ORDINANCE NO. 11, EIGHTH SERIES

AN ORDINANCE OF THE CITY OF FERGUS FALLS, MINNESOTA, AMENDING CITY CODE CHAPTER 154.135 THROUGH 154.138 RELATING TO SOLAR ENERGY SYSTEMS.

THE CITY OF FERGUS FALLS DOES ORDAIN:

Section 1. Solar Energy Systems is hereby amended to read as follows:

SOLAR ENERGY SYSTEMS

§ 154.135 PURPOSE.

Regulations governing solar energy systems are established to provide for appropriate locations for solar energy systems, to ensure compatibility with surrounding uses and to promote safe and effective use of solar energy to increase opportunities for generation of renewable energy.

§ 154.136 DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

ACCESSORY USE. The use of solar collector surfaces as a subordinate or incidental use to the primary use on the same lot as the primary use, not to exceed 10 acres in size.

BUILDING-INTEGRATED SOLAR ENERGY SYSTEM. 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 systems that are contained within roofing materials, windows, walls, skylights, and awnings.

BUILDING-MOUNTED SOLAR ENERGY SYSTEM. A solar energy system affixed to a principal or accessory building.

FREESTANDING SOLAR ENERGY SYSTEM. A solar energy system with a supporting framework that is placed on, or anchored in, the ground and that is independent of any building or other structure.

SOLAR COLLECTOR SURFACE. Any part of a solar energy system that absorbs solar energy for use in the system's transformation process. The COLLECTOR SURFACE does not include frames, supports and mounting hardware.

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 intended to provide for collection, storage and distribution of solar energy for heating or cooling, electricity generating or water heating.

SOLAR FARM. An area of land designated for the purpose of producing photovoltaic electricity, as a principal use of the land, for wholesale production or for a community solar production. This includes any use of solar energy system over 10 acres in size.

§ 154.137 SOLAR ENERGY STANDARDS.

(A) Zoning districts. Solar energy systems in accordance with the standards in this subchapter are allowed as a permitted accessory use in all zoning districts. Solar collector surfaces and all mounting devices shall comply with the minimum yard requirements of the district in which they are located, unless specifically cited elsewhere in this chapter. Solar farms shall be a conditionally permitted use in R-A Zoning areas which must address standards as set forth at City Code §154.138 and other reasonable conditions as may be required by the City Council.

(B) Exemption. Passive or building-integrated solar energy systems are exempt from the requirements of this subchapter and shall be regulated as any other building element.

(C) Standards for accessory uses.

(1) Location. In residential zoning districts, ground-mounted solar energy systems are limited to the rear yard.

(2) Height. Roof-mounted solar energy systems shall comply with the maximum height requirements in the applicable zoning district. Ground mounted solar energy systems shall not exceed 15 feet in height.

(3) Setbacks. Ground-mounted solar energy systems shall comply with all accessory structure setbacks in the applicable zoning district. Roof-mounted and side-mounted 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) Roof mounting. Roof-mounted solar collectors shall be flush mounted on pitched roofs unless the roof pitch is determined to be inadequate for optimum performance of the solar energy system in which case the pitch of the solar collector may exceed the pitch of the roof up to 5%, but in no case shall be higher than ten inches above the roof line. Solar collectors may be bracket-mounted on flat roofs.

(5) Easements. Solar energy systems shall not encroach on public drainage, utility roadway or trail easements.

(6) Screening. Solar energy systems shall be screened from view from existing neighboring dwellings to the extent possible without impacting their function. Roof mounted collectors flush mounted shall not require screening.

(7) Maximum area. In all residential districts, ground-mounted solar energy systems shall be limited to a maximum area of 200 square feet of~~f~~ solar collector surfaces and all mounting devices shall comply with the minimum yard requirements of the district in which they are located, whichever is greater. The City Council may approve solar collector surfaces larger than 200 square feet as an interim use pursuant to City Code § 154.021.

