



MEMORANDUM

TO: Sunfish Lake Mayor and City Council

FROM: Michelle Barness

DATE: April 1, 2015

RE: Sunfish Lake – Regulations for Solar Energy Systems

FILE: 211.02

4/7/15 CC Mtg.
**Agenda
Item
6b**

BACKGROUND

Recently the City was approached with exploratory questions about the establishment of facilities in the community that would generate electrical power through an array of solar panels. Although the solar energy system inquiry was preliminary rather than specific to a certain property, staff became concerned that the current zoning regulations are not clear regarding the classification of this type of land use. This memorandum briefly addresses the rise in demand for solar energy production in urban areas, the types of solar energy installations seen in urban areas, and how Sunfish Lake currently regulates this land use. Planning staff asks that the City Council discuss this issue and consider directing staff to complete further research on the matter, culminating in a potential Ordinance amendment to establish standards for solar energy in Sunfish Lake.

ANALYSIS

Growing interest in solar energy production. Several factors have contributed to a growing interest in solar energy systems:

- Solar energy is a clean, renewable energy option that may supplement or provide an alternative to more conventional forms of energy production.
- Alternative energy production is growing in Minnesota due to a series of state mandates to the largest power producers to meet various thresholds in energy from renewable sources. Accompanying the mandates has been a variety of subsidies and incentives to both producers and consumers that abate or defer different taxes, depending on the program.
- Continued advancements in efficiency and production costs have made solar energy more appealing to all parties, including both commercial producers and consumers.

- The interest in establishing solar arrays in metropolitan areas has grown as a result of the real estate market crash which lowered land prices, combined with a practical interest by solar energy producers to locate solar systems in proximity to power substations in urban areas to reduce transmission costs.

Types of solar energy installations. Solar arrays can constitute the sole use of property, complement an existing use, or co-exist side-by-side with an existing use:

Principal solar installations: Interest in establishing more significant “solar farms” as a principal use of property is gaining popularity as a result of the factors described – a change in state mandates, tax incentives, real estate prices, technological advances, and environmental appeal. For many of the typical installations of this sort, a parcel of between 15 and 25 acres is devoted to solar panel arrays. Such facilities need few, if any, urban services, create little or no on-site employment, and generate no traffic. The City of Sunfish Lake has few remaining vacant parcels in the community that could serve this scale of solar energy use.

Accessory solar installations: Urban solar energy production often occurs as accessory solar panels attached to individual buildings. In these cases, the property owner consumes the energy produced on-site, and in some situations, feeds a small amount back to the grid, which the utility company with the distribution territory is obligated to purchase. Historically, these installations have been limited to roof-mounted panels or occasionally, a few ground-mounted panels within the open yard spaces on developed property. In addition, a large solar array does not necessarily need to be the principal use of a property. Any parcel with a significant amount of unused land could consider solar energy production as an unrelated ancillary/accessory use.

Sunfish Lake regulation of solar energy production. Section 1202.02 of the Sunfish Lake Zoning Ordinance provides a definition of “solar energy system” as follows:

“Any solar collector or other solar device or any structural design of a building whose primary purpose is to collect, convert and store solar energy for useful purposes including heating and cooling of buildings, domestic water heating, electric power generation and other energy using processes.”

However, the Sunfish Lake Zoning Ordinance provides no further regulation of solar energy systems in the community, providing no performance standards for the use and no specification of in which zoning districts such uses should be permitted.

Solar energy production land use considerations. Installation of solar energy systems as either a principal or accessory use on Sunfish Lake properties poses the following potential land use issues that may need to be addressed in a potential Ordinance amendment to establish solar standards:

Neighboring property impacts: Of potential concern with solar installations would be how the design and location of solar panels impacts views from adjacent properties. New solar standards may need to address issues such as glare from panels, size or height of panels, or panel placement & orientation with regards to potential impacts on nearby properties.

Solar access: Solar access necessary for solar installations to function may become a concern on Sunfish Lake properties, given the extensive tree canopy the community preserves. Provision of access to sunlight for the purposes of utilizing solar energy is protected by the zoning enabling legislation in Minnesota law. However, local governments may establish specific standards and procedures regulating solar access based on the needs and conditions of the local community. Additional research needs to be completed to determine what solar access standards would be appropriate for the Sunfish Lake community.

Public safety and infrastructure impacts: Solar facilities generate almost no on-site traffic after construction is complete. Occasional maintenance visits may occur with larger installations, including washing activity. Apart from this, there is no other sanitary sewer or water use from the typical solar facility. Water and sewer utilities are not constructed at the City scale within Sunfish Lake, so minimal water requirements necessary for maintenance purposes would need to be addressed at the site scale.

SUMMARY AND CONCLUSION

With a rise in interest in solar energy systems by both producers and consumers of energy, it is possible that the City of Sunfish Lake will receive additional inquiries regarding the regulation of solar energy uses in the community in the future. However, the Zoning Ordinance currently provides no regulations for solar energy land uses, either in regards to specific performance standards or by way of identifying zoning districts within which such uses should be permitted as a principal or accessory use. If the City Council agrees that this is a land use issue warranting further investigation by the City, the Council may consider directing staff to conduct additional study into a potential amendment to the Sunfish Lake Zoning Ordinance to specify conditions under which solar energy systems may be permitted in the community. In this case, a more detailed report and draft Ordinance amendment could be reviewed via a public hearing with the Planning Commission, and brought before the City Council for final consideration. Please direct staff on how to move ahead with regards to this issue.

cc: Catherine Iago, City Clerk
Tim Kuntz, City Attorney
Don Sterna and Eric Eckman, City Engineers
Mike Andrejka, Building Official
Jim Naves, City Forester
Ron Wasmund, Septic System Inspector