A commercial solar energy system less than 100 megawatts that converts sunlight into electricity for the primary purpose of wholesale sales of generated electricity. A large-scale solar energy system will have a project size greater than 20 acres and is the principal land use for the parcel(s) on which it is located.

Megawatt (MW)- A unit of power equal to one million watts, especially as a measure of the output of a power station.

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.

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.

Photovoltaic System- A solar energy system that converts solar energy directly into electricity.

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 Wis Statutes 700.35.

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.

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.

Solar Carport- A solar energy system 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.

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, mechanical, chemical, or electrical energy. The collector does not include frames, supports, or mounting hardware.

Solar Energy- Radiant energy received from the sun that can be collected in the form of heart or light by a solar collector.

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.

Solar Hot Air System- (also referred to as Solar Air Heat or Solar Furnace)- A solar energy system that includes a solar collector to provide direct supplemental space heating by heating and re-circulating conditioned building air. The most efficient performance includes a solar collector to preheat air or supplement building space heating, typically using a vertically mounted collector on a south-facing wall.

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.

Solar Mounting Devices- Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

Solar Resource- 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.

Utility-Scale Energy System- Solar (100MW or larger), wind (100 MW or larger), and other facilities for the production, transmission, delivery or furnishing of heat, light, water, or power, for which a certificate of public convenience and necessity has been obtained from the state public service commission under Wis. Stats 196.491.

…

ARTICLE III – DISTRICT REGULATIONS

…

DIVISION 2- AED EXCLUSIVE AGRICULTURAL DISTRICT

…

Sec. 54-100, Permitted principal uses and structures

4) Utility-Scale Energy System.

…
Sec. 54-101, Permitted accessory uses and structures
6) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
Sec. 54-102, Special exception uses and structures
9) Community-Scale and Large-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.
…
DIVISION 3- AGD GENERAL AGRICULTURAL DISTRICT
…

Sec. 54-128, Permitted principal uses and structures
6) Utility-Scale Energy System.

…
Sec. 54-129, Permitted accessory uses and structures
3) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
Sec. 54-130, Special exception uses and structures
~~**17) Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. 196.491 and subject to the site plan review procedures outlined in Division 5 of Article XII of this chapter.**~~

17) Community-Scale and Large-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
DIVISION 4- RSF SINGLE- FAMILY RESIDENTIAL DISTRICT
…

Sec. 54-154, Permitted principal uses and structures
6) Utility-Scale Energy System.

…
Sec. 54-155, Permitted accessory uses and structures
5) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
Sec. 54-156, Special exception uses and structures
11) Community-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
DIVISION 7- CL LOCAL COMMERCIAL DISTRICT
…

Sec. 54-233, Permitted principal uses and structures
19) Utility-Scale Energy System.

…
Sec. 54-234, Permitted accessory uses and structures
3) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
Sec. 54-235(b), Special exception uses and structures
~~**15). Facilities for the production, transmission, delivery or furnishing of heat, light, water, or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in division 5 of article XII of this chapter.**~~

15) Community-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
DIVISION 8- CR REGIONAL COMMERCIAL DISTRICT
…

Sec. 54-259, Permitted principal uses and structures
3) Utility-Scale Energy System.

…
Sec. 54-261, Special exception uses and structures
~~**3) Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity has been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in Division 5 of Article XII of this chapter.**~~

…
DIVISION 9- CP PLANNED COMMERCIAL OFFICE DISTRICT
…

Sec. 54-279, Permitted principal uses and structures
9) Utility-Scale Energy System.

…
Sec. 54-280, Permitted accessory uses and structures
3) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
Sec. 54-281, Special exception uses and structures
~~**4) Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in Division 5 of Article XII of this chapter.**~~

4) Community-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
DIVISION 10- IND INDUSTRIAL DISTRICT
…

Sec. 54-306, Permitted principal uses and structures
~~**11) Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in Division 5 of Article XII of this chapter.**~~

11) Utility-Scale Energy System.

