WHEREAS, the City of Rushford wishes to provide a sustainable quality of life for the City's residents, making careful and effective use of available natural resources to maintain and enhance this quality of life. Cities are enabled to regulate land use under MN Statutes 394 and 462 for the purpose of "promoting the health, safety, morals and general welfare of the community", and;

WHEREAS, as part of this regulatory power, the City of Rushford believes it is in the public interest to encourage renewable energy systems that have a positive impact in energy conservation, with limited adverse impact on the community, and;

WHEREAS, while the City encourages increased energy conservation and improved energy efficiency, the City also finds that increased use of appropriate renewable energy systems will be an important part of improving urban sustainability, and;

WHEREAS, the renewable energy regulations are intended to supplement existing zoning ordinances and land use practices and ensures these systems are appropriately designed, sited and installed. These regulations are in place to balance the need to improve energy sustainability through increased use of renewable energy systems with concerns for preservation of public health, welfare and safety as well as environmental quality, visual and aesthetic values, and existing neighborhood social and ecological stability, and;

NOW, THEREFORE, the following Ordinance will be incorporated into the City's Zoning Ordinance.

THE CITY OF RUSHFORD ORDAINS:

SECTION 1. The following section of that certain ordinance dated August 11, 1997, and amended in November 1997, February 2000, May 2000, June 2001, July 2006, and August 2010 entitled City of Rushford Zoning Ordinance is hereby amended to include the following chapter:

CHAPTER 23
AN ORDINANCE REGARDING RENEWABLE ENERGY SYSTEMS (GEOTHERMAL & SOLAR)

SECTION:

23.1: Definitions
23.2 Ground Source Heat Pump Systems
23.3 Solar Energy Systems
23.4 Prohibitive Characteristics
23.5 Permits for Alternative Energy Systems
23.6 Conditional Use Permits
23.7 Interpretations
23.8 Penalties
23.9 Severability & Savings Clause

23.1 DEFINITIONS.

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

ALTERNATIVE ENERGY SYSTEM. A ground source heat pump or solar energy system.

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.

CLOSED LOOP GROUND SOURCE HEAT PUMP SYSTEM. A system that circulates a heat transfer fluid, typically food-grade antifreeze, through pipes or coils buried beneath the land surface or anchored to the bottom in a body of water.

FLUSH-MOUNTED SOLAR ENERGY SYSTEM. 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 ten inches above the roof.

GROUND SOURCE HEAT PUMP SYSTEM. A system that uses the relatively constant temperature of the earth or a body of water to provide heating in the winter and cooling in the summer. System components include open or closed loops of pipe, coils or plates; a fluid that absorbs and transfers heat; and a heat pump unit that processes heat for use or disperses heat for cooling; and an air distribution system.

HORIZONTAL GROUND SOURCE HEAT PUMP SYSTEM. A closed loop ground source heat pump system where the loops or coils are installed horizontally in a trench or series of trenches no more than 20 feet below the land surface.

OPEN LOOP GROUND SOURCE HEAT PUMP SYSTEM. A system that uses ground water as a heat transfer fluid by drawing ground water from a well to a heat pump and then discharging the water over land, directly in a water body or into an injection well.

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 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.

VERTICAL GROUND SOURCE HEAT PUMP SYSYTEM. A closed loop ground source heat pump system where the loops or coils are installed vertically in one or more borings below the land surface.

23.2 GROUND SOURCE HEAT PUMP SYSTEMS.

A. Zoning Districts. Ground source heat pump systems in accordance with the standards in this section are allowed as a permitted accessory use in all zoning districts.

B. Standards.
   1) System Requirements.
      a) Only closed loop ground source heat pump systems utilizing heat transfer fluids are permitted. One loop ground source heat pump systems are not permitted. Tracer wire or a traceable system must be installed from the loop system to the entry point into the building.
      b) Ground source heat pump systems in public waters may be permitted as a conditional use subject to approval from the MN Dept. of Natural Resources in accordance with MN Rules 6115.0211, Subp.6b and subject to written consent of all property owners and/or approval by an association in accordance with its adopted bylaws.
   2) Setbacks.
      a) All components of ground source heat pump systems including pumps, boring and loops shall be set back at least five feet from interior side lot lines and at least ten feet from rear lot lines.
      b) Above-ground equipment associated with ground source heat pumps shall not be installed in the front yard of any lot or the side yard of a corner lot adjacent to a public right-of-way and shall meet all required setbacks for the applicable zoning district.
   3) Easements. Ground source heat pump systems shall not encroach on public drainage, utility roadway or trail easements, or any other public easements.
   4) Noise. Ground source heat pump systems shall comply with MN Pollution Control agency standards outlined in MN Rules Chapter 7030, as amended.
   5) Screening. Ground source heat pumps are considered mechanical equipment and in order to suppress noise and hide from public view materials and designs matching those used for the structure will be incorporated into a plan design. Where miscellaneous exterior equipment cannot be fully hidden with matching building materials, landscaping may be used as additional screening. Screening remains subject to the requirements of the applicable zoning district.
   6) Deviations. Any deviation from the required standards of this division may be permitted through a conditional use permit in accordance with Zoning Ordinance Chapter 21.

