

City of Independence

Consideration of a Text Amendment to the Zoning Ordinance to Consider Allowing Solar Energy Systems in the City

To: Planning Commission
From: Mark Kaltsas, City Planner
Meeting Date: March 15, 2016

Request:

A proposed text amendment to the City of Independence Ordinances as follows:

- Chapter 5, Sections 510 and 530;
 - a. Consideration of the establishment of regulations pertaining to solar systems

Discussion:

The City initially received an application seeking a text amendment to the City's zoning ordinance to permit community solar gardens as a conditional use in the AG-Agriculture zoning district of the City. The City's current zoning ordinance does not address solar in any form as a permitted, accessory or conditional use in any zoning district. The City has addressed wind generation systems within the zoning ordinance. All wind generation systems are considered a conditional use and permitted only in the AG-Agriculture zoning district. The City has previously discussed addressing solar system regulations in some fashion within the ordinance. This application brings the question to the forefront and will allow the City to further discuss the issues and benefits of considering solar systems within the zoning ordinance.

The community solar garden applicant approached the City last year to discuss the possibility of amending the City's zoning ordinance to allow community solar gardens in some manner within the City. The City noted that a text amendment would need to be considered and then pending the outcome of that request, a site specific request could be made for an individual property. As recently noted and discussed, the City can determine where and what land uses should be permitted, accessory or conditional within the City.

Community solar gardens have become a current topic of discussion for many outlying and rural communities in the state of Minnesota following the passage of additional legislation in 2013 that mandated 1.5% of renewable energy comes from solar generation. Many communities have begun discussing if to allow and how to regulate solar systems within their respective communities.

Solar systems come in many forms, installation types and sizes. Although there are a wide array of different system types, solar systems can generally be broken down into 3-4 categories.

1. Roof mounted systems – residential and commercial (typically defined by size and underlying building use).
2. Free standing residential and commercial systems – ground mounted, pole mounted, etc. Would need to be defined by a maximum size and or power generation capability. Typically have minimum lot size, height and or setback restrictions which are established to minimize impacts on surrounding properties. Could be permitted as accessory structures if capable of meeting the established criteria and a conditional use if cross established thresholds.
3. Community solar system – could be further distinguished by size and generation capabilities.
4. Utility Scale Solar Systems – regulated by the Public Utilities Commission.

The development of an ordinance should be based on the City's Comprehensive Plan and the current vision of the community and its residents. Solar ordinances should address all types of potential solar systems and will likely distinguish between system types and whether or not they are permitted, accessory, conditional or not permitted uses within a given zoning district.

The City has five primary zoning districts. The Comprehensive Plan further defines several additional land use categories as well as outlines the intended future locations of certain land uses. Along with the information presented by the applicant, the City should contemplate and provide direction regarding the following considerations:

1. Residential roof mounted solar systems are becoming more common. Typically these roof mounted systems are mounted flush to a residential roof and have been accepted as a typical accessory structure within most residential and agriculture zoning districts. Standards can be developed which further define the requirements for this type of solar system.
2. Commercial roof mounted systems are also becoming more common. These types of systems can be installed utilizing several different methods. Standards can further define the parameters of these types of systems to minimize their potential impacts. Commercial roof mounted systems could be considered as an accessory or conditional use within the Commercial/Light Industrial zoning district.
3. Free standing solar systems come in many shapes and sizes. The City could consider establishing parameters which further define residential versus commercial systems. Minimum lot size, permitted yard location, setbacks, screening and height requirements could be further defined to limit and minimize potential impacts on surrounding properties. These standards could also be used to establish whether or not the solar system is considered to be an accessory or conditional use on a particular property.
4. Community Solar Systems can also come in many different forms and sizes. This type of system is conceptually proposed with this application. These systems are capped by their generation capabilities; however, individual systems can be developed in concert on an individual property

such that their scale becomes more consistent with a utility scale development. This type of development could then be considered more consistent with a commercial or industrial land use versus an agricultural land use. The City will need to consider whether or not these types of systems are in keeping with the character of the rural residential, agricultural and or commercial/light industrial zoning districts. While it is suggested that there are minimal impacts, often times these systems are not positively received by adjacent residential property owners. As a result, the location of these systems and their proximity to residential development becomes a critical issue to further discern. The City will need to consider if and or where these systems can be considered an appropriate and compatible land use. Are they compatible with typical and approved agricultural uses, rural residential uses and commercial/light industrial uses?