…
Sec. 54-307, Permitted accessory uses and structures
5) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
Sec. 54-308, Special exception uses and structures
6) Community-Scale and Large-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

…
ARTICLE IV.- SUPPLEMENTARY DISTRICT REGULATIONS
…
Proposed Amendment, related to specific provisions for solar energy systems
Amend Article IV Supplementary District Regulations to include Division 4. Solar Energy Systems

Division 4. Solar Energy Systems

Subdivision 1. General

Sec. 54-445, Purpose and intent

To encourage the use of renewable energy in Outagamie County and achieve, among others, the following objectives:

a) Promoting Clean Energy: Encourage the use of local, clean, renewable, and efficient energy resources to serve both current and future generations.

b) Sustainable Building and Practices: Promote sustainable building designs and management practices, which are essential for long-term environmental responsibility.

c) Compliance with Wisconsin Statutes: Incorporate the requirements of Wisconsin Statutes (Wis. Stats. 66.0401), which provide guidelines for the installation and use of solar energy systems, ensuring that they are legally compliant.

d) Protecting Health, Safety, and Welfare: Support solar energy use, while protecting the community's health, safety, and welfare.

e) No Significant Impact on Cost or Efficiency: Avoid significantly increasing the cost of solar energy systems or decreasing their efficiency. Aim to ensure that alternative systems of comparable cost or efficiency are not hindered.

Sec. 54-446, Restriction limited

Pursuant to Wis. Stats. 66.0401(1m) the county may not place any restriction, either directly or in effect, on the installation or use of a solar energy system, unless the restriction satisfies one of the following conditions:

a) Serves to preserve or protect the public health or safety.

b) Does not significantly increase the cost of the system or significantly decrease its efficiency.

c) Allows for an alternative system of comparable cost and efficiency.

Subdivision 2. Accessory-Scale Solar Energy System

Sec. 54-447, General standards

Accessory-scale solar energy systems are subject to the following requirements and the requirements of Wis. Stats. 66.0401. Solar carports and associated electric vehicles charging equipment are a permitted accessory use on surface parking lots in all districts regardless of the existence of another building.

a) Site Design

1. Height. Accessory-scale solar energy systems must meet the following height requirements:

a. Building- or roof-mounted solar energy systems shall not exceed the maximum allowed height for the zoning district in which it is located. For purposes 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 under Section 54-353

b. Ground-mounted solar energy systems shall not exceed 15 feet in height when oriented at maximum tilt. Height may be increased by 1 foot for every 2 feet of additional setback beyond what is required.

c. Solar carports shall not exceed 20 feet in height.

2. Setbacks. Accessory-scale solar energy systems must meet the required structure setback for the zoning district and primary land use associated with the lot on which the system is located. Setback distance shall be measured from the edge of the solar energy system array.

a. Building- or roof-mounted solar energy systems must meet the principal structure setback when attached to the principal structure and the accessory structure setback when attached to an accessory structure.

b. Ground-mounted solar energy systems must meet the detached accessory structure setback when oriented at minimum design tilt.

b) Site Plan/Elevations. Accessory-scale solar energy systems shall provide a site plan and elevation drawing for review unless deemed unnecessary by the Zoning Administrator.

1. The site plan shall include both existing and proposed conditions, showing locations of all solar arrays, other structures, property lines, rights-of-way, entrances, service roads, storage systems, floodplains, wetlands and other protected natural resources, topography, electrical equipment/infrastructure, and all other characteristics requested by the Zoning Administrator.

2. Elevation drawings must be scaled and show the location of the system on the building or on the property for a ground-mount system, including the property lines, and all other characteristics requested by the Zoning Administrator.

c) Stormwater. Ground-mounted systems shall be exempt from impervious surface standards if the soil under the collector is maintained in vegetation and not compacted.

Subdivision 3. Community-Scale and Large-Scale Solar Energy System

Sec. 54-448, General Standards

Community-scale and large-scale solar energy systems are subject to the following requirements and the requirements of Wis. Stats. 66.0401.

a) Site Design

1. Height. Ground-mounted solar energy systems shall not exceed 15 feet in height when oriented at maximum tilt. Height may be increased by 1 foot for every 2 feet of additional setback.

2. Setbacks. Community-scale and large-scale solar energy systems must meet the following setbacks:

a. Arrays

i. Required setbacks for principal buildings or structures in the district in which the system is located.

ii. Setback distance shall be measured from the edge of the solar energy system array, excluding security fencing, screening, or berm.

b. Battery Energy Storage System (BESS)

i. Minimum 100 feet from exterior lot lines.

ii. Minimum 300 feet from existing dwellings and any other existing building containing a permitted principal use.

iii. Setback distance shall be measured from the edge of the BESS containment enclosure(s), excluding security fencing, screening, or berm.

