VILLAGE OF SUGAR GROVE
BOARD REPORT

TO: VILLAGE PRESIDENT & BOARD OF TRUSTEES

FROM: WALTER MAGDZIARZ, COMMUNITY DEVELOPMENT DIRECTOR

SUBJECT: DISCUSSION: SOLAR REGULATIONS

AGENDA: MAY 17, 2022 VILLAGE BOARD MEETING

DATE: MAY 13, 2022

ISSUE

Shall the Village Board discuss modifications of the existing regulations to permit solar collection devices to be placed on rooves facing a public street.

DISCUSSION

The Village Board discussed this matter on December 15, 2020 when the Board approved an Ordinance amending the Village's solar regulations initiated by an amendment request from a resident. That amendment modified the application requirements for solar installations and did not address the resident's specific request. Village staff continues to receive considerable pushback from contractors and residents in similar predicaments since that discussion. Yet another resident has approached the Village administration about consideration of easing the Village's solar regulations.

The specific issue is solar collection devices are not permitted on any roof surface that faces a public street. This prohibition does not take into account basic physics of solar radiation: it comes from only one direction (generally, the south) and placing solar collection devices on the north-facing roof surface because the south-facing roof surface faces the street greatly diminishes the efficiency of the solar collector array.

When this topic was last presented as a Zoning Ordinance amendment in 2020, the Planning Commission held the required public hearing to collect testimony concerning the proposed amendment and it is clear the issue is one of aestehtics, not the technology. To be sure, aesthetics are an important consideration as the Village prides itself on the high quality of design and maintenace of structures and property throughout the Village.

The Planning Commission had the benefit of Commissioner Eckert's professional experience in designing and regulating solar electric systems from the utility perspective and his knowledge, experience and insights were invaluable to the discussion.

The Planning Commission's recommendation (attached) is not an indictment of solar energy and the technology. Rather it is call to attention of the quality of installations and the lack of self-policing in the industry. As the Village Board may or may not know, the zoning regulations were amended several years ago to align with the then recent State of Illinois legislation to encourage more solar electric production at the residential scale.

The legislation has proven to be very successful in increasing the generation of electricity with renewable sources in Illinois. In fact, the number of solar projects in Sugar Grove has grown steadily each year since the new legislation became effective. But there are a number of concers.

The Commission wants to make it clear that it unanimously supports the application and use of solar technology. It, grudgingly, cannot accept the lack of consistency in the industry as it pertains to maintenance and repair of solar installations. In reviewing the testimony, and drawing upon personal experiences, Commissioners identified many concerns with street-facing installations, but the principal issue being the lack of control over maintaining a consistent appearance of the collector array over time.

- Solar collectors fade over time and the pace at which they fade is not uniform even for panels manufactured by the same company, even in the same production run.
- Solar collectors are not created or manufactured equally. Variations in the manufacture of collectors cannot be controlled by the installer or the end user.
- Solar collectors malfunction and can be easily damaged by hail, tree limbs and branches, and thrown objects which requires replacement, hence the opportunity for mismatched appearance of collectors.

All of this means solar collectors will need to be replaced. Whether by the resident responsible for the original installation or a future owner of the house there will be replacement of solar collectors. Given the changes in manufacturing, technology, and the effect of time on the solar panels, there is no guarantee that replacement panels will match the originals. The Commissioners could not reconcile the likely possibility that rooftop installations in the future could be characterized by a checkerboard of shiny new and faded old panels, gaps between mis-matched panels, or uneven surfaces created by mixing old and new panels. Commissioners were of the opinion that requiring replacement of an entire array if any panel required replacement was a burdensome requirement.

Village staff is of the opinion that the appearance of the solar collectors following installation is a property maintenance issue. However, in the instances where panels would be required to be replaced due to weathering, damage, malfunction or otherwise, the inability to guarantee replacement panels will match is a significant cause for concern from both an appearance and enforcement perspective. The Planning Commission's discussion brought to the fore the issue of ongoing maintenance, not the initial installation of solar collectors.

Be advised, prohibiting solar collectors on rooves facing a street does not deprive a resident from obtaining electricity from a green source. The State of Illinois recognizes that not every resident has the physical or financial ability to place solar collectors on their roof, so a community solar program was established whereby Illinois residents can subscribe to a community solar project and obtain their solar electricity from a remote location. The Planning Commission was of the opinion that this alternative was a suitable option for residents whose optimum roof orientation roof faced a street.

