



Community
Development Department

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Date: October 12, 2017
To: Wisconsin Rapids Planning Commission
From: Adam Tegen, Director
Re: Solar Power Regulation Changes

At the September meeting of the Planning Commission we discussed the City partnering with Midwest Renewable Energy Association (MREA) to apply for a SolSmart designation through the Department of Energy. As part of that process it was recommended we amend our current zoning regulations as they relate to solar energy systems. My recommendation is that the following changes and additions be made to our current zoning ordinance. I would note that CiviTek has been reviewing the same recommendations and incorporating them into the new zoning code draft as well.

1. Amend Section 11.02 Definitions to include:

- Photovoltaic System: An active solar energy system that converts solar energy directly into electricity – also see Solar Collector.
- Rated Nameplate Capacity: the maximum rated output of electric power production of the photovoltaic system in watts of Direct Current (DC).
- Solar Access: The access of a solar energy system to direct sunlight.
- Solar Array: An accessory system or device that is roof-mounted or ground-mounted with poles or racks used to collect radiant energy directly from the sun for use in a solar collector's energy transformation process.
- Solar Collector: A device, structure, or part of a device, the substantial purpose of which is to transform solar energy into thermal, mechanical, chemical, or electrical energy.
- 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 or structural design feature, a substantial purpose of which is to provide daylight for interior lighting or provide for the collection, storage and distribution of solar energy for space heating or cooling, electricity generation, or water heating.

Solar Energy System, Active: A solar energy system whose primary purpose is to harvest energy by transforming solar energy into another form of energy of transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

Solar Energy System, Grid-Intertie: A photovoltaic system that is

connected to an electric circuit served by an electric utility.

Solar Energy System, Ground-Mounted: An Active Solar Energy System that is structurally mounted to the ground and is not roof mounted; may be of any size (small, medium or large scale).

Solar Energy System, Large-Scale: An Active Solar Energy System that occupies more than 40,000 square feet of surface area (equivalent to a rated nameplate capacity of about 250kW DC or greater).

Solar Energy System, Medium-Scale: An Active Solar Energy System that occupies more than 1,750 but less than 40,000 square feet of surface area (equivalent to a rated nameplate capacity of about 10 – 250 kW DC).

Solar Energy System, Off-Grid: 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.

Solar Energy System, Passive: 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.

Solar Energy System, Roof-Mounted: An Active Solar Energy System that is structurally mounted to the roof of a building or structure; may be of any size (small, medium, or large scale).

Solar Energy System, Small-Scale: An Active Solar Energy System that occupies 1,750 square feet of surface area or less (equivalent to a rated nameplate capacity of about 10 kW DC or less).

- Solar Farm: An array of multiple solar collectors on ground-mounted racks or poles that transmit solar energy and is the primary land use for the parcel on which it is located.
- Solar Thermal System: An Active Solar Energy System that uses collectors to convert the sun's rays into useful forms of energy for water heating, space heating, or space cooling.

2. Amend Section 11.07 (10) Alternative Energy Ordinance to specifically address Solar Energy Systems and differentiate between the different styles and sizes of the systems.

(10) Solar Energy System Ordinance.

(a) General Provisions.

(1) Installation: Solar Energy Systems may be installed in all zones upon the issuance of a building permit, site plan review, or Conditional Use Permit as outlined below:

	ONE AND TWO FAMILY RESIDENTIAL	MULTI-FAMILY RESIDENTIAL	COMMERCIAL	INDUSTRIAL	INSTITUTIONAL
PRINCIPAL USE					
MEDIUM-SCALE GROUND-MOUNTED SOLAR ENERGY SYSTEM	SITE PLAN REVIEW	SITE PLAN REVIEW	PERMITTED	PERMITTED	PERMITTED
LARGE-SCALE GROUND-MOUNTED SOLAR ENERGY SYSTEM	PROHIBITED	SITE PLAN REVIEW	SITE PLAN REVIEW	SITE PLAN REVIEW	SITE PLAN REVIEW

	ONE AND TWO FAMILY RESIDENTIAL	MULTI-FAMILY RESIDENTIAL	COMMERCIAL	INDUSTRIAL	INSTITUTIONAL
ACCESSORY USE					
ROOF-MOUNTED SOLAR ENERGY SYSTEM	PERMITTED	PERMITTED	PERMITTED	PERMITTED	PERMITTED
SMALL-SCALE GROUND-MOUNTED SOLAR ENERGY SYSTEM	PERMITTED	PERMITTED	PERMITTED	PERMITTED	PERMITTED
MEDIUM-SCALE GROUND-MOUNTED SOLAR ENERGY SYSTEM	SITE PLAN REVIEW	SITE PLAN REVIEW	PERMITTED	PERMITTED	PERMITTED

(2) All structures and roof-mounted solar energy systems must conform to state codes regarding construction, wind loading, materials, etc.

(3) Any Solar Energy System which for any reason a building permit is not granted may appeal to the planning commission.

(4) Height Exemption. Roof-Mounted Solar Energy Systems shall be exempt from maximum building height regulations in all districts.

(5) Setbacks. Small- and medium-scale ground-mounted solar energy systems accessory to a principal use may be located in accordance to the setbacks required for an accessory building and in any residential district shall be located in either a side or rear yard to the extent practicable. Location in the front yard shall require approval by the Planning Commission.

(6) Lot Coverage. Solar energy systems shall not be included in calculations for lot coverage in all districts.

(7) Wisconsin State Solar Access Rights. In accordance with Wisconsin State law 60.61(2)(i), an application for a permit will only be denied if the denial is necessary to preserve or protect the health and safety, or an alternative system of comparable cost and efficiency would be permitted; and provided further that conditions may be imposed upon a permit if they; serve to preserve or protect public health or safety, or do not significantly increase the cost of the system or significantly decrease efficiency.