



## SOLAR ENERGY CITY CODES

### § 11.84 SOLAR ENERGY INSTALLATIONS.

**Subd. 1. 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.

**Subd. 2. Definitions.** For the purpose of this section, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

- A. **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.
- B. **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.
- C. **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.
- D. **SOLAR COLLECTOR SURFACE.** The surface and framing of a solar collector, excluding the rack, rail, or other device upon which the collector is mounted.
- E. **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.

**Subd. 3. Permitted accessory use.** 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.

- 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, except that for solar installations on flat roofs or roofs with minimal slope (under 10%) solar installations shall be exempt from height limitations consistent with § 11.75, Subd. 2, Subpar. C of this chapter. Regardless of height limitations, solar energy systems shall not extend more than three feet above the peak of a pitched roof, and shall not extend more than ten feet above the roof surface of flat roofs or roofs with minimal slope (under 10%).

2. Ground- or pole-mounted solar energy systems shall not exceed 20 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. Solar energy systems mounted on the primary building or garage are allowed to extend into a required side or rear yard consistent with § [11.75](#), Subd. 4, Subpar. A, Item 6. Measurements of encroachment are made from the edge of the collector or the collector support system, whichever extends nearest to the adjacent property line.
  2. 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.
  3. Ground-mounted solar energy systems may be located within the rear or side yard areas, but in no case will they be less than five 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.
  4. ***Clearance to electric lines.*** Electric lines passing over the collector must have a minimum clearance of ten feet, or most recent standard in the National Electric Safety Code.
- C. ***Coverage.*** Ground-mounted solar energy systems are subject to accessory use coverage limitations of § [11.01](#), Subd. 1, except that solar energy installations shall not count toward the maximum number of accessory structures and are not required to have exterior finishes similar to the primary structure. Coverage shall be calculated as the square footage of ground under the system when at the solar energy system's minimum design tilt.
- 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. Building-integrated solar energy systems meet the visibility standard.
  5. Solar energy systems not meeting the above design standards shall require a conditional use permit.
- E. ***Approved solar components.*** Electric solar energy system components must have a UL listing and solar hot water systems must have an SRCC rating.
- F. ***Compliance with state codes.*** All active solar energy systems shall meet approval of the relevant code officials, consistent with the most currently adopted State of Minnesota Building Code, National Electric Code, National Electric Safety Code and Plumbing Code.

**Subd. 4. *Restrictions on solar energy systems limited.*** No homeowners' agreement, covenant, common interest community standard, or other contract between multiple property owners, created as of May 31, 2013, shall prohibit property owners from installing solar energy systems for the capture of direct sunlight. Design review conducted by a common interest community as applied to proposed solar energy installations within the CIC may reasonably require mitigation of visual impacts but may not preclude solar development within the CIC.