(8) Aesthetics. All solar energy systems shall be designed to blend into the architecture of the building to the extent possible without negatively impacting the performance of the system and to minimize glare towards vehicular traffic and adjacent properties.

(9) Feeder lines. The electrical collection system shall be placed underground within the interior of each parcel. The collection system may be placed overhead near substations or points on interconnection to the electric grid.

~~(10) Location. Structures shall not be located such that solar power access block neighboring property.~~

(10~~1~~) Abandonment. If a solar energy system remains non-functional or inoperative for a continuous period of one year, the system shall be deemed to be abandoned and shall constitute a public nuisance. The owner shall remove the abandoned system at their expense within ninety (90) days after the solar energy system is deemed to be abandoned. ~~after a demolition permit has been obtained~~. Removal includes the entire structure including transmission equipment, structures and foundations, and the restoration of soil and vegetation.

(D) Permits. A building permit shall be obtained for any solar energy system prior to installation.

(E) Administrative review process.

(1) In general. The ~~-~~Building Official~~Zoning Administrator~~, in consultation with the ~~-~~City Planner~~Planning Director~~, shall have up to 15 working days following the submittal of a complete application to approve or deny the application. The Building Official ~~Zoning Administrator~~ may impose conditions and require guarantees deemed reasonable and necessary to protect the public interest and to ensure compliance with the standards and purposes of this chapter and policies of the Comprehensive Plan.

(2) Submittal requirements. An application for a solar energy system shall be filed on a form approved by the ~~-~~Building Official~~Zoning Administrator~~. In addition, the applicant shall submit the following: ~~written evidence that the electric utility service provider that serves the proposed site has been informed of the applicant's intent to install a solar energy system, unless the applicant does not plan, and so states so in the application, to connect the system to the electricity grid.~~

i. Plan Applications - Plan applications for solar energy systems shall be accompanied by to-scale horizontal and vertical (elevation) drawings. The drawings must show the location of the system on the building or on the property for a ground-mount system, including the property lines and proposed screening, if required~~.~~.

ii. Plan Approvals - Applications that meet the design requirements of this ordinance and have total solar collector surfaces of less than 200 square feet, when ground mounted, shall be granted administrative approval by the zoning official and shall not require Planning Commission review. Plan approval does not indicate compliance with Building Code or Electric Code.

iii. Approved Solar Components - Electric solar energy system components must have a UL or equivalent listing and solar hot water systems must have an SRCC rating.

iv. Compliance with Building Code - All solar energy systems shall meet approval of local building code officials, consistent with the State of Minnesota Building Code, and solar thermal systems shall comply with HVAC-related requirements of the Energy Code.

v. Compliance with State Electric Code - All photovoltaic systems shall comply with the Minnesota State Electric Code.

vi.. Compliance with State Plumbing Code - Solar thermal systems shall comply with applicable Minnesota State Plumbing Code requirements.

vii.. Utility Notification - All grid-intertie solar energy systems shall comply with the interconnection requirements of the electric utility. Off-grid systems are exempt from this requirement.

§154.138 SOLAR FARMS; ALLOWABLE ZONING DISTRICTS AND DESIGN STANDARDS.

~~1.~~ (A). Solar farms shall be a conditionally permitted use in R-A Zoning areas only. ~~,~~

An application for a solar farm shall be filed on an application as approved by the ~~-~~City Planner ~~Building Official~~. The application must include a current site plan for the entire solar farm. The site plan must include:

(1) A to-scale horizontal and vertical (elevation) drawings showing the location of the solar farm system on the property.

(2) Property lines and the names of the adjacent property owners and current use of those properties.

(3) Existing public and private roads showing widths of the roads and any associated easements.

(4) All design and standards requirements of this ordinance,

(5) Location, spacing and t~~t~~he numbers of solar panels proposed to be installed.

(6) Planned location and a~~, a~~ description of the method of connecting the array to a building or substation, and a copy of the interconnection application and/or agreement.