At the time, the Planning Commission recommended no change to the current regulations pertaining to solar collectors on a roof facing a street.

COSTS

There is no cost to discuss the matter.

ATTACHMENTS

- Planning Commission Recommendation PC20-017

RECOMMENDATION

The Village Board should indicate to the Village staff whether there is an appetite to change the prohibition of solar panels facing a public street, and what are the concerns if such a change were implemented prior to staff beginning drafting proposed regulations.

SUGAR GROVE
INCORPORATED 1957

COMMUNITY DEVELOPMENT

R E C O M M E N D A T I O N
PC20-017

TO:	Village President and Board of Trustees
FROM:	Planning Commission
DATE:	Meeting of November 18, 2020
PETITION:	20-017 Zoning Ordinance Amendment Various solar regulations

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PROPOSAL

Amend the Zoning Ordinance to permit roof-mounted solar panels on a roof facing a street; and add additional standards and criteria for this use.

BACKGROUND & HISTORY

Vivint Solar is requesting this zoning text amendment in response to an application for a Level I solar permit being denied due to the placement of the solar panels. In the past year the Village has had several other complaints/comments concerning the Village Code not allowing roof-mounted solar panels to be placed on a roof facing a street.

The Village has seen an increase in roof-mounted solar panel permits. This form of renewable energy is becoming more and more popular within the Village. In order to get the most energy out of the systems, it is best if they are placed in a location so that they are facing south in order to receive the most sunlight. Due to the current Village Code, this is not always an option for some residents, due to the fact that their south side of their roof faces a street.

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In reviewing the zoning ordinance concerning solar regulations, staff felt that the requirement of a plan for demolition, as part of the permit for a level I solar energy system was not necessary. This requirement is geared more towards larger solar farms that take up acres of land. In place of a plan for demolition, the Plan Commission proposed to add a requirement for restoration of the roof that the panels are removed from.

DISCUSSION

The Planning Commission discussed the proposed text amendment and the biggest concern expressed was being able to control the quality and consistency of work done by different solar contractors. They made the point that workmanship varies from contractor to contractor and the way installs are done varies as well. The Planning Commission felt that this in turn could result in having several poor installations being done on the front of houses that would be around for a long time. Another concern the Commissioners discussed concerning allowing solar panels on the front of a house was when panels would break and need to be replaced. When these broken panels are replaced, they will not match the existing panels as far as color and sometimes even design and size. Some Commissioners felt this was not be acceptable for the front of a house, but were not as concerned about this on interior sides or rear roofs of houses.

The Commissioners struggled with the prohibition but found a suitable alternative already in place. Community solar allows residents to utilize the power generated from solar panels located in an off-site location.

The Plan Commission discussed removing the requirement for submission of a plan for with a level I solar energy permit application and were in favor of doing so. In place of this requirement, they felt that a requirement should be added to the Zoning Ordinance stating that no panels shall be removed unless the roof on which the panel is removed from is restored.

PUBLIC RESPONSE

After due notice, the Planning Commission held a public hearing on October 21, 2020. No objectors were present. Comments in support of the proposed amendment were submitted electronically by the public and entered into the record.

RECOMMENDATION

After carefully considering the facts, the Planning Commission recommends the Village Board **approve** the proposed zoning text amendment for solar regulations in the form and substance provided in Exhibit A, attached hereto and made a part hereof.

AYES: Sabo, Jones, Ochsenschlager

NAYES: White, Eckert, Guddendorf, Wilson

ABSENT: None

MOTION FAILED

After carefully considering the facts, the Planning Commission recommends the Village Board **approve** the proposed text amendment to remove the requirement for a plan for demolition and add the regulation that no panel shall be removed unless the underlying roof is repaired or restored.

