

AN ORDINANCE FOR THE DEVELOPMENT OF SOLAR ENERGY SYSTEMS

CHAPTER 16C. SOLAR ENERGY SYSTEMS

Table of Contents

16C.10 PURPOSE

16C.11 DEFINITIONS

16C.12 PERMITTED ACCESSORY USE

16C.13 SAFETY & INSTALLATION

16C.14 APPROVAL

16C.15 ABANDONMENT

16C.16 RESTRICTIONS ON SOLAR ENERGY SYSTEMS

16C.10 PURPOSE

In order to accommodate the renewable energy needs of residents and businesses and enhance the sustainability of local energy production and consumption, while protecting the public health, safety and general welfare of the community, the city finds that these regulations are necessary in order to:

- A. Allow property owners the opportunity to capture their on-site solar energy resource;
- B. Allow small-scale solar distributed generation that can provide support to the local electric grid;
- C. Enhance the economic use of local resources and foster the development of solar energy businesses in the city;
- D. Minimize adverse visual effects of solar energy installations through careful design and siting standards; and
- E. Encourage distributed generation that fully integrates into the municipal electric utility to protect the utility's distribution system, protection and control schemes, and maintain existing levels of safety and reliability to customers.

16C.11 DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of this Ordinance:

- F. Building Integrated Solar. 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.
- G. Ground- or Pole-Mounted Solar Energy System. A solar energy system mounted on a

rack or pole that rests on the ground or on a foundation, and is not connected to a building except by the electric system.

- H. Roof- And Building-Mounted Solar Energy System. A solar energy system mounted on top of the finished surface of a building roof or another component of the finished building surface.
- I. Solar Collector Surface. The surface and framing of a solar collector, excluding the rack, rail, or other device upon which the collector is mounted.
- J. Solar Energy System. A mechanical or electrical device whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.
- K. Small-Scale Solar Distribution System. A solar energy system that is one (1) megawatt in size or smaller.

16C.12 PERMITTED ACCESSORY USE

Small solar energy systems are allowed as an accessory use in all zoning classifications where structures of any sort are allowed, subject to certain requirements as set forth below. Exception: Solar Energy Systems are not allowed in Flood Plain (F1) district.

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

1. Building- or roof-mounted solar energy systems shall not exceed the maximum allowed height in any zoning district. Regardless of height limitations, on pitched roofs located in residential districts, the solar collectors shall not extend above the peak of the roof and shall not extend higher than ten (10) feet above the surface of the roof when installed on a flat roof.
2. Ground- or pole-mounted solar energy systems shall not exceed fifteen (15) feet in height when oriented at maximum tilt.

B. **Set-back.** Solar energy systems are required to meet set-back standard for the district in which the systems are located, except as provided below:

1. For roof-mounted solar energy systems the collector surface and mounting devices shall not extend beyond the exterior perimeter of the building's roof, except as such extensions are building-integrated systems, designed to serve as an awning or canopy. Exterior piping for solar hot water systems or electrical conduit or other electric component shall be allowed to extend beyond the perimeter of the building on a side or rear yard exposure.
2. Ground-mounted solar energy systems may be located within the rear or side yard areas, but in no case will they be less than ten (10) feet from any property line when oriented at minimum design tilt. Solar energy systems shall not be

permitted in the required front yard or easement areas.

3. Clearance to electric lines. Electric lines passing over the collector must have a minimum clearance of ten (10) feet, or most recent standard in the National Electric Safety Code.
4. Solar energy systems not meeting the above setbacks shall require a variance.
5. Solar energy systems shall be positioned in such a way that glare does not affect adjacent properties, roadways, or the municipal airport.

