Legislation Text

File #: 2018-0680, **Version:** 2

Title/Name/Summary
Solar Panel Installation - 11353 Longwood Circle - Halper Residence

History
QUICKFACTS

Project
Solar Panel Installation - 11353 Longwood Circle - Halper Residence, Installation of 10.56 kW Solar Array as part of an Environmental Clean Technology (ECT) Review
2018-0680 / AR-18-00562

Petitioner
Sunrun Installation Services, Inc.

Purpose
The purpose of this petition is to install and maintain a roof-mounted solar panel system at a single-family residence located at 11353 Longwood Circle.

Requested Actions: Appearance Review (Environmental Clean Technology)

Project Attributes
Address: 11353 Longwood Circle
P.I.N.(s): 27-30-418-010-0000
Parcel Size: 0.14 acres (6,435 square feet)

Comprehensive Plan Planning District: Grasslands Planning District
Comprehensive Land Designation: Single Family Residential
Existing Zoning: R-4 Residential District
Existing Land Use: Single Family Home

Surrounding Land Use:
North: R-4 Residential District - Single-family home
South: R-4 Residential District - Open space for the Crossings at Brook Hills subdivision
East: R-4 Residential District - Single-family home
West: OS Open Lands District - ComEd easement (overhead power lines)

Preliminary Engineering: A structural engineer report was submitted, which concluded that the roof structure can safely support the weight of the proposed solar panels.

PLANNING OVERVIEW AND BACKGROUND
Section 6-314.C of the Land Development Code requires that the petitioner seeking a renewable

energy or environmental clean technology system first obtain an Environmental Clean Technology (ECT) review from the Plan Commission. Subsequent to such a review, this project will follow the standard development review process. A review will next take place at the Development Services, Planning and Engineering Committee, followed by a final review and decision from the Village Board of Trustees.

PROJECT DESCRIPTION & CONTEXT

The petitioner is proposing to install a 10.56 kW solar array, comprised of thirty-two (32) photovoltaic (PV) solar panels at a single family home located at 11353 Longwood Circle in the Crossings at Brook Hills subdivision. The solar panels will be located on the northwest, southeast, and southwest facing gabled rooftops. Energy captured by the proposed solar panels will be used for general household purposes, providing an overall general reduction in electricity costs for the homeowner. The solar panel system also includes a “SnapNrack RL” roof mount system, inverters, and other electrical service components.

The petitioner does not request any variances for this project.

The recommendation motion includes the following conditions:
1. That all building code related items shall be met.
2. That all building permits shall be obtained prior to construction.
3. That all utility systems related to the solar energy system shall not be visible from any adjacent street and from neighboring residential properties.
4. That additional screening of any utility conduits and systems related to the solar energy system may be required after installation has been completed, as determined by the Development Services Department.

Overall, the project conforms to the Village’s Comprehensive Plan, Land Development Code and policies for this area.

SITE PLAN

The petitioner submitted a plan set, titled “Customer Residence: Barbara Halper”, prepared by Sunrun, project number 711R-353HALP, dated 7/13/2018, received 10/02/2018, and specification sheets that detail the location, dimensions and materials to be used for the installation of the proposed solar panels.

The solar panels (collectively referred to as an array) will be located on the northwest, southeast, and southwest facing rooftops of the existing single family house. The proposed 10.56 kW, grid-tied photovoltaic system will be comprised of thirty-two (32) LG Neon R "LG330N1C-A5” (330W) modules (panels) manufactured by LG Electronics. The array will be supported by a flush mounted system, “SnapNRack RL,” which is a low-profile system that connects to roof rafters with structural screws.

One (1) “SolarEdge Power Optimizer” will be connected to each solar module to monitor performance data, increase the energy output from the photovoltaic system by constantly tracking the maximum power point of each module individually, and control safe voltage levels. One (1) "SolarEdge Single Phase Inverter" will be used to convert incoming Direct Current (DC) to Alternating Current (AC) before entering the building. A DC disconnect will be installed on the outside of the home near the electric meter. All ground-level utilities will be screened from view from neighboring properties and from the street. Additional screening may be required after installation is complete to ensure

adequate screening has been provided.

