



CITY OF BLACKDUCK

ORDINANCE # 2016-01

AN ORDINANCE AMENDING CHAPTER 15, SECTION 8 OF THE CITY CODE ENTITLED “LAND USE AND SUBDIVISION SPECIAL PROVISIONS” TO ADD SECTION 8.7 ENTITLED “SOLAR ENERGY SYSTEMS”

THE CITY OF BLACKDUCK DOES ORDAIN AS FOLLOWS:

Blackduck City Code Chapter 15, is amended to add Section 8.7 entitled “Solar Energy Systems” which shall read as follows:

Section 8.7 Solar Energy Systems

Section 1. Purpose and intent

A. It is the purpose of this Ordinance to regulate Solar Energy Sources to promote a sustainable quality of life for the city’s residents, making careful and effective use of available natural, human and economic resources and ensuring that resources exist to maintain and enhance the quality of life for future residents. In accordance with that goal, the city finds that it is in the public interest to encourage solar energy systems that have a positive impact on energy production and conservation while not having an adverse impact on the community. Therefore, the purposes of this ordinance include:

- i. To promote rather than restrict development of solar energy sources by removing regulatory barriers and creating a clear regulatory path for approving solar energy systems.
- ii. To create a livable community where development incorporates sustainable design elements such as resource and energy conservation and use of renewable energy.
- iii. To protect and enhance air quality, limit the effects of climate change and decrease use of fossil fuels.
- iv. To encourage alternative energy development in locations where the technology is viable and environmental, economic and social impacts can be mitigated.

Section 2. Definitions

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section:

Accessory a system designed as a secondary use to existing buildings or facilities, wherein the power generated is used primarily for on-site consumption.

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 including, but not limited to, photovoltaic or hot water solar systems contained within roofing materials, windows, skylights and awnings.



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Flush-mounted solar energy systems a roof-mounted system mounted directly abutting the roof. The pitch of the solar collector may exceed the pitch of the roof up to 5% but shall not be higher than 10 inches above the roof.

Roof-mounted solar energy system a solar energy system mounted directly or abutting the roof of a principal or accessory building.

Ground-Mounted Solar energy system a freestanding solar system mounted directly to the ground using a rack or pole rather than being mounted on a building.

Maximum Area for above Ground-Mounted Solar energy systems relates to the solar panels only (not their mounting poles/hardware) and the total area that the panels occupy.

Passive solar energy system a system that captures solar light or heat without transforming it to another form of energy or transferring the energy via a heat exchanger.

Photovoltaic system a solar energy system that converts solar energy directly into electricity.

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, a substantial purpose of which is to provide daylight for interior lighting or provide for the collection, storage and distribution of solar energy for space heating or cooling, electricity generation or water heating.

Solar Resource a view of the sun from a specific point on a lot or building that is not obscured by any vegetation, building, or objects for a minimum of four hours between the hours of 9:00am and 3:00 pm standard time on any day of the year.

Solar Collector a device, structure or a part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electrical energy.

Solar Collector Surface any part of a solar collector that absorbs solar energy for use in the collector's energy transformation process. Collector surface does not include frames, supports and mounting hardware.

Solar Daylighting a device specifically designed to capture and redirect the visible portion of the solar spectrum, while controlling the infrared portion, for use in illumination interior building spaces in lieu of artificial lighting.

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 Device a system or series of mechanisms designed primarily to provide heating, cooling, electrical power, mechanical power, solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means. Such systems may also have the capability of storing such energy for future utilization. Passive solar energy systems shall clearly be designed as a solar energy device such as a trombe wall and not merely a part of a normal structure such as a window.



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Solar Heat Exchanger a component of a solar energy device that is used to transfer heat from one substance to another, either liquid or gas.

Solar Hot Air System (also referred to as Solar Air Heat or Solar Furnace) an active solar energy system that includes a solar collector to provide direct supplemental space heating by heating and re-circulating conditioned building air. The most efficient performance typically uses a vertically mounted collector on a south-facing wall.

Solar Hot Water System (also referred to as Solar Thermal) 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, including residential domestic hot water and hot water for commercial processes.

Community Solar Garden a solar-electric (photovoltaic) array that provides retail electric power (or a financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system, under the provisions of Minn. Statute 216B.1641 or successor statute.

Solar Mounting Devices racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

Solar Storage Unit a component of a solar energy device that is used to store solar generated electricity or heat for later use.