(7) Location of access roads.

(8) A screening and vegetative cover plan.

(9) A decommissioning plan to ensure that facilities are properly removed after their useful life which shall include provisions for the removal of all structures and foundations and restoration of soil and vegetation and plan ensuring financial resources will be available to fully decommission the site. The decommissioning plan shall include a schedule for the City and applicant to review and update the decommissioning plan. The City may require the posting of a bond, letter of credit or the establishment of an escrow account to ensure proper decommissioning.

~~,~~ (B) The application shall be reviewed by the City Planner ~~Building Official~~ to ensure it is complete. A complete application shall be submitted to the Planning Commission for a public hearing and

its recommendation to the City Council. The Planning Commission shall review the application to ensure it meets the requirements and standards of this ordinance and whether additional conditions should be made as part of its recommendation to the City Council. The City Council may impose additional reasonable conditions on the applicant in granting the conditional use permit.

(C) Solar farms must meet the following requirements~~: solar energy systems and solar farm development~~ and standards and all other reasonable conditions as may be required by the City Council: ~~shall be:~~

(1~~A~~) Height. Systems, equipment, and structures shall be ground mounted and not exceed 25 feet in height ~~when ground mounted~~. ~~Roof-mounted systems shall not exceed the maximum height for the applicable zoning district;~~

(2~~B~~) Setbacks. Active solar system structures must meet the following setbacks:

i~~1~~. ~~Ground-mounted solar~~Solar energy systems as part of a solar farm shall ~~be~~ at minimum forty (40) feet from the outside perimeter to all property lines of the Solar Farm and meet all public water body setbacks found in C~~c~~ity C~~c~~ode. In the event of multiple parcels being utilized for the entire solar farm, the outermost property line shall be required to meet the setback.~~meet the minimum zoning setback for the zoning district in which it is located;~~

ii.~~2~~. ~~Roadway~~Public right of way and road setback of 50 feet from the right-of-way edge of all public roads or other public right of ways.

iii~~3~~. Housing unit setback of 150 feet from any existing residential dwelling ~~unit~~, except setback may be reduced by 50% if the solar energy system array is fully screened from the setback point of measurement and a written agreement of the reduced setback from the owner(s) of the existing residential dwelling unit is recorded with the Otter Tail County Recorder, Otter Tail County, Minnesota~~on the property deed with Ottertail County~~.

iv~~4~~. Setback distance ~~should be~~is measured from the edge of the solar energy system array, excluding security fencing, screening, or berm.

(D~~C~~) Distribution 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:

(1) Where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines.

(2) Unless otherwise determined non feasible by the City.

(ED) Approved solar components. Electric solar system components must have a UL listing or equivalent.

(FE) Compliance with Building Code. All active solar systems shall meet all requirements of the state's Building code and shall be inspected by a Building Inspector.; A registered engineer shall certify that the foundation and design of the solar panel racking, and support is within accepted professional standards, given local soil and climate conditions.

(GF) Compliance with Electric Code. All photovoltaic systems shall comply with the state's Electrical Code,

(HG) Utility notification. No grid tied photovoltaic system shall be installed until evidence has been given to the Building Zoning Administrator thatOfficial that the owner has been approved by the utility company to install the system. Off-grid systems shall be exempt from this requirement.

(IH) Abandonment. It is the responsibility of the parcel owner to remove all obsolete or unused systems within 12 months of cessation of operations. The solar fam may be granted an extension of no more than 1 year (total of 2 years from cessation), if a plan is submitted to the city building official demonstrating plans to return the site to operation. This plan must be submitted within one year of cessation. Reusable components are to be recycled whenever feasible and the countyOtter Tail County solid waste ordinance must be followed. The plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation and assurances that financial resources will be available to fully decommission the site;

(JI) Security fence. A security fence may will surround the perimeter of the solar farm and may be located up to the property line. The use of wildlife-friendly fencing standards that include clearance at the bottom is preferred. No use of barbed wire is allowed on perimeter fencing, unless agrivoltaics practices are incorporated and approved during permitting.