It may be possible to develop standards which would effectively mitigate any negative impacts that are otherwise imposed or perceived. Standards could include items such as minimum lot size, setbacks, screening requirements, height limitations, decommissioning plans and other similar criteria. The City will need to first determine the compatibility of the proposed land use and then determine if standards can be established to effectively mitigate potential impacts.

5. Utility Scale Solar Systems are regulated by the Public Utilities Commission.

Considerations/Decision Points:

Staff is seeking Planning Commission direction relating to several key aspects of a potential ordinance amendment. The key questions/considerations are highlighted at the end of each note. Staff has prepared some initial draft language for discussion purposes only. Based on the consideration of the following key components, actual draft ordinance language will be prepared.

1. The City will need to define the types of solar energy systems that are reasonably anticipated to be requested within the City. The following draft definitions would more formally define the aforementioned concepts:

Community Solar Garden – A community solar energy system that generates electricity by means of a ground-mounted or building-integrated solar energy system and that provides retail electric power (or a financial proxy for retail power) to multiple households or businesses residing or located off-site from the location of the solar energy system in accordance with the requirements of Minnesota Statutes 216B.1641 or successor statute.

Solar Energy System (SES) - A device or structural design feature, a substantial purpose of which is to provide for the collection, storage and distribution of solar energy for space heating or cooling, electricity generating, or water heating.

Solar Energy System, Building Integrated - 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, examples of which are roofing materials, windows, skylights, and awnings.

Solar Energy System, Ground-Mounted – A freestanding solar system mounted directly to the ground using a rack or pole rather than being mounted on a building.

Solar Farm - A commercial facility that converts sunlight into electricity, whether by photovoltaic (PV), concentrating solar thermal devices (CST), or other conversion technology, for the principal purpose of wholesale sales of generated energy.

Are there additional or revised definitions that should be considered?

- The City has property that is zoned AG-Agriculture, but is guided Rural Residential in the Comprehensive Plan. The City has guided this land rural residential and it is anticipated that the land ultimately develops in a manner consistent with rural residential property. Allowing the development of long-term and substantial infrastructure on a property that is currently zoned agriculture, but guided for rural residential may negatively affect the long term use and or develop ability of a property or neighboring property. The City will want to carefully consider if larger community or utility sized systems can be developed in concert with rural residential development. It may be desirable to consider development of an ordinance that uses the Comprehensive Plan as the guide for the future land use rather than the existing zoning of a property.

Should the City consider utilizing the Comprehensive Guide Plan as the basis for determining whether a use is permitted, rather than the zoning of a property?

- The City will need to determine what types of systems are permitted, accessory, conditional or interim uses in each of the respective zoning districts (i.e. Building integrated SES may be permitted as an accessory use in all zoning districts). The City will need to “fill-in” the following chart for inclusion in the ordinance.

| Type of Use | Zoning Districts | | | | |
|---|--------------------|-------------------------|-------------------------|--------------------------------------|------------------------|
| | AG- Agriculture | RR-Rural Residential | UR-Urban Residential | CLI-Commercial - Light Industrial | UC-Urban Commercial |
| Community Solar Garden | | | | | |
| Building Integrated Solar Energy System | | | | | |
| Ground Mounted Solar Energy System | | | | | |
| Solar Farm | | | | | |

| |
|--|
| P - Permitted A - Accessory C - Conditional I - Interim |
|--|

What types of systems will be permitted, accessory, conditional or interim uses in each zoning/comprehensive planning districts?

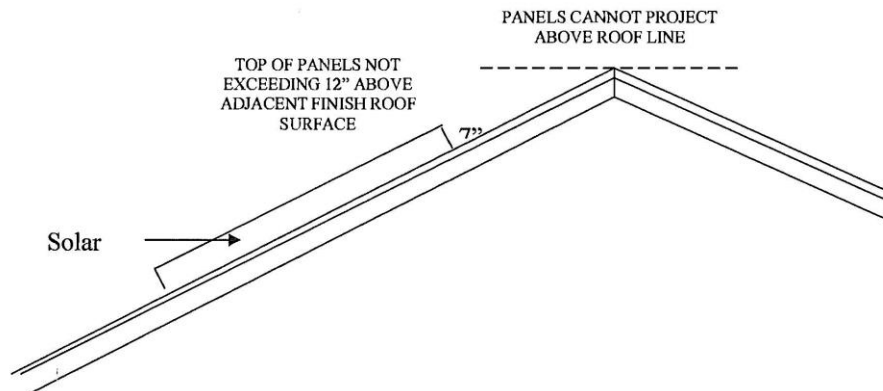
4. The City will want to develop both qualifying site and system/site specific design criteria. The City will need to consider performance standards and placement guidelines which further define the criteria pertaining to the installation of solar energy systems.

