



MINUTES OF A MEETING OF THE
INDEPENDENCE PLANNING COMMISSION
TUESDAY, MARCH 12TH, 2024

1. **Call to Order**

Pursuant to due call and notice thereof, a work session of the Independence Planning Commission was called to order by Chair Thompson at 7:30 PM.

2. **Roll Call**

Present: Dumas, Volkenant, Thompson, Story and Usset

Absent: Tearse, Administrative Services Director Simon

Staff: City Administrator Kaltsas

Visitors: See Sign in sheet

3. **Approval of Minutes**

a. February 20, 2024, Planning Commission Meeting Minutes.

b. February 20, 2024, City Council Meeting Minutes (For Information Only).

Minutes were not included in the packet, they will be approved at the next meeting.

4. **PUBLIC HEARING (Continued):** A text amendment to the City's zoning ordinance Chapter 5, Section 515, Solar energy systems.

- a. The City will consider an amendment that will look at possible allowing an increase in the maximum square footage of residential scale ground mounted solar energy systems. The current maximum is 500 square feet.

UPDATED DISCUSSION:

Based on the discussion and direction provided by the Planning Commission at our last meeting, I prepared two options that can be considered for how the City could potentially amend the ground mounted solar energy ordinance to provide for systems that are more proportional to the energy demands generated by homes in Independence. While there is not an established "home size average", it was noted that the average home size directly correlates to energy demand which directly correlates to solar energy system size. In looking at our current language, language relating to similar structures (i.e. accessory structures), it was noted that we have often used proportionality between lot size or principal home size as a metric in permitted allowances. With this in mind, the City has also been successful in using the "review committee" (ABRC) as a way to vet potential impacts of certain entities.

Option A – this option would utilize the already established ABRC review committee to consider ground mounted solar energy systems. With this concept, the committee could consider approval of a ground mounted system up to 2,500 SF. For discussion, I proposed to increase the minimum lot size to 5 acres. The remaining criteria would have to be complied with fully in order for the ABRC to consider approving. If the ABRC does not approve, a property owner could appeal to the Planning Commission and City Council but only under the CUP rules. The City could keep the rules the same as now or amend to be consistent with the proposed changes below. This concept also requires the sign-off of all adjoining property owners.

- (1). The city council may establish a ground mounted solar energy system review committee to review construction and site plans submitted for any proposed ground mounted solar energy system to ensure compliance with the following:
 - a. Ground-mounted systems shall only be allowed on a parcel with an existing principal structure.
 - b. The property is 5 acres or larger.
 - c. The maximum size of any ground mounted solar energy system is 2,500 SF.
 - d. The ground mounted solar energy system shall be located a minimum of 100 LF from any property line and 500 LF from any residential structure on an adjoining property.
 - e. The ground mounted solar energy systems shall not be located in the Shoreland Overlay District.
 - f. The ground mounted solar energy system shall not be visible from any City, County or State roadway. Screening can be installed to mitigate visibility as determined necessary by the committee.
 - g. Properties that share a property line with an Outlot, can be granted a reduction in the applicable 100 foot property line setback. In no case shall the setback be less than 50 feet.
 - h. The applicant shall provide with the application, the written consent of 100 percent of the owners of privately or publicly owned real estate directly abutting the premises for which the permit is being requested (on forms provided by the city). Where a street separates the premises for which the permit is being requested from other neighboring property, no consent is required from the owners of property located on the opposite side of the street. Where an abutting property consists of a multiple dwelling, the applicant need only obtain the written consent of the owner or manager, or other person in charge of the building.

Option B - this option would consider amending the existing ordinance. Proposed amendments are noted below. The biggest change would be to provide a proportional scale between lot size and solar energy system size. This could be done in a multitude of ways; however, I provided one way as an example for discussion. I also believe that separation from property lines and adjoining residential structures should be increased to ensure minimal impacts.

Subd. 5. Ground-Mounted Solar Energy Systems - shall conform to the following standards:

- a. Ground-mounted systems shall only be allowed on a parcel with an existing principal structure.
- b. Ground-mounted systems shall be located only in rear or side yards.
- c. Ground-mounted systems shall not be located in the Shoreland Overlay District.
- d. Ground-mounted systems shall be wholly screened from view from the public right of way and adjacent residential structures. Methods for screening shall include berming, fencing, landscaping and/or combination thereof.
- ~~e. Ground-mounted systems shall be located on a parcel of at least 2.5 acres.~~
- ~~f. Ground-mounted systems shall be setback 40 feet from the rear yards.~~
- ~~g. Ground-mounted systems shall be setback 30 feet from the side yards.~~
- h. Ground-mounted systems shall be setback 100 feet from all property lines.**
- i. Ground mounted solar energy systems shall be located a minimum of 500 LF from any residential structure on an adjoining property.**
- j. The maximum height for any component of the system shall be 15 feet.
- k. Ground-mounted systems shall be in compliance with any applicable local, state and federal regulatory standards, including building, electrical and plumbing codes.
- l. Ground-mounted systems and their support structures shall be designed by a certified professional to meet applicable professional standards for the local soil and climate conditions.
- m. Ground-mounted solar energy systems shall have a maximum allowable area as follows:**

Properties with a minimum of 2.5 acres up to 3.49 acres: 500 SF

Properties with a minimum of 3.49 acres up to 4.99 acres: 1,000 SF

Properties with a minimum of 5.0 acres up to 7.49 acres: 1,500 SF

Properties with a minimum of 7.5 acres up to 9.99 acres: 2,000 SF

Properties with a minimum of 10.0 acres: 2,500 SF

Staff will be looking for additional direction and discussion pertaining to potential amendments to the ordinance. As noted at the meeting, I am also providing the address of the only existing system that has been constructed in Independence.

