

## **§ 154.30 SOLAR ENERGY SYSTEMS.**

(A) Purpose. It shall be the purpose of this Section to permit, as an accessory use, solar energy systems, while protecting the health, safety and welfare of city residents and the property interests of adjacent and surrounding land uses through appropriate zoning and land use controls.

(B) Definitions.

(1) Building-integrated solar energy system. A solar energy system that is directly integrated into the building by replacing typical building materials.

(2) Interconnection. When a customer-owned solar energy system is connected to or has access to the electric grid.

(3) Ground-mounted solar energy systems. A solar energy system that is installed directly onto the ground by means of brackets or poles.

(4) Roof-mounted solar energy systems. A solar energy system where the panels are mounted to a house or other building.

(5) Solar energy system. A set of devices whose primary purpose is to provide for the collection, storage, and distribution of solar energy for space heating or cooling, electricity generation or water heating.

(6) Solar thermal 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 of the building.

(C) Permitted accessory use. Solar energy systems are allowable as an accessory use in all residential districts and as a conditional use in all other zoning districts, subject to the following requirements:

(1) Height. Roof-mounted solar energy systems shall not project beyond the peak elevation of a pitched roof and shall not project more than 10 feet above the surface of a flat roof to which they are attached. Ground-mounted solar energy systems shall not exceed 10 feet in height in residential districts, at maximum design tilt, and 20 feet in height all other districts, or the height of the principal structure, whichever is less.

(2) Location. Ground-mounted solar energy systems must be located in the rear yard only.

(3) Setbacks. Ground-mounted solar energy systems, at minimum design tilt, setback distance from property lines shall be equivalent to the setback requirements of the underlying district or as otherwise needed so as not to impair sight distance for safe access to the property or other traffic or properties in the vicinity. Roof-mounted solar energy systems shall comply with all building setbacks in the applicable zoning district and shall not extend beyond the exterior perimeter of the building on which the system is mounted.

(4) Coverage. A roof-mounted solar energy system's surface shall not exceed one-half the footprint of the principal structure or 525 square feet, whichever is less. Solar energy systems must have a 5-foot clearance around all edges (including the roof peak line), at

minimum design tilt, to facilitate emergency responder access. Ground-mounted solar energy systems shall be included with the principal structure and all accessory buildings when calculating the maximum lot coverage ratios of the zoning district.

(5) Aesthetics. All solar energy systems shall use colors that blend with the color of the roof or structure. Reflection angles from collector surfaces shall be oriented so as not to interfere with the use and enjoyment of other properties. Where necessary, screening may be required to address glare.

(6) Feeder Lines. All power exterior electrical or other service lines must be buried below the surface of the ground.

(7) Exemption. Building integrated solar energy systems are exempt from the requirements of this section and shall be regulated as any other building element, **with the exception of the (5) Aesthetics.**

(8) Abandonment. Any solar energy system that ceases to produce energy on a continuous basis for 6 months will be considered abandoned unless the property owner provides substantial evidence to the Community Services Director of the intent to maintain and reinstate the operation of that solar energy system within an acceptable designated time period. Upon abandonment of a solar energy system, the property owner must remove all components of the solar energy system and restore the real property to its condition prior to development and installation of the solar energy system. If the property owner does not remove the abandoned solar energy system within 180 days of receiving written notice from the zoning administrator, the City may remove the solar energy system, sell any removed materials, and initiate judicial proceedings or take any other steps legally authorized against the responsible parties to recover the costs required to remove the solar energy system and restore the site to a non-hazardous condition. All end-of-life disposal of solar products must comply with the Federal Resource Conservation and Recovery Act and any state policies governing solar product waste. If an applicant has received a permit but has not completed construction of the solar energy system within 18 months from the date of issuance of the permit, the system shall be deemed abandoned.

(9) Restoration. Upon abandonment, the property owner must ensure the site is restored to a useful, non-hazardous condition in a timely manner, including, but not limited to the following:

(a) Removal of aboveground and below ground equipment, structures and foundations.

(b) Restoration of the surface grade and soil after removal of solar energy equipment.

(c) Re-vegetation of restored soil areas with native seeds mixes, excluding any invasive species.

(10) Easements. It shall be the responsibility of the property owner to secure any desired solar easement to protect solar access for the system (per Minnesota Statutes Section 500.30).

(11) Design Plan. Any permit submittal shall include a site or design plan indicating the adequacy, location, arrangement, size, design and general site compatibility of the proposed solar energy system.

(D) Safety.

(1) Compliance with building code. All solar energy systems shall comply with all local and state building codes. The Minnesota Department of Labor and Industry (DLI) and Minnesota Department of Commerce developed a standardized load table to help determine if the roof structure of wood-framed buildings is sufficient to handle the additional weight of solar PV systems (see <http://mn.gov/commercestat/pdfs/standardized-load-table-report.pdf>). Permit applicants and building officials may use the standardized load table report to demonstrate structural compliance without consultation by a structural engineer. In other buildings, a structural engineer is required to certify that the structural system will provide enough support for the added weight, snow-drift loads and live-load of firefighters.

(2) Compliance with electrical code. All solar energy systems shall comply with the National Electrical Code.

(3) Compliance with state plumbing code. All solar energy systems shall comply with the Minnesota State Plumbing Code requirements.

(4) Certifications. Solar energy system components shall be certified by Underwriters Laboratories Inc. and the Solar Rating and Certification Corporation. The city reserves the right to deny a building permit for proposed solar energy systems deemed to have inadequate certification.

(5) Batteries. When solar storage batteries are included as part of a solar energy system, they must be placed in a secure container or enclosure meeting the requirements of the Minnesota State Building Code.

(E) Approval.

(1) Permits. The erection, alteration, improvement, reconstruction, and movement of all solar energy systems shall require a building permit from the city. The City Council shall set the solar energy system permit fee by resolution.

(2) Utility Notification. All solar energy systems that will interconnect with the electric grid shall have an agreement with the local utility prior to the issuance of a building permit. Any connection with a local utility must be inspected by the local utility prior to use.

(3) Aviation. If the solar energy system is over ½ acre (21,780 SF) in size and located within 5 nautical miles of an airport, or is located within the airport zoning district, airport or FAA notification shall be provided and approval obtained.