Draft Solar Performance Standards and Placement Guidelines.

- (a) The following guidelines are to be used in the design and placement of solar energy systems:

1. Building Integrated Solar Energy Systems - shall conform to the following provisions:

- a. Solar panels (photovoltaic and solar thermal systems) can be located on pitched and flat roofs of all principle and accessory buildings within the City:
- b. Solar panels shall be low profile and parallel with the slope of the pitched roof.
- c. Panels should not project above the roof ridge line.
- d. Set solar panels and solar devices back from the edge of a flat roof to minimize visibility.
- e. Select solar panels, solar devices, mechanical equipment and mounting structures with non-reflective finishes such as an anodized finish.
- f. Color of panel frames and support structures should be neutral and compatible with the roof surface color.
- g. Placement of panels should be uniform. Consider the panels as part of the overall roof configuration. Match the slope and proportions of the array with the shape and proportions of the roof.



2. Ground-Mounted Solar Energy Systems - shall be subject to the following provisions:

- a. Shall be located in the rear or side yards. Ground-mounted systems shall not be located in the Shoreland Overlay District (may want to consider allowing as an IUP).
- b. The system, structure, and support apparatus shall comply with applicable accessory building setbacks as determined by the underlying zoning district.
- c. The maximum height for any component of the system shall be 15 feet.

3. Community Solar Gardens – shall be subject to the following provisions:

- a. Shall be located on a parcel of at least _____ acres.
- b. Shall be setback _____ feet from the front yard.
- c. Shall be setback _____ feet from the rear and side yards.
- d. Shall not exceed 15 feet in height.
- e. Shall be wholly screened from view from the public right of way or adjacent residential structure. Methods for screening shall include berming, fencing, landscaping and/or combination thereof.
- f. Shall be subject to stormwater management and erosion and sediment control best practices and NPDES permit requirements, and shall obtain requisite permits from the MPCA, local watershed district, City and other regulatory agencies.
- g. Shall be in compliance with any applicable local, state and federal regulatory standards, including building, electrical and plumbing codes.
- h. Shall be designed by a certified professional to meet applicable professional standards for the local soil and climate conditions.
- i. Power and communication lines that are not defined in this ordinance as essential services and running between banks of solar panels to electric substations or interconnections with buildings that are on adjacent parcels shall be buried underground.
- j. Shall be designed and located in order to prevent reflective glare toward inhabited buildings on adjacent properties and adjacent right of ways.
- k. The limitation on the number of cumulative generating capacity of community solar garden facilities is regulated by Minnesota Statutes 216B.164 and related regulations.
- l. The applicant shall submit a decommissioning plan to ensure that facilities are properly removed after their useful life. 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

plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation, and a plan ensuring financial resources will be available to fully decommission the site. The City may require the posting of a bond, letter of credit or the establishment of an escrow account to ensure decommissioning.

4. Solar Farms which have a generating capacity of 50 megawatts of power or more shall fall under the jurisdiction of the Minnesota Public Utilities Commission.

The City can further discuss and develop standards appropriate for the City of Independence.

The City does have criteria for considering zoning amendments in the zoning ordinance. The criteria are provided to help guide the City's consideration of zoning amendments, but do not limit the City's ability to consider other factors or criteria. The criteria provided in the zoning ordinance are as follows:

520.07. Criteria on zoning amendments. Subdivision 1. The planning commission and the city council may consider, without limitation, the following criteria in approving or denying zoning amendments.

Subd. 2. Zoning amendments must conform to the Independence city comprehensive plan.

Subd. 3. The zoning amendment application must demonstrate that a broad public purpose or benefit will be served by the amendment.

Subd. 4. The zoning amendment application must demonstrate that the proposed zoning is consistent with and compatible with surrounding land uses and surrounding zoning districts.

Subd. 5. The zoning amendment application must demonstrate that the subject property is generally unsuited for the uses permitted in the present zoning district and that substantial changes have occurred in the area since the subject property was previously zoned.

Subd. 6. The zoning amendment application must demonstrate merit beyond the private interests of the property owner.

Based on the discussion and direction provided by the Planning Commission additional ordinance language will be prepared for review by the City. It is anticipated that the Planning Commission will work through several iterations of the draft ordinance prior to forwarding to the City Council for consideration.

Neighbor Comments:

The City has received numerous phone calls and several letters pertaining to the consideration to amend the ordinance.

Recommendation:

Staff is seeking discussion and direction from the Planning Commission for the requested Text Amendment.

Attachments:

1. Adjacent Community Ordinances
2. Public Comment Letters