DETAILED PLANNING DISCUSSION

Section 6-314.E.1 of the Land Development Code permits the installation of solar panels on residential rooftops via an Environmental Clean Technology review provided that:
1. Solar panels do not increase the visual height of the building.
2. Solar panels do not extend beyond the edge of the parapet or roof.
3. Solar panels are in line with the plane of the roof and shall not be attached to chimneys.
4. That no more than seventy-five percent (75%) of a residential rooftop may be covered by PV collectors or arrays.
5. Solar panels shall be placed such that concentrated solar radiation or glare shall not be directed onto nearby properties, roadways or public right-of-ways.

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The arrays are located on the northwest, southeast, and southwest facing rooftops and will be inset from the roof eaves. The arrays will be in line with the plane of the roof, are not attached to any chimneys, and will not increase the visual height of the building. Each solar panel has a height of 1.57 inches and measures 18.4 square feet in size. In total, the proposed array measures approximately 590 square feet in area while the rooftop is approximately 2,823 square feet, equaling 20.9% of the overall rooftop coverage.

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The array on the southeast facing roof will be located approximately 20 feet from the adjacent single-family home to the east, as measured from the closest panel to the house. The array located on the northwest roof will be located approximately 18 feet to the adjacent single-family home to the northwest, as measured from the closest panel to the house. The closest adjacent house to the east is located approximately 215 feet away, across the ComEd easement that includes overhead power lines.

As there are neighboring properties in line with the solar panels on the northwest and southeast facing roofs, the petitioner and contractor were asked to provide assurance that “concentrated solar radiation or glare shall not be directed onto nearby properties.” Sunrun Installation Services, the contractor for the project, has provided the Village with a letter and documentation stating that none of the solar arrays should pose a solar reflection or glare risk to any of the neighbors. The following documents have been submitted for review:
- Photos of the building elevations and rooftop views from the Halper residence
- An information packet by LG, the manufacturer of the proposed solar panels, which briefly discusses the anti-reflective coating on the glass and solar cells used to absorb light rather than reflect it
- Two articles on solar glare from PV arrays

Overall, the project conforms to the Village’s Comprehensive Plan, Land Development Code and policies for this area.

Land Use/Compatibility

The proposed land use is compatible with the R-4 Residential District and the Comprehensive Plan vision for this property. As a component of sustainability and stewardship, one of the goals of the Village’s Comprehensive Plan is to reduce the dependence on non-renewable resources by “support

(ing) private and public infrastructure upgrades that meet local energy demand using renewable sources (wind, solar, biomass/fuel, geothermal, fuel cells etc.).” The proposed project supports this and other sustainability goals of the Comprehensive Plan.

Lot Coverage
No change to lot coverage has been proposed.

Screening
All utility systems related to the solar energy system shall not be visible from the street and from neighboring residential properties. Additional screening may be required, as determined by the Development Services Department.

PLAN COMMISSION DISCUSSION
On November 13, 2018, a public hearing was held before the Plan Commission. A representative for SunRun, the petitioner and solar contractor for the project, was present at the meeting to answer any questions from the Commissioners or neighboring residents. The petitioner noted that certified letters were sent out to all property owners within 330 feet of the subject property, but did not submit a notarized affidavit to staff prior to the Plan Commission meeting. As a result, the Plan Commission included an additional condition to the motion requiring the petitioner to submit an affidavit to staff confirming that proper notices were sent to the surrounding properties.

PLAN COMMISSION MOTION
On November 13, 2018, the Plan Commission, by a vote of 7-0 moved to recommend to the Village Board of Trustees approval of the Environmental Clean Technology Review for a roof-mounted solar energy system at 11353 Longwood Circle as fully referenced below:

I move to accept as findings of fact of this Plan Commission the findings of fact set forth in this staff report, dated November 7, 2018.
And

I move to recommend to the Village Board to approve the Environmental Clean Technology review for a roof-mounted solar energy system at 11353 Longwood Circle, as depicted on the plan set “Customer Residence: Barbara Halper” prepared by Sunrun, project number 711R-353HALP, dated 7/13/2018 and received 10/02/2018, and the specification sheets, subject to the following conditions:

1. That all building code