Section 3. Permitted Accessory Use - Active solar energy systems shall be allowed as an accessory use in all zoning classifications where structures of any sort are allowed, subject to certain requirements as set forth below. Active solar energy systems that do not meet the visibility standards in C. below will require a conditional use permit.

A. Height – Active 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. For purposes for height measurement, solar energy systems other than building-integrated systems shall be given an equivalent exception to height standards as building-mounted mechanical devices or equipment.
2. Ground or pole-mounted solar energy systems shall not exceed 20 feet in height when oriented at maximum tilt.

B. Set-back – Active solar energy systems must meet the accessory structure setback for the zoning district and primary land use associated with the lot on which the system is located.

1. Roof-mounted Solar energy systems – In addition to the building setback, the collector surface and mounting devices for roof-mounted solar energy systems shall not extend beyond the exterior perimeter of the building on which the system is mounted or built, unless the collector and mounting system has been explicitly engineered to safely extend beyond the edge, and setback standards are not violated. Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side yard exposure.
2. Ground-mounted Solar energy systems – Ground-mounted solar energy shall be set back a minimum of 10 feet from rear property lines and a minimum of 30 feet from all dwellings located on adjacent lots.



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C. Visibility – Active solar energy systems shall be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways other than alleys. The color or the solar collector shall blend with the color of the roof or other structure. Reflection angles from collector surfaces shall be oriented away from neighboring windows. Where necessary, screening may be required to address glare.

D. Screening – Solar energy systems shall be screened from view to the extent possible without reducing their efficiency. Screening may include walls, fences or landscaping.

E. Location – In residential zoning districts, ground-mounted solar energy systems are limited to the rear yard. In non-residential zoning districts, ground-mounted solar energy systems may be permitted in the front yard of any lot or the side yards on corner lots but shall not encroach less than 30 feet to public rights-of-way.

F. Easements – Solar energy systems shall not encroach on public drainage, utility roadway, or trail easements

G. Exemptions – Both passive and building integrated solar energy systems are exempt from the standards of this ordinance based on the findings that these are site design principals or building components commonly part of other buildings.

H. Minimum Lot Size. In R-1, Residential Zoning District, a minimum lot size of 7000 square feet is required for ground-mounted solar energy systems.

I. Maximum Area. In R-1, Residential Zoning District, ground-mounted solar energy systems shall be limited to a maximum area of 120 square feet.

J. Feeder Lines – The electrical collection system shall be placed underground within the interior of each parcel.

K. Utility Connection – All grid connected systems shall have an agreement with the local utility prior to the issuance of a building permit. A visible external disconnect must be provided if required by the utility.

L. Certification – Solar energy systems shall meet be certified by Underwriters Laboratories, Inc. and the National Renewable Energy Laboratory, the Solar Rating and Certification Corporation or other body as determined by the appropriate authorizing agency. The City reserves the right to deny a building permit for proposed solar energy systems deemed to have inadequate certification.

M. Compliance with Other Codes – Solar energy systems shall meet approval with the Minnesota building, electrical and plumbing codes.

N. Deviations – Any deviation from the required standards of this ordinance would be through a variance.

O. Abandonment – If the Solar energy system remains nonfunctional 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. Removal includes the entire structure including transmission equipment.



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P. Permits – A building permit and interim conditional use permit, if required, shall be obtained for any solar energy system prior to installation.

Section 4. Interpretation In interpreting this ordinance and its application, the provisions of these regulations shall be held to be the minimum requirements for the protection of public health, safety and general welfare. This ordinance shall be construed broadly to promote the purposes for which it was adopted.

Section 5. Conflict – This ordinance is not intended to interfere with, abrogate or annul any other ordinance, rule or regulation, statute or other provision of law except as provided herein. If any provision of this ordinance imposes restrictions different from any other ordinance, rule, or regulation, statute or provision of law, the provision that is more restrictive or imposes high standards shall control.

Section 6. Separability - If any part or provision of this ordinance or its application to any developer or circumstance is judged invalid by any competent jurisdiction, the judgement shall be confirmed in its operation to the part, provision or application directly involved in the controversy in which the judgement shall be rendered and shall not affect or impair the validity of the remainder of these regulations or the application of them to other developers or circumstances.

Section 7. Repealer: All ordinances or parts of ordinances inconsistent herewith are hereby repealed.

Section 8. Effective: This ordinance shall take effect and be in force from and after its passage and publication in accordance with law.

First Reading:

Passed:

Attest:

Approved:

Christina Regas, City Administrator

Daryl Lundberg, Mayor