C. Safety. Ground source heat pumps shall be certified by Underwriters Laboratories, Inc. and meet the requirement of the State Building Code and the Minnesota Department of Health.

D. Abandonment. If the ground source heat pump 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 after a demolition permit has been obtained in accordance with the following:
   1) The heat pump and any external mechanical equipment shall be removed.
   2) Pipes or coils below the land surface shall be filled with grout to displace the heat transfer fluid. The heat transfer fluid shall be captured and disposed of in accordance with applicable state and federal regulations. The top of the pipe, coil or boring shall be uncovered and grouted.

E. Permits. A building permit and a conditional use permit if required, shall be obtained for any ground source heat pump prior to installation. Borings for vertical systems are subject to approve from the MN Dept. of Public Health.

23.3 SOLAR ENERGY SYSTEMS.

A. Zoning Districts. Solar Energy systems in accordance with the standards in this section, are allowed as a conditional use in all zoning districts, except that in residential and arterial commercial districts when the structure is roof mounted, it is a permitted accessory use.

B. Standards.
   1) Exemption. Passive or building-integrated solar energy systems are exempt from the requirements of this section and shall be regulated as any other building element.
   2) Height. Roof-mounted solar energy systems shall comply with the maximum height requirements in the applicable zoning district. Ground-mounted energy systems shall not exceed 15 feet in height.
   3) Location. In residential zoning districts, as well as arterial commercial districts, ground-mounted solar energy systems are limited to the rear yard. In industrial zoned districts, ground-mounted solar energy systems may be permitted in the front yard or the side yards on corner lots, but shall not encroach in the public right-of way.
   4) Setbacks. Ground-mounted solar energy systems including any appurtenant equipment shall be set back a minimum of 15 feet from all property lines and a minimum of 30 feet from all dwellings located on adjacent lots. Roof-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.
   5) Roof mounting. Roof-mounted solar collectors shall be flush mounted on pitched roofs and shall not exceed 10 feet above the highest portion of the building. Solar collectors may be bracket mounted on flat roofs at no more than 3 feet above the surface of the roof. The collector surface and mounting devices for roof-mounted solar energy systems that are parallel to the roof surface shall not extend beyond

the exterior perimeter of the building on which the system is mounted or built. Solar collectors must have a 3 foot clearance around all roof edges to facilitate Emergency Responders access.

6) Easements. Solar energy systems shall not encroach on public drainage, utility roadway or trail easements, or any other public easements.
7) Screenings. Solar energy systems shall be screened from view to the extent possible without reducing their efficiency. Screening may include walls, fences or landscaping.
8) Maximum area. In all zoning districts which do not have a maximum coverage area, ground-mounted solar energy systems shall be limited to a maximum area of 200 square feet, or not more than 25 percent of the rear yard, whichever is less.
9) Aesthetics. All solar energy systems shall use colors that 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. All solar energy systems hall minimize glare towards vehicular traffic and adjacent properties.
10) 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 of interconnection to the electric grid.
11) Deviations. Any deviation from the required standards of this division may be permitted through a conditional use permit in accordance with Zoning Ordinance Chapter 21.

C. Safety.

1) Standards and certification.

(a) Standards. Solar energy systems shall meet the minimum standards outlined by the International Electroteclinical Commission (IEC), the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE, ASTM International, British Standards Institution (BSI), International Electroteclinical Commission (IEC), International Organization of Standardization (ISO), Underwriter's Laboratory (UL), the Solar Rating and Certification Corporation (SRCC).

(b) Certification. Solar energy systems shall be certified by Underwriter's Laboratories, Inc. and the National Renewable Energy Laboratory, 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.

2) Utility connection. All grid-connected systems shall have a completed, written 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.

D. 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 after a demolition permit has been obtained. Removal includes the entire structure including transmission equipment.

E. Permits. Those permits as required, and a conditional use permit if required, shall be obtained for any solar energy system prior to installation. Applicable state inspections, i.e. electrical, plumbing, etc. are also required.