Existing systems (note – one located in Minnetrista):

7297 Co Rd No 6,
Independence, MN 55359

9226 U S Hwy No 12,
Independence, MN 55328

4885 Co Rd No 151,
Minnetrista, MN 55364

Discussion:

Since the adoption of the solar energy ordinance in 2016, the City has considered 3 variance applications relating to ground mounted solar energy systems. All three of the applications considered asked for more than 500 SF of ground mounted surface area which is the maximum size allowed by the City's currently solar energy ordinance. The current ordinance stipulates the following relating to ground mounted solar energy systems:

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- e. Ground-mounted systems shall be located on a parcel of at least 2.5 acres.
- f. Ground-mounted systems shall be setback 40 feet from the rear yards.
- g. Ground-mounted systems shall be setback 30 feet from the side yards.
- h. Ground-mounted systems shall have a maximum area of 500 SF.
- i. The maximum height for any component of the system shall be 15 feet.
- j. Ground-mounted systems shall be in compliance with any applicable local, state and federal regulatory standards, including building, electrical and plumbing codes.
- k. Ground-mounted systems and their support structures shall be designed by a certified professional to meet applicable professional standards for the local soil and climate conditions.

Staff has discussed the possibility of increasing the size of allowed residential scale ground mounted solar energy systems based on the demonstrated need of a particular property. In addition to demonstrated need, the City could consider additional criteria similar to those already

contemplated in the current ordinance. Criteria such as lot size, separation or setbacks from adjacent or neighboring properties, maximum size, etc.

The City reviewed similar ordinances for surrounding communities and noted that the following methods are being utilized:

- Percentage of lot coverage (i.e., counts towards maximum lot coverage requirements – 20%)
- Minimum setbacks (i.e., 300 LF from adjacent residential structures and 100 LF from property line)
- Maximum SF (i.e., 4,000 SF – anything over 1,500 SF is a CUP)
- Minimum lot size (i.e., 5 acres minimum lot size)

The City also reached out to several solar installers to discuss energy usage and solar array sizes typical for today's technology. The City obtained the following information:

Large Residence Example

Conditioned Square Footage: 14,750

sqft Usage Estimate per Sq/Ft: 0.45

kWh/sqft/month Estimated Monthly

Usage: 6,637 kWh Estimated Annual

Usage: 79,650 kWh

Proposed Solar Installation production estimate: 56,169 kWh Estimated offset: 71%

MN Average Single-Family Home Example

Square Footage: 2,026

sq.ft. Average Monthly

Usage: 1,013 kWh Average

Annual Usage: 12,156 kWh

The relationship between size of home and usage has been a dependable starting point for determining estimated usage on new construction. In instances where utility bills can be used to see historical usage, the estimate for most homes tracks still tracks within 10% of actual usage. With the addition of electric vehicles and the trend to electrify homes, we have been seeing a trend upwards in average home usage. Electric vehicles alone will add an average of 270 kWh/month per vehicle.

Current 500 sqft CUP limit for ground mounts

- Allows for 22 x 420 modules or 9.24 kWDC system (using the most efficient module in the marketplace)
- Production when optimally placed and tilted, and with no shade would produce approximately 11,916 kWh/yr

Based on the information obtained and considered by the City in reviewing this issue, the following considerations are provided to Planning for further discussion:

- Increase the allowable size of ground mounted solar arrays allowed by conditional use permit to be commensurate with demonstrated usage. This could include utilizing a third-party consultant to prepare and document demonstrated need for each application.
 - Maximum size of ground mounted systems meeting the following additional criteria and showing demonstrated need is **2,500 SF**
- Provide additional criteria that would be used to review applications:
 - Increased property size or minimum large property size – **10 acres minimum** to exceed 500 SF
 - Increased setbacks from property lines – **100 LF from property lines and 1,000 LF from adjacent residential structures**

Recommendation:

It should be noted that the solar energy ordinance has been utilized for many roof or structure mounted systems and has accommodated more than 5 ground mounted systems that all have met the applicable requirements. The issue relating to the maximum size of residential scale ground mounted systems has been identified and warrants further discussion. Staff is seeking feedback and direction from the Planning Commission relating to this issue. Based on the feedback and direction, it is anticipated that a formal ordinance amendment would be brought back for formal recommendation to the City Council.

Option A

- (1). The city council may establish a ground mounted solar energy system review committee to review construction and site plans submitted for any proposed ground mounted solar energy system to ensure compliance with the following:

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Option B

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Meeting adjourned.

Respectfully Submitted,

Carrie Solien/Recording Secretary