



**CITY COUNCIL WORK SESSION
AGENDA**

**Thursday, April 6, 2023
4:30 PM**

The April 6, 2023 City Council Work Session meeting will be held in-person

AGENDA

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. APPROVAL OF AGENDA** – April 6, 2023 Council Work Session
- 4. CITY COUNCIL BUSINESS**
 - A. Emergency Preparedness Training provided by Doug Berglund, Washington County Emergency Preparedness Director
 - B. Solar Energy Ordinance Clarification Regarding the Allowed Size of Residential Solar Arrays
 - C. City Administrator Updates
- 5. ADJOURN**

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Meeting Date April 6, 2023

Council Memo

To: Mayor Palmquist and City Council Members

From: Ron Moorse, City Administrator

Date: March 30, 2023

Re: Emergency Preparedness Training Provided by Doug Berglund, Washington County Emergency Preparedness Director

Doug Berglund, Washington County Emergency Preparedness Director, will provide training regarding emergency preparedness.

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Meeting Date April 6, 2023

Council Memo

To: Mayor Palmquist and City Council Members

From: Ron Moorse, City Administrator

Date: March 30, 2023

Re: Solar Energy Ordinance Clarification

The Solar Energy Ordinance was recently amended to provide greater flexibility regarding the size of ground-mounted solar arrays. (See the attached ordinance amendment). Recent use of the amended ordinance has raised two questions which need to be clarified. One question is whether the revised size limitations apply to roof-mounted solar arrays as well as to ground-mounted arrays. The other question relates to the applicability of the limitation of 120% of the documented actual electricity usage on the property.

The ordinance amendment, as well as the previous ordinance, indicate that, in the VHS district, "Roof-Mounted systems solar panel square footage is not restricted, however, it may be limited by the size of the roof or the roof structure." While this language is not repeated in the other zoning districts; in practice, staff has applied this same language to the other zoning districts; so that there have been no size limitations placed on roof-mounted solar arrays. Staff recommends this language regarding no size restrictions for roof-mounted arrays should be added to the other zoning districts.

The lack of size restrictions on roof-mounted arrays should not supersede the more generally applicable language that limits the size of a residential solar array to a maximum generating capacity of 40kW. The main goal of the size restriction is to establish a distinction between residential and commercial arrays. The 40kW maximum generating capacity does provide a clear distinction between residential and commercial arrays, in that the 40kW limit allows a size of about 3,000 square feet, while commercial solar arrays are generally measured in acres vs square feet.

A question has been raised regarding the need to also limit the size to 120% of actual usage. A solar array contractor who works in multiple metro cities has indicated Xcel Energy does not limit residential solar arrays to 120% of actual usage. The City Engineer has indicated a residential solar array that generates more than 120% of actual usage is in a different category than arrays that generate 120% or less of actual usage, but is allowed by Excel.

ORDINANCE 04 - 2022

CITY OF AFTON
WASHINGTON COUNTY, MINNESOTA

AN ORDINANCE AMENDING SECTION 12-230 OF THE AFTON CITY CODE RELATING TO SOLAR ENERGY SYSTEMS

BE IT ORDAINED by the City Council of the City of Afton hereby amends the following section of the Afton Code of Ordinances: Section 12-230 relating to Solar Energy Systems, as shown below. (Add the **bold and underlined** text and delete the ~~strikeout~~ text.)

- E. *Standards.* All solar energy systems are subject to the accessory use standards for the district in which it is located, including, but not limited to, setback, height, and coverage limits.
1. *Aesthetic.* Solar energy systems are subject to the following aesthetic standards:
 - a. Installation on Residential structures must be designed to blend into the architecture of the building.
 - b. Installation on Commercial structures shall be placed on the roof to limit visibility from the public right-of-way or to blend into the roof design, provided that minimizing visibility still allows the property owner to reasonably capture solar energy.
 - c. The color of the solar collector is not required to be consistent with other roofing materials.
 - d. Active solar energy systems that do not meet the aesthetic standards will require a Conditional Use Permit.
 2. *Size.* For residential applications, under no circumstances shall a solar array exceed 40kW.
 3. *Height.*
 - a. Building- or Roof-mounted systems. Shall not exceed the maximum height allowed in any zoning district.
 - i. Shall be no higher than twenty-four (24) inches above the roof.
 - ii. For purposes of height measurement, solar systems other than building-integrated systems shall be considered to be mechanical devices and are restricted consistent with other building-mounted mechanical devices for the zoning district in which the system is being installed, except that solar energy systems shall not be required to be screened.
 - b. Ground- or Pole-mounted systems. Shall not exceed 20 feet in height when oriented at maximum tilt.
 4. *Set-backs.* 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.
 - a. Building- or Roof-mounted 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.
 - b. Ground- or Pole-mounted systems. Must be set back from the property line the same distance as required for other accessory structures and may not extend into the side- or rear-yard setback when oriented at minimum design tilt.