3. Screening. Community-scale and large-scale solar shall be screened from existing dwellings located within 300 feet of the closest array.

a. A screening plan shall be submitted that identifies the type and extent of screening.

b. Screening shall be consistent with Section 54-359 Landscaped Buffer requirements, except that screening may be located where most effective and does not need to run the entire length of the property line.

c. The Zoning Administrator may require additional screening where they determine there is a clear interest in protecting/maintaining a viewshed.

4. Vegetation/Ground cover. The following provisions shall apply to the clearing of existing vegetation and establishment of vegetated ground cover for Large-Scale Solar Energy Systems. Additional site-specific conditions may apply as required by the Zoning Administrator.

a. Large-scale removal of mature trees on the site is discouraged.

b. The applicant shall submit a vegetative management plan prepared by a qualified professional or reviewed and approved by a natural resource agency or authority, such as the Wisconsin Department of Natural Resources or Outagamie County Department of Land Conservation. The plan shall identify:

i. The natural resource professionals consulted or responsible for the plan.

ii. 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 or ground-water quality.

iii. The intended mix of vegetation upon establishment.

iv. The management methods and schedules for how the vegetation will be managed on an annual basis, with particular attention given to the establishment period of approximately three years.

c. Soils shall be planted and maintained in perennial vegetation for the full operational life of the project, to prevent erosion, manage run off and build soil.

d. Vegetative cover should include a mix of perennial grasses and wildflowers that will preferably result in a short stature prairie with a diversity of forbs or flowering plants that bloom throughout the growing season. Blooming shrubs may be used in buffer areas as appropriate for visual screening. Perennial vegetation (grasses and forbs) are preferably 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 (i.e. clovers).

e. Plant material. Plant material must not have been treated with systemic insecticides.

5. Foundations. A licensed engineer shall certify that the foundation and design of the solar panel racking and support is within accepted professional standards, given local soil and climate conditions.

6. Power and communication lines. Power and communication lines running between banks of solar panels and to nearby electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted by the Zoning Administrator in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines, or distance makes undergrounding infeasible.

b. Stormwater. Solar collectors shall not be considered impervious surfaces if the soil under the collector is maintained in vegetation and not compacted.

c. Other standards and codes. All solar energy systems 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.

d. Project Narrative. The applicant shall submit a project narrative providing a general description of the proposed facility, facility operations, and site design.

e. Site Plan/Elevations. The applicant shall submit a site plan and elevations for review in accordance with the following.

1. The site plan shall include both existing and proposed conditions, showing locations of all solar arrays, other structures, property lines, rights-of-way, entrances, service roads, storage systems, floodplains, wetlands, and other protected natural resources, topography, electrical equipment/infrastructure, and all other characteristics requested by the Zoning Administrator.

2. Elevation drawings must be scaled and show the location of the system on the building or on the property for a ground-mount system, including the property lines, and all other characteristics requested by the Zoning Administrator.

f. Decommissioning. A decommissioning plan shall be required to ensure that solar energy systems are properly removed after their useful life.

1. The developer, including any successor, is responsible for the removal of the system at the end of its useful life. The site is to be restored to its pre-construction condition to the maximum extent possible, within 12 months of ceasing operations.

2. The plan shall include the following:

a. Provisions and steps for removal of all structures and foundations and restoration of soil and vegetation to pre-construction conditions.

b. Estimated cost for decommissioning and restoration of the site less the project's estimated salvage value.

g. Financial Assurance. Financial assurance shall be required in the amount adequate to cover the estimated cost of decommissioning as determined within the decommissioning plan and any subsequent amendments thereto. Financial assurance must be provided prior to the commencement of construction activities in the form of cash, irrevocable letter of credit, or other suitable financial mechanism as agreed upon by the County.

Sec. 54-449, Special exception permit requirements

All special exception permit applications are subject to, and shall be processed in accordance with, procedures set forth in Division 6 of Article XII of this ordinance and the following:

a. Application Requirements. Applications for special exception permits are subject to the provisions and requirements set forth in Section 54-448 and shall include application materials the same.

b. Conditions. In evaluating a special exception permit application, the Zoning Committee may impose one or more conditions as may be necessary to grant approval. Such conditions and restrictions may relate to the establishment, location, construction, maintenance, operation of the use, off-site impacts and any other aspect of the use that impacts the public health, safety, or general welfare and must be based on substantial evidence. Examples of such conditions are listed below.