(J) Emergency services vehicles. Reasonable accessibility for emergency services vehicles shall be required; and

(K) Signage. No signage is allowed on the solar farm fencing, except for a sign not to exceed requirements, as defined in § 154.170 through 154.177 of this chapter, displaying the facility name, address and emergency contact information. Any safety related signage required by law is allowed and exempted from signage requirements.

(L) Screening and Vegetated Ground Cover

(1) The A screening plan shall be submitted thatshall identifyies the type and extent of screening provided for the projectsolar farm. Screening is required onalong lot lines bordering a different residential zoning district. Screening is required within 150 feet of an existing residential dwellings, unless the 50% setback reductionthe setback is reduced as provided in this Section at citedin Paragraph B.3-.above is utilized. Screening is encouraged along public roadways, as

deemed practical and not to disturb the function of the solar modules. Screening may consist of vegetation, non-transparent fencing or berming.

(2) Landscape screening improvements shall be installed prior to all other above grade site improvements and confirmed compliant by city inspection.

(M) Ground cover

(1) The ~~project site design shall include the~~vegetative cover plan shall address the ~~installation~~planting, establishment and maintenance of vegetated 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~~. This shall then be maintained until the site is no longer operable and decommissioned. The~~

(2) Beneficial habitat standards shall be maintained on the site for the duration of operation, until the site is decommissioned.

(3) 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 beneficial habitat standard. ~~project site design shall:~~

~~i. Provide native perennial vegetation and foraging habitat beneficial to game birds, songbirds, and pollinators, for disturbed areas within the project area, excluding roadways and areas with structures.~~

~~ii. reduce storm water runoff and erosion at the solar generation site.~~

~~iii. When establishing perennial vegetation and beneficial foraging habitat, a solar site owner shall use native plant species and seed mixes under Department of Natural Resources "Prairie Establishment & Maintenance Technical Guidance for Solar Projects."~~

(M) Stormwater and NPDES - Solar farms are subject to the city stormwater management and erosion and sediment control provisions and NPDES permit requirements and best practices. For the purpose of this ordinance, a solar collector surface is not considered impervious surface.

(N) Additional Site Plan Requirements~~ed~~ - ~~A detailed~~The site plan for both existing and proposed conditions must ~~be submitted, showing~~show the location of all solar arrays, other structures, ~~property lines, rights-of-way, service roads,~~ floodplains, wetlands and other protected natural resources, topography, electric equipment, interior and exterior fencing plans including fence locations, design, dimensions, and all other characteristics as may be requested by the C~~c~~ity. The site plan should show all zoning districts and overlay districts.

(O) Aviation Protection - For solar farms located within 500 feet of an airport or within approach zones 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 most recent version adopted by the FAA.

(P) Decommissioning Plan. The required decommissioning plan should include the following items to be included in the permit application:

(1) The anticipated life of the project.

(2) The anticipated present value cost of decommissioning.

(3) An explanation of the calculation of the cost of decommissioning.

(4) A surety to cover the cost of decommissioning.

(5) Financial security in the form of surety bond, letter of credit, or cash escrow held by a federally insured financial institution.

(6) A reserve factor to the cost projections to protect against changes in market values.

(7) A detailed decommissioning plan with a documented decommissioning costs and salvage value projections. This plan should be produced or reviewed by a licensed engineer.

(8) Require recycling of panels, as practical.

(9) Decommissioning plan should be reviewed every five years and updated as necessary.

Section 2. Effective date. The effective date of this ordinance shall be the _____ day of_____, 2021.

THIS ORDINANCE was introduced on the _____ day of _____, 2021, and adopted by the City Council of the City of Fergus Falls, Minnesota, on the _____ day of _____, 2021, by the following vote:

AYES:

NAYS:

ATTEST: APPROVED:

_____ _____

City Administrator Mayor

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