23.4 PROHIBITED CHARACTERISTICS OF ALTERNATIVE ENERGY SYSTEMS.

A. No alternative energy system shall be constructed within 20 feet laterally of any overhead power lines, excluding secondary electrical service lines or service drops. Setbacks from underground distribution lines shall be 10 feet.
B. An alternative energy system shall not cause radio and television interference.
C. No alternative energy system shall violate MPCA noise standards, air quality standards or otherwise result in a nuisance source of noise.
D. No alternative energy system shall resemble, imitate or approximately the shape, size, form or color of railroad or traffic signs, signals or devices.
E. No alternative energy system shall be located as to interfere with the visibility or effectiveness of any official traffic sign or signal, or with driver vision at any access point or intersection.
F. No alternative energy system shall display any advertisement, nor shall it be used for any purpose other than for alternative energy.
G. No alternative energy system shall be erected which contains, includes or is illuminated by any flashing light or lights, except as required by law.
H. No alternative energy system shall be erected or maintained which is not effectively shielded so as to prevent beams or rays of light from being directed at any portion of the traveled way of a highway or street of such intensity or brilliance so as to cause glare or impair the vision of the operator of any motor vehicle. Further, all systems shall be constructed as to prevent beams or rays of light from being directed at any portion of a building or residence.

23.5 PERMITS FOR ALTERNATIVE ENERGY SYSTEMS.

A. Compliance with law. All alternative energy systems shall be constructed in accordance with all applicable building and electrical codes and comply with all applicable federal, state, and local laws and regulations.

B. Required alternative energy system permit. Except as otherwise specifically authorized, no alternative energy system shall be located, constructed, erected, moved, reconstructed, extended, enlarged or structurally altered within the City until a permit for the system has been issued by the city. No system permit shall be issued for a system not in conformity with the regulations application to such system. An application for a system permit shall be accompanied by the fee as specified in the city fee schedule. No application will be considered unless and until the required fee has been paid by the application to the City Clerk. The alternative energy system permit will include:
    1) Recorded property easements.

2) A description of the project including: number, type, height, diameter of alternative energy systems.
3) Site layout, including location of property lines, roads, ground source heat pump, or solar panel, electrical wires, interconnection points with the electrical grid, and all related accessory structures.
4) Engineer's certification.
5) Interconnection agreement.

C. Duration. Any system permit issued by the city under this chapter shall be valid for a period of 12 months from the date of issuance. If the construction of the system is not completed within 12 months from the date of its issuance, the system permit shall be void, and the site or which the permit was sought shall be returned to the condition it was prior to the issuance of such system permit.

D. Zoning Certificate. In addition to the system permit required by this chapter, a zoning permit must be obtained from the city prior to the construction of any system. An application for a zoning certificate shall be accompanied by the fee as specified in the city fee schedule.

E. Building Permit. In addition to the system permit and zoning certificate required by this subchapter, a building permit must be obtained from the city prior to the construction of any system when construction activity is of such a nature that a building permit is required.

F. Application requirements. Building permit applications for any alternative energy systems shall be accompanied by standard drawings depicting the specifications and location of the alternative energy system and any other documentation as required by the city. An application for a building permit shall be accompanied by the fee as specified in the city fee schedule.

23.6 CONDITIONAL USE PERMIT.

Deviations to the standards in this division may be permitted as a conditional use in accordance with Chapter 21 of the Zoning Ordinance. In granting a conditional use permit, the City shall consider the criteria and the following additional criteria unique to alternative energy systems:

A. That the deviation is required to allow for the improved operation of the alternative energy system.
B. That the alternative energy system has a net energy gain.
C. That the alternative energy system does not adversely affect solar access to adjacent properties.
D. That the alternative energy system complied with all other engineering, building, safety and fire regulations.
E. That the alternative energy system is found to not have any adverse impacts on the area, including the health, safety and general welfare of occupants of neighboring properties and users of public rights-of-way.

23.7 INTERPRETATION.

In interpreting this division 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 division shall be construed broadly to promote the purposes for which it was adopted.

23.8 PENALTIES.

Any violation of this ordinance shall be a petty misdemeanor punishable according to petty misdemeanor limits as established from time to time by the state of Minnesota. Each day that a violation exists shall constitute a separate offense.

23.9 SEVERABILITY & SAVINGS CLAUSE.

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, state or provision of law, the provision that is more restrictive or imposes higher standards shall control.

If any section or portion of this ordinance shall be found unconstitutional or otherwise invalid or unenforceable by a court of competent jurisdiction, that finding shall not serve as invalidation or affect the validity or enforceability of any other section of provisions of this ordinance.

SECTION 2. EFFECTIVE DATE

This ordinance becomes effective upon its passage and publication according to law.

Adopted by the City Council of the City of Rushford this 28th day of Sept., 2015.

Chris Hallum, Mayor

Attest:

Kathy Zacher, City Clerk/Treas.

Publication Date: 10-8-15