C. Coverage.

1. Area. In the residential districts, the area of the solar collector surface of freestanding solar energy systems shall not exceed three (3) percent of the parcel area. In all other districts, the area of the solar collector surface of freestanding solar energy systems shall not exceed ten (10) percent of the parcel area.
2. Vegetation. Underground mounted solar energy systems must be maintained according to the regulations of the Tyler City Code.
3. First Responder Access. Roof-mounted solar energy systems shall not cover more than 25 percent of the total area of a roof. Solar energy systems must have clearance for two 3 foot paths to facilitate emergency responder access and comply with Minnesota Statute.
1. Weight. Roof top solar projects must not overload the designed weight limit of a roof.

D. Visibility. Building or roof-mounted solar energy systems shall be designed to blend into the architecture of the building, as viewed from the front public right-of-way. Solar energy systems that meet the following design standards shall be in compliance with the visibility requirements:

1. On pitched roofs located in residential districts, the solar collectors shall not extend above the peak of the roof.
2. On pitched roofs on a corner lot, roof-mounted systems shall be flush-mounted.
3. The solar collector shall not extend beyond the edge of the finished roof.
4. If the solar energy system is placed in or adjacent to a residential district, a visual buffer or fence must be constructed between the said properties to ease the visual aesthetics of the solar energy system. All fences must comply with the regulations of Tyler City Code.

5. Building-integrated solar energy systems meet the visibility standard.
6. Solar energy systems not meeting the above design standards shall require a conditional use permit.

16C.13 SAFETY & INSTALLATION

- B. Approved Solar Components.** Electric Solar Energy System components shall be certified and have an Underwriters Laboratories, Inc. (UL) rating. Solar Hot Water Systems must be certified and have a Solar Rating and Certification Corporation (SRCC) rating. The City reserves the right to deny a building permit for proposed solar energy systems deemed to have inadequate certification.
- C. Feeder Lines.** All power, exterior electrical or other service lines must be buried below the surface of the ground.
- D. Compliance with Codes.**
1. Compliance with Building Codes. All solar energy systems shall comply with the Minnesota Building Code and any local building Code requirements.
 2. Compliance with Electric Code. All solar energy systems shall comply with the National Electrical Code.
 3. Compliance with Plumbing Code. All solar thermal systems shall comply with the Minnesota State Plumbing Code.
- E. Inspection.** Solar energy systems shall be installed to meet Minnesota Building and Electrical Codes and be inspected by the city building official as well as the State Electrical Inspector.
- F. Exemption.** Building integrated solar energy systems are exempt from the requirements of this section and shall be regulated as any other building element.
- G. Easements.** It shall be the responsibility of the property owner to secure/provide any desired solar easement by City of Tyler to protect solar access for the system (per Minnesota Statutes Section 500.30).

16C.14 APPROVAL

- A. City Building Permit.** The erection, alteration, improvement, and movement of a solar energy system requires a building permit from the City.
- B. TYLER PUBLIC UTILITIES interconnect agreement.** The owner of a solar energy system that will physically connect to a house or other building's electrical system and/or the electric utility grid must enter into a signed interconnection

agreement with the City of Tyler prior to the issuance of a building permit.

16C.15 ABANDONMENT

- A. If the solar energy remains nonfunctional or inoperative for more than twelve consecutive months, the system shall constitute a public nuisance. The owner shall obtain a demolition permit and remove the abandoned system at their expense. Removal includes the entire structure, including collector, mount and transmission equipment. Removal of all materials must be done in accordance with local, State and Federal Solid Waste rules.

16C.16 RESTRICTIONS ON SOLAR ENERGY SYSTEMS

- A. **Noise.** Noise generated by the system shall not exceed thirty (30) decibels, measured at the property line.
- B. **Power Outage.** In the case of a loss of electricity by the city electrical system, the solar system must be equipped to shut down so no electricity will be put into the city electrical distribution lines.
- C. **Solar Energy Systems for Heat.** If the system is used to heat the property of the owner of the system, the property shall be equipped with switching devices so that the city electricity may be switched off by an electronic signal during a period of high demand of electricity. The owner shall have an alternate source of heat for such periods.

This ordinance shall take full effect and be in full force from and after passage and publication according to law.

Passed and adopted by the Tyler Minnesota City Council on April 6, 2020.