Example Conditions	
Issue	***Potential Condition***
Construction	• *Limit hours of construction to be more compatible with surrounding uses.* • *Require construction phasing to limit area of disturbance.* • *Require dust mitigation.*
Buffering/Screening	*Require a larger buffer than what is otherwise required by this chapter. Buffering may include landscaping, walls or fences, berms, and other features to physically separate adjoining uses.*
Number and/or location of entrances	*Design the site so that entrances and drives are located in areas away from adjoining properties.*
Lighting	*Restrict location and type of lighting to reduce offsite impacts (glare/light pollution).*
Damaged soil drainage infrastructure	*Require a mitigation plan to correct any damage to existing soil drainage infrastructure.*
Damage to local roads from project construction	*Require a road maintenance agreement for the maintenance and repair of any damage to local roads from construction of the project.*
Battery Energy Storage System (BESS) fire hazards	*Require mitigation plans documenting:* • *Battery-related fire suppression design and chemical release containment design.* • *Clean-up and monitoring activities of any fire-related chemical releases.* • *Additional funding to affected fire districts directly impacted, including but not limited to equipment supplies and training for local firefighting/EMS.*

Subdivision 4. Utility-Scale Energy System

Sec. 54-450, General

Utility-scale energy systems require a Certificate of Public Convenience and Necessity (CPCN) from the Public Service Commission (PSC) of Wisconsin. Utility-scale energy systems are subject to review and regulation by the PSC and are exempt from the requirements of this division.

Sec. 54-451- 54-470, Reserved.

BE IT FURTHER ORDAINED, that this ordinance shall be in effect upon completion of publication in accordance with Wisconsin State Statutes, and

BE IT FINALLY ORDAINED, that the Outagamie County Clerk be directed to forward a copy of this ordinance to the Outagamie County Corporation Counsel, the Outagamie County Development and Land Services Director, and Municipal Code Corporation for inclusion in the Outagamie County Code of Ordinances.

Dated this ____ day of March, 2025

Respectfully Submitted,

AGRICULTURE, EXTENSION EDUCATION, ZONING AND LAND CONSERVATION COMMITTEE

_____	_____
Debbie VanderHeiden	Mike Janke
_____	_____
Jayme Heiser	Mark Mitchell
_____	
Daniel Rettler	

Duly and officially adopted by the County Board on: _____

Signed: _____ _____

Board Chairperson County Clerk

Approved: _____ Vetoed: _____

Signed: _____

County Executive

Outagamie County Est. 1851

Department of Development and Land Services
Planning & Zoning | GIS & Land Information
320 S. Walnut St | Appleton, WI 54911
Administration Building, 3rd Floor
Phone: 920-832-5255 | Fax: 920-920-832-4770
www.outagamie.org

MEMORANDUM

TO: Outagamie County Zoning Committee
FROM: Isaac Uitenbroek, Zoning Administrator
DATE: February 3, 2025
RE: PL202500006 – Proposed Minor Code Amendments to Chapter 54, Pertaining to Solar Energy Systems.

Background and Analysis

The County adopted its Comprehensive Plan in 2020, following community outreach and review spanning several years. The Plan provided clear policy direction to modernize our land use codes. In particular, it cited the following goals and recommendations:

- Goal 2: Modernized land use and regulatory tools.
  - *Rec. 2.1.* Evaluate the zoning, subdivision, and other land use codes for compliance with statutory changes, urban, suburban, and rural land use patterns, and community and county goals….Identify areas where greater clarity could be added. Recommend changes where appropriate.

Based on this policy direction and the need to update the current zoning ordinance to comply with Wis. Stat. 66.0401 pertaining to solar energy systems, Outagamie County zoning staff propose three minor amendments to the Outagamie County Zoning Ordinance (Chapter 54 of Outagamie County's Code of Ordinances).

The first amendment, will incorporate solar energy system related definitions into Section 54-4 *Definitions* of Chapter 54 (see Exhibit A for details).

The second amendment, will establish placement of solar energy systems within each of the existing zoning districts. Depending on the type of solar energy system, it may be permitted by-right, permitted by special exception, or not permitted (see Exhibit B for details).

The third amendment, will establish a new division (*Division 4. Solar Energy Systems*) under Article IV of Chapter 54. This division will provide specific regulatory guidelines and performance criteria related to solar energy systems (see Exhibit C for details).

