

Section 10.03.3. **Solar Farms**

Subd. 1. **Purpose.** This ordinance permits solar energy farms 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.

Subd. 2. **Definitions:**

A. Solar Farms: A solar array composed of multiple solar panels on ground-mounted racks or poles which is not directly connected to or designed to serve the energy needs of the primary user(s) but rather for the primary purpose of wholesale or retail sales of generated electricity. Solar farms include but are not limited to: 1. Community solar gardens which are defined as a solar-electric (photovoltaic) array or other device that provides retail electric power (or a financial proxy for retail power) to multiple community members, consistent with Minn. Statutes 216B.1641 or successor statute or; 2. Business solar farms using a solar-electric (photovoltaic) array or other device that provides retail electric power (or a financial proxy for retail power) to businesses/investors located off-site from the location of the solar energy system. A community solar garden may be either a principal, accessory, or conditional use. Business (commercial/industrial) solar farms designed to provide energy to off-site uses or export to the wholesale or retail market are a conditional use.

Subd. 3. **Performance Standards**

A. Standards for Solar Farms: Solar Farms shall be subject to the administrative requirements of the Zoning Ordinance and the following specific performance standards:

1. Stormwater management shall meet the requirements of Section 12 of the City Code. For purposes of this Ordinance, the solar panel collector surface shall not be considered to be

impervious surface, unless otherwise required by the Council.

2. Erosion and sediment control shall meet the requirements of Section 12 of the City Code.
3. Foundations. The manufacturer's engineer or another qualified engineer shall certify that the foundation and design of the solar panels is within accepted professional standards, given local soil and climate conditions.
4. Other standards and codes.
 - a) All solar farms shall be in compliance with any applicable local, state and federal regulatory standards, including the State of Minnesota Uniform Building Code, as amended from time to time; and the National Electric Code, as amended from time to time.
 - b) Power and communication lines. Power and communication lines running between the banks of the solar panels may be placed above ground, provided the lines are placed no higher than top of the solar modules. Power and communication lines to electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted by the City in the following instances:
 - (i) Where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines.
 - (ii) When required by ALP Utilities or its successor.
 - c) All solar farms shall comply with the relevant provisions of ALP Utilities Distributed Generation Workbook dated May, 2019, or its successor guidelines.
5. Screening: Solar farms shall be screened from residential dwelling units and/or other land uses as required by the City and shall minimally meet the requirements of the Zoning Ordinance. The screening plan shall show the location of fences and residential dwelling units on contiguous lots. Fences installed as part of the project shall be screened by dense vegetative cover. The type and location of the required screening shall be subject to City approval.

6. Setbacks: Solar farms must meet the minimum building setback for the zoning district and be located a minimum of two hundred (200) feet from a residential dwelling unit not located on the property. Setbacks shall be measured to the nearest solar array or other structure within the solar farm, excluding security fencing, screening or berm.
7. Vegetation requirements and management. The following provisions shall be met related to the clearing of existing vegetation and establishment of vegetated ground cover. Additional requirements may apply as required by the City Council.
 - a) Large-scale removal of mature trees on the site is discouraged. Restrictions on tree clearing, or mitigation for cleared trees shall comply with the provisions of Section 10.03, Subd. 2.J of the City Code.
 - b) The project site design shall include the installation and establishment of ground cover meeting the beneficial habitat standards consistent with Minnesota Statutes, section 216B.1642, or successor statutes and guidance as set by the Minnesota Board of Water and Soil Resources.
 - (i) Beneficial habitat standards shall be maintained on the site for the duration of operation, until the site is decommissioned.
 - (ii) The applicant shall submit a financial guarantee in the form of a letter of credit, cash deposit or bond in favor of the County equal to one hundred twenty-five (125) percent of the costs to meet the beneficial habitat standard. The financial guarantee shall remain in effect until vegetation is sufficiently established in accordance with the requirements set forth in this Ordinance.
8. Application requirements: The following information shall be provided to the Community Development Division prior to issuance of a building and/or conditional use permit application for solar farms:
 - a) A site plan showing the following:

- (1) Existing property lines and property lines extending one hundred (100) feet from the exterior boundaries, including the names of the adjacent property owners and current use of those properties
- (2) Existing public and private roads, showing widths of the roads and any associated easements
- (3) Location and size of any abandoned wells, sewage treatment systems and dumps
- (4) Existing and/or proposed buildings and any other impervious surfaces
- (5) Topography at two (2) foot intervals and source of contour interval, unless determined otherwise by the Division. A contour map of the surrounding properties may also be required
- (6) Existing vegetation (list type and percent of coverage; i.e. grassland, plowed field, wooded areas, etc.)
- (7) Waterways, watercourses, lakes and public water wetlands
- (8) Delineated wetland boundaries
- (9) The one hundred (100)-year flood elevation and Regulatory Flood Protection Elevation, if available
- (10) Floodway, flood fringe and/or general flood plain district boundary, if applicable
- (11) The shoreland district boundary, if any portion of the project is located in a shoreland overlay district
- (12) In the shoreland overlay district, the ordinary high water level and the highest known water level
- (13) In the shoreland overlay district, the toe and top of any bluffs within the project boundaries
- (14) Mapped soils according to the Douglas County Soil Survey
- (15) Surface water drainage patterns
- (16) Land Evaluation and Site Assessment (LESA) score for the parcel, if located within an agricultural zoning district or if presently used for agricultural

purposes.

- (17) Location and spacing of solar panels
 - (18) Location of access roads
 - (19) Planned location of underground or overhead electric lines connecting the solar farm to the building, substation or other electric load
 - (20) New electrical equipment other than at the existing building(s) or substation(s) that is the connection point for the solar farm
 - (21) Proposed erosion and sediment control measures as required in Section 12 of this Ordinance.
 - (22) Proposed stormwater management measures as required under Section 12 of this Ordinance
 - (23) Sketch elevation of the premises accurately depicting the proposed solar energy conversion system and its relationship to structures on adjacent lots (if any);
 - (24) Location, number and caliper of any trees to be removed, for trees with size greater than six (6) inches.
 - (25) Acreage of solar array.
 - (26) Acreage of solar array within fenced area.
- b) Manufacturer's specifications and recommended installation methods for all major equipment, including solar panels, mounting systems and foundations for poles or racks;
- c) The number of panels to be installed;
- d) A description of the method of connecting the array to a building or substation;
- e) Decommissioning. A decommissioning plan shall be required to ensure that facilities are properly removed after their useful life. Decommissioning of solar panels must occur in the event they are not in use for twelve (12) consecutive months. The plan shall include provisions for removal of all structures, foundations, electrical equipment and internal or perimeter access roads, restoration of soil and vegetation

and a plan ensuring financial resources will be available to fully decommission the site. The applicant shall submit a financial guarantee in the form of a letter of credit, cash deposit or bond in favor of the City equal to one hundred twenty five (125) percent of the costs to meet the requirements of the decommissioning plan. The type of guarantee is subject to the City's approval.

- f) Aviation Analysis. If the project is within two miles of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or successor policy. The applicant must also complete the Air Space Case Analysis (Form 7460) and provide the results.
- g) Visual Impact Analysis. An analysis of the potential visual impacts from the project including solar panels, roads and fencing along with measures to avoid, minimize or mitigate the visual effects shall be required. A plan may be required showing vegetative screening or buffering of the system from those items to mitigate for visual impacts in accordance with Section 10.03, Subd. 2.G of this Ordinance.

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