AYES: Sabo, Jones, White, Guddendorf, Wilson, Eckert, and Ochsenschlager

NAYES: None

ABSENT: None

MOTION PASSED

EXHIBIT A

Section 11-4-21 Solar Energy Systems:

2. Building Mounted Level 1 Solar Energy System:

~~f. Mounting Location: No roof-mounted system shall be placed on a roof plane adjacent a front yard or corner side yard.~~

f. Design Standards for roof-mounted panels on a roof plane facing a front yard or corner side yard:

1. ~~-only monocrystalline panels, thin-film panels, Tesla low-profile panels, or solar shingles are the types of solar panels permitted to be mounted on a roof plane adjacent a front yard or corner side yard.~~
2. all panels shall run evenly parallel with the pitch of the roof and shall not exceed more than six (6) inches in height from roof
3. all panels shall be fixed-position collectors
4. panels shall be located only on one plane of the roof and shall be in a square or rectangular continuous array
5. auxiliary structures, rails, conduit, wirings, invertors, storage devices, or other similar items shall not be attached to nor traverse any part of the home visible from the street.
6. panels shall be all black, including, but not limited to, moldings, rails, mounting hardware, supporting structures
7. no battery storage shall be mounted on the roof

3. General requirements for level 1 solar energy system

a. building permit

~~6. Plan for demolition and site restoration at the end of the life of the system.~~

8. Must show proof that homeowners insurance covers solar panels

m. Damaged panels must be replaced within 1 month of being damaged

n. All equipment must be UL certified

o. All conduit, support structures, and any other like components must be painted to match the color of the existing roof and house to which such conduit, support structures, and/or other like components are attached or traverse.

Local Solar Installations

The first is a front of the house installation that shows the panel moldings being improperly installed. Located on Blackberry Trail in Aurora.

The second is also a front of the house installation that shows how the conduit is run between the panels and the house. It also shows some supporting components also attached to the roof. Also located on Blackberry Trail in Aurora.

The third is a side of the house installation. You can see the differences in the panel colors and the conduit is run all over the roof of the house. Located on Cobbler Street in Sugar Grove.

Advertising material

Community Solar 101

At ComEd, we are powering a cleaner and brighter future for our customers and communities. Today, our customers have more choices than ever before in receiving reliable, clean,

affordable and innovative energy products, and we are committed to driving that progress.

WHATISCOMMUNITYSOLAR?

As part of our commitment, ComEd supports community solar as an opportunity for customers to benefit from solar energy.

For over a century, energy was primarily generated at large central plants, often at considerable distance from the customer. With community solar, a solar generating system provides benefits to community members.

Community options expand access to solar power for renters, those with shaded roofs or properties, and those who choose not to install a system at their home or business for financial or other reasons.

HOW DOES COMMUNITY SOLAR WORK?

1. JOIN

Homes and businesses earn bill credits by subscribing to a Community Solar project.

2. COMMUNITY SOLAR

"Farm" of Solar Panels owned and operated by a Community Solar Developer.

3. ENERGY GENERATED

Energy generated by Community Solar flows to the energy grid to become part of the overall energy supply.

4. ENERGY DELIVERY

ComEd delivers energy through the grid to homes and businesses.

5. BILL CREDITS

Subscribers pay a monthly subscription for the Community Solar Project and receive credits on their ComEd bill for energy generated by the solar farm.

FUTURE SUBSCRIPTIONS

Through subscription-based community solar, customers subscribe to a portion of the electricity generated and receive credits on their bill for the solar energy produced by the community solar generating system. In Illinois, customers can subscribe up to 110% of their last 12 months of usage – receiving credits on their bill and taking advantage of solar energy without having to install panels of their own.

Customer solar projects are currently under development in our service territory. If you would like to learn more, sign up for updates.

Solar is growing and more solar developers are entering the arena. That means more options for you! However, while ComEd is a trusted source for information about solar energy, we do not sell any solar energy or products, guarantee external savings claims, or partner with any solar contractors. Beware of companies that may be misrepresenting themselves as ComEd. Learn More

Solar Permits Issued in Sugar Grove

(except as noted, all are solar garden installations)

160 Diana Dr.

1175 McDole Dr.

669 Sheffield Cir.

1042 Oak St.

155 Cobbler Ct.

925 Black Walnut Dr.

99 Sutton Ave.

225 Exeter Ln.

233 Bastian Dr.

144 Godlenrod Dr.

932 Pembridge Pl.

911 Merrill New Rd.

271 Belle Vue Ln.

132 Cobbler Ln.

549 Heartland Dr. Unit A (solar farm, installation)

1082 Ottawa Dr.

144 Cobbler Ln.