Staff Recommendation

DLS staff requests that the County Zoning Committee: **approve the minor code amendments to Ch. 54, Outagamie County Code of Ordinances, as proposed in Exhibits A, B, and C.**

Exhibits

- Exhibit A: First Amendment to Chapter 54
- Exhibit B: Second Amendment to Chapter 54
- Exhibit C: Third Amendment to Chapter 54

Exhibit A: First Amendment to Chapter 54

Proposed Amendment, related to Definitions

Amend Section 54-4 to include the following definitions associated with the Solar Energy Systems:

1. In Sec. 54-4, alphabetically **ADD** the following definitions:

Accessory-Scale Solar Energy System – A private or commercial solar energy system less than 100 megawatts that converts sunlight into electricity for the purpose of serving on-site electric demands only. Accessory-scale systems are accessory to permitted/permissible principal uses for the parcel on which it is located.

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.

Battery Energy Storage System (BESS) – Electrochemical devices that charge, or collect, energy from the electric grid or a generation facility, store that energy, and then discharge that energy at a later time to provide electricity or other electric grid services.

Building-integrated Solar Energy Systems – A solar energy system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. Building-integrated systems include but are not limited to photovoltaic or hot water solar energy systems that are contained within roofing materials, windows, skylights, and awnings.

Community-Scale Solar Energy System – A commercial solar energy system less than 100 megawatts 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 have a project size equal to, or less than, 20 acres.

Grid-intertie Solar Energy System — A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.

Ground-mount – 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.

Kilowatt (KW) – A unit of power equal to one thousand watts.

Large-Scale Solar Energy System – A commercial solar energy system less than 100 megawatts that converts sunlight into electricity for the primary purpose of wholesale sales of generated electricity. A large-scale solar energy system will have a project size greater than 20 acres and is the principal land use for the parcel(s) on which it is located.

Megawatt (MW) – A unit of power equal to one million watts, especially as a measure of the output of a power station.

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.

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.

Photovoltaic System – A solar energy system that converts solar energy directly into electricity.

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 Wis Statutes 700.35.

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.

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.

Solar Carport – A solar energy system 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.

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, mechanical, chemical, or electrical energy. The collector does not include frames, supports, or mounting hardware.

Solar Energy — Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

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.

Solar Hot Air System — (also referred to as Solar Air Heat or Solar Furnace) – A solar energy system that includes a solar collector to provide direct supplemental space heating by heating and re-circulating conditioned building air. The most efficient performance includes a solar collector to preheat air or supplement building space heating, typically using a vertically mounted collector on a south-facing wall.

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.

Solar Mounting Devices — Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

Solar Resource — 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.

Utility-Scale Energy System – Solar (100 MW or larger), wind (100 MW or larger), and other facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity has been obtained from the state public service commission under Wis. Stats. § 196.491.

Exhibit B: Second Amendment to Chapter 54

Proposed Amendment, related to Placement

Amend existing zoning districts to incorporate solar energy systems as a land use. Further, amend each district to determine where and how solar energy systems will be permitted and by what process.

Table 1 summarizes the proposed placement of solar energy systems. Specific modifications to district regulations within each relevant section are documented in items 1-24 following the table.

Table 1. Summary of Proposed Placement Requirements for Solar Energy Systems

	Agricultural		Residential			Commercial			Industrial
	Exclusive (AED)	General (AGD)	Single-Family (RSF)	Two-Family (RTF)	Multifamily (RMF)	Local (CL)	Regional (CR)	Planned (CP)	Industrial (IND)
Accessory-Scale Solar Energy System									
Proposed	P	P	P	P	P	P	P	P	P
Community-Scale Solar Energy System									
Proposed	SP	SP	SP	SP	SP	SP	SP	SP	SP
Large-Scale Solar Energy System									
Proposed	SP	SP	NP	NP	NP	NP	NP	NP	SP
Utility-Scale Energy System[1]									
Proposed	P	P	P	P	P	P	P	P	P

Table Key:
P = Permitted
SP = Special Exception Permit Required
NP = Not Permitted/Permissible

Table Notes:
[1] Utility-scale energy systems are reviewed and permitted by the Public Service Commission (PSC) of Wisconsin and are not subject to regulation at the local level. As such, this use will be included as a permitted use in all districts.

1. In Sec. 54-100, **ADD** the following text:

   4) Utility-Scale Energy System.

2. In Sec. 54-101, **ADD** the following text:

   6) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

3. In Sec. 54-102, **ADD** the following text:

9) Community-Scale and Large-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

4. In Sec. 54-128, **ADD** the following text:

   6) Utility-Scale Energy System.