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5. *Impervious Coverage.* The surface area of pole- or ground-mount systems must comply with the City's overall impervious coverage requirements.
 - a. Impervious coverage will be calculated based on the footprint of the system at minimum tilt.
 - b. Building- or Roof-mounted systems. Shall allow for adequate roof access to the south-facing or flat roof upon which the panels are mounted.
 - c. Ground- or Pole-mounted system. The collector surface of any foundation, compacted soil, or other component of the solar installation is considered impervious surface.
 - d. Vegetated ground under the collector surface shall be used to mitigate stormwater runoff.
6. *Glare.* All solar energy systems shall minimize glare so as not to **minimize the effect on** adjacent or nearby properties.
 - a. Measures to minimize glare include selective placement of the system, screening on the north and/or sides of the solar array, modifying the orientation of the system, reducing use of the reflector system, or other remedies that limit glare. **The selection and requirement of such measures shall be at the sole discretion of the City.**
7. *Historic Buildings.* Solar energy systems on buildings within designated historic districts or on locally designated historic buildings (exclusive of State or Federal historic designation) will require an administrative permit and a design review by the Heritage Preservation Commission (HPC).

F. *Zoning District and Lot Size requirements.*

1. *VHS districts:*
 - a. For Ground-Mounted systems, the maximum solar panel square footage allowed is 150 square feet or 1% of the total square footage of the lot, whichever is less.
 - b. Roof-Mounted systems solar panel square footage is not restricted, however, it may be limited by the size of the roof or the roof structure.
 - c. Must meet City of Afton historical preservation standards.
 - d. Requires an administrative permit and design review by the Heritage Preservation Commission (HPC).
2. *Rural Residential (RR) and Agriculture (Ag) districts:*
 - a. *On lots up to 10 acres:*
 - i. If not fully screened:
 - (1) A maximum height of 15 feet at maximum vertical tilt and a total panel square footage of 300 square feet, at the required setback.
 - ii. If fully screened:
 - (1) A maximum height of 20 feet and a total panel square footage of **that provides up to 120% of the documented energy usage of the property** 1,000 square feet, subject to being fully screened from public roads and neighboring properties, and subject to statutory and/or public utility power generation restrictions. **For residential applications, under no circumstances shall a solar array exceed 40kW.**
 - b. *On lots 10 to 20 acres:*
 - i. If not fully screened:
 - (1) A maximum height of 15 feet at maximum vertical tilt and a total panel square footage of 300 square feet, at the required setback.
 - (2) A maximum height of 15 feet and a total panel square footage of 500 square feet if setback 200 feet from all property lines, subject to statutory and/or public utility power generation restrictions.
 - ii. If fully screened:
 - (1) A maximum height of 20 feet and a total panel square footage of **that provides up to 120% of the documented energy usage of the property** 1,000 square feet, subject to

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statutory and/or public utility power generation restrictions, at the required setback.
For residential applications, under no circumstances shall a solar array exceed 40kW.

c. *On lots 20 acres or greater:*

i. If not fully screened:

- (1) A maximum height of 20 feet at maximum vertical tilt and a total panel square footage of 300 square feet, at the required setback.
- (2) A maximum height of 20 feet and a total panel square footage of 500 square feet if setback 200 feet from all property lines, subject to statutory and/or public utility power generation restrictions.
- (3) A maximum height of 20 feet and a total panel square footage 750 square feet if setback 250 feet from all property lines, subject to statutory and/or public utility power generation restrictions.

ii. If fully screened:

- (1) A maximum height of 20 feet and a total panel square footage of **that provides up to 120% of the documented energy usage of the property** ~~2,000 square feet~~ if fully screened, subject to statutory and/or public utility power generation restrictions, at the required setback. **For residential applications, under no circumstances shall a solar array exceed 40kW.**

3. *Industrial districts:*

- a. Rooftop community systems are permitted only in the Industrial districts.
- b. Ground-mount community solar energy systems are allowed only in the Industrial districts and are allowed as conditional uses.
- c. Solar farms are only allowed in the Industrial districts.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF AFTON THIS 20TH DAY OF DECEMBER, 2022.

SIGNED:

Bill Palmquist, Mayor

ATTEST:

Ronald J. Moorse, City Administrator

City of Afton
3033 St. Croix Trl, P.O. Box 219
Afton, MN 55001

Meeting Date April 6, 2023

Council Memo

To: Mayor Palmquist and City Council Members
From: Ron Moorse, City Administrator
Date: March 30, 2023
Re: City Administrator Updates

The City Administrator will provide updates regarding any new information related to projects, needs, etc.