5. In Sec. 54-129, **ADD** the following text:

   3) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

6. In Sec. 54-130, **REMOVE** the following text:

   17) ~~Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in division 5 of article XII of this chapter.~~

7. In Sec. 54-130, **ADD** the following text as a replacement:

   17) Community-Scale and Large-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

8. In Sec. 54-154, **ADD** the following text:

   6) Utility-Scale Energy System.

9. In Sec. 54-155, **ADD** the following text:

   5) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

10. In Sec. 54-156, **ADD** the following text:

    11) Community-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

11. In Sec. 54-233, **ADD** the following text:

    19) Utility-Scale Energy System.

12. In Sec. 54-234, **ADD** the following text:

    3) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

13. In Sec. 54-235(b), **REMOVE** the following text:

15) ~~Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in division 5 of article XII of this chapter.~~

14. In Sec. 54-235(b), **ADD** the following text as a replacement:

15) Community-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

15. In Sec. 54-259, **ADD** the following text:

3) Utility-Scale Energy System.

16. In Sec. 54-261, **REMOVE** the following text, and update numbering convention that follows:

3) ~~Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in division 5 of article XII of this chapter.~~

17. In Sec. 54-279, **ADD** the following text:

9) Utility-Scale Energy System.

18. In Sec. 54-280, **ADD** the following text:

3) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

19. In Sec. 54-281, **REMOVE** the following text:

4) ~~Facilities for the production, transmission, delivery or furnishing of heat, light, water or power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in division 5 of article XII of this chapter.~~

20. In Sec. 54-281, **ADD** the following text as a replacement:

4) Community-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

21. In Sec. 54-306, **REMOVE** the following text:

11) ~~Facilities for the production, transmission, delivery or furnishing of heat, light, water or~~

~~*power, for which a certificate of public convenience and necessity had been obtained from the state public service commission under Wis. Stats. § 196.491 and subject to the site plan review procedures outlined in division 5 of article XII of this chapter.*~~

22. In Sec. 54-306, **ADD** the following text as a replacement:

    11) Utility-Scale Energy System.

23. In Sec. 54-307, **ADD** the following text:

    5) Accessory-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

24. In Sec. 54-308, **ADD** the following text:

    6) Community-Scale and Large-Scale Solar Energy System, subject to the provisions of Division 4 of Article IV of this chapter.

Exhibit C: Third Amendment to Chapter 54

Proposed Amendment, related to specific provisions for solar energy systems

Amend Article IV *Supplementary District Regulations* to include *Division 4. Solar Energy Systems*.

1. In Article IV, **ADD** the following text:

DIVISION 4. SOLAR ENERGY SYSTEMS

Subdivision 1. General

Sec. 54-445. Purpose & Intent.

To encourage the use of renewable energy in Outagamie County and achieve, among others, the following objectives:

a) *Promoting Clean Energy: Encourage the use of local, clean, renewable, and efficient energy resources to serve both current and future generations.*
b) *Sustainable Building and Practices: Promote sustainable building designs and management practices, which are essential for long-term environmental responsibility.*
c) *Compliance with Wisconsin Statutes: Incorporate the requirements of Wisconsin Statutes (Wis. Stats. 66.0401), which provide guidelines for the installation and use of solar energy systems, ensuring that they are legally compliant.*
d) *Protecting Health, Safety, and Welfare: Support solar energy use, while protecting the community's health, safety, and welfare.*
e) *No Significant Impact on Cost or Efficiency: Avoid significantly increasing the cost of solar energy systems or decreasing their efficiency. Aim to ensure that alternative systems of comparable cost or efficiency are not hindered.*

Sec. 54-446. Restriction Limited.

Pursuant to Wis. Stats. 66.0401(1m) the county may not place any restriction, either directly or in effect, on the installation or use of a solar energy system, unless the restriction satisfies one of the following conditions:

a) *Serves to preserve or protect the public health or safety.*
b) *Does not significantly increase the cost of the system or significantly decrease its efficiency.*
c) *Allows for an alternative system of comparable cost and efficiency.*

Subdivision 2. Accessory-Scale Solar Energy System

Sec. 54-447. General Standards.

Accessory-scale solar energy systems are subject to the following requirements and the requirements of Wis. Stats. 66.0401. Solar carports and associated electric vehicle charging equipment are a permitted accessory use on surface parking lots in all districts regardless of the existence of another building.

a) Site Design

1. *Height. Accessory-scale solar energy systems must meet the following height requirements:*

    a. *Building- or roof-mounted solar energy systems shall not exceed the maximum allowed height for the zoning district in which it is located. For purposes 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 under Section 54-353.*

    b. *Ground-mounted solar energy systems shall not exceed 15 feet in height when oriented at maximum tilt. Height may be increased by 1 foot for every 2 feet of additional setback beyond what is required.*

    c. *Solar carports shall not exceed 20 feet in height.*

2. *Setbacks. Accessory-scale solar energy systems must meet the required structure setback for the zoning district and primary land use associated with the lot on which the system is located. Setback distance shall be measured from the edge of the solar energy system array.*

    a. *Building- or roof-mounted solar energy systems must meet the principal structure setback when attached to the principal structure and the accessory structure setback when attached to an accessory structure.*

    b. *Ground-mounted solar energy systems must meet the detached accessory structure setback when oriented at minimum design tilt.*

b) Site Plan/Elevations. Accessory-scale solar energy systems shall provide a site plan and elevation drawing for review unless deemed unnecessary by the Zoning Administrator.

1. *The site plan shall include both existing and proposed conditions, showing locations of all solar arrays, other structures, property lines, rights-of-way, entrances, service roads, storage systems, floodplains, wetlands and other protected natural resources, topography, electrical equipment/infrastructure, and all other characteristics requested by the Zoning Administrator.*

2. *Elevation drawings must be scaled and show the location of the system on the building or on the property for a ground-mount system, including the property lines, and all other characteristics requested by the Zoning Administrator.*

c) Stormwater. Ground-mounted systems shall be exempt from impervious surface standards if the soil under the collector is maintained in vegetation and not compacted.

Subdivision 3. Community-Scale and Large-Scale Solar Energy System

Sec. 54-448. General Standards.

Community-scale and large-scale solar energy systems are subject to the following requirements and the requirements of Wis. Stats. 66.0401.

a) Site Design

1. *Height. Ground-mounted solar energy systems shall not exceed 15 feet in height when oriented at maximum tilt. Height may be increased by 1 foot for every 2 feet of additional setback.*
2. *Setbacks. Community-scale and large-scale solar energy systems must meet the following setbacks:*
    a. *Arrays*
        i. *Required setbacks for principal buildings or structures in the district in which the system is located.*
        ii. *Setback distance shall be measured from the edge of the solar energy system array, excluding security fencing, screening, or berm.*
    b. *Battery Energy Storage System (BESS)*
        i. *Minimum 100 feet from exterior lot lines.*
        ii. *Minimum 300 feet from existing dwellings and any other existing building containing a permitted principal use.*
        iii. *Setback distance shall be measured from the edge of the BESS containment enclosure(s), excluding security fencing, screening, or berm.*
3. *Screening. Community-scale and large-scale solar shall be screened from existing dwellings located within 300 feet of the closest array.*
    a. *A screening plan shall be submitted that identifies the type and extent of screening.*
    b. *Screening shall be consistent with Section 54-359 Landscaped Buffer requirements, except that screening may be located where most effective and does not need to run the entire length of the property line.*
    c. *The Zoning Administrator may require additional screening where they determine there is a clear interest in protecting/maintaining a viewshed.*
4. *Vegetation/Ground cover. The following provisions shall apply to the clearing of existing vegetation and establishment of vegetated ground cover for Large-Scale Solar Energy Systems. Additional site-specific conditions may apply as required by the Zoning Administrator.*
    a. *Large-scale removal of mature trees on the site is discouraged.*

b. The applicant shall submit a vegetative management plan prepared by a qualified professional or reviewed and approved by a natural resource agency or authority, such as the Wisconsin Department of Natural Resources or Outagamie County Department of Land Conservation. The plan shall identify:

i. The natural resource professionals consulted or responsible for the plan.

ii. 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 or ground-water quality.

iii. The intended mix of vegetation upon establishment.

iv. The management methods and schedules for how the vegetation will be managed on an annual basis, with particular attention given to the establishment period of approximately three years.

c. Soils shall be planted and maintained in perennial vegetation for the full operational life of the project, to prevent erosion, manage run off and build soil.

d. Vegetative cover should include a mix of perennial grasses and wildflowers that will preferably result in a short stature prairie with a diversity of forbs or flowering plants that bloom throughout the growing season. Blooming shrubs may be used in buffer areas as appropriate for visual screening. Perennial vegetation (grasses and forbs) are preferably 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 (i.e. clovers).

e. Plant material. Plant material must not have been treated with systemic insecticides.

5. Foundations. A licensed engineer shall certify that the foundation and design of the solar panel racking and support is within accepted professional standards, given local soil and climate conditions.

6. Power and communication lines. Power and communication lines running between banks of solar panels and to nearby electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted by the Zoning Administrator in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines, or distance makes undergrounding infeasible.

b) Stormwater. Solar collectors shall not be considered impervious surfaces if the soil under the collector is maintained in vegetation and not compacted.

c) *Other standards and codes. All solar energy systems 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.*

d) *Project Narrative. The applicant shall submit a project narrative providing a general description of the proposed facility, facility operations, and site design.*

e) *Site Plan/Elevations. The applicant shall submit a site plan and elevations for review in accordance with the following.*

1. *The site plan shall include both existing and proposed conditions, showing locations of all solar arrays, other structures, property lines, rights-of-way, entrances, service roads, storage systems, floodplains, wetlands and other protected natural resources, topography, electrical equipment/infrastructure, and all other characteristics requested by the Zoning Administrator.*
2. *Elevation drawings must be scaled and show the location of the system on the building or on the property for a ground-mount system, including the property lines, and all other characteristics requested by the Zoning Administrator.*

f) *Decommissioning. A decommissioning plan shall be required to ensure that solar energy systems are properly removed after their useful life.*

1. *The developer, including any successor, is responsible for the removal of the system at the end of its useful life. The site is to be restored to its pre-construction condition to the maximum extent possible, within 12 months of ceasing operations.*
2. *The plan shall include the following:*
    a. *Provisions and steps for removal of all structures and foundations and restoration of soil and vegetation to pre-construction conditions.*
    b. *Estimated cost for decommissioning and restoration of the site less the project's estimated salvage value.*

g) *Financial Assurance. Financial assurance shall be required in the amount adequate to cover the estimated cost of decommissioning as determined within the decommissioning plan and any subsequent amendments thereto. Financial assurance must be provided prior to the commencement of construction activities in the form of cash, irrevocable letter of credit, or other suitable financial mechanism as agreed upon by the County.*

Sec. 54-449. Special Exception Permit Requirements.

All special exception permit applications are subject to, and shall be processed in accordance with, procedures set forth in Division 6 of Article XII of this ordinance and the following:

a) *Application Requirements. Applications for special exception permits are subject to the provisions and requirements set forth in Section 54-448 and shall include application materials the same.*
b) *Conditions. In evaluating a special exception permit application, the zoning committee may impose one or more conditions as may be necessary to grant approval. Such conditions and restrictions may relate to the establishment, location, construction,*

maintenance, operation of the use, off-site impacts, and any other aspect of the use that impacts the public health, safety, or general welfare and must be based on substantial evidence. Examples of such conditions are listed below.

Example Conditions	
Issue	***Potential Condition***
Construction	• *Limit hours of construction to be more compatible with surrounding uses.* • *Require construction phasing to limit area of disturbance.* • *Require dust mitigation.*
Buffering/Screening	*Require a larger buffer than what is otherwise required by this chapter. Buffering may include landscaping, walls or fences, berms, and other features to physically separate adjoining uses.*
Number and/or location of entrances	*Design the site so that entrances and drives are located in areas away from adjoining properties.*
Lighting	*Restrict location and type of lighting to reduce offsite impacts (glare/light pollution).*
Damaged soil drainage infrastructure	*Require a mitigation plan to correct any damage to existing soil drainage infrastructure.*
Damage to local roads from project construction	*Require a road maintenance agreement for the maintenance and repair of any damage to local roads from construction of the project.*
Battery Energy Storage System (BESS) fire hazards	*Require mitigation plans documenting:* • *Battery-related fire suppression design and chemical release containment design.* • *Clean-up and monitoring activities of any fire-related chemical releases.* • *Additional funding to affected fire districts directly impacted, including but not limited to equipment supplies and training for local firefighting/EMS.*

Subdivision 4. Utility-Scale Energy System

Sec. 54-450. General.

Utility-scale energy systems require a Certificate of Public Convenience and Necessity (CPCN) from the Public Service Commission (PSC) of Wisconsin. Utility-scale energy systems are subject to review and regulation by the PSC and are exempt from the requirements of this division.

Sec. 54-451 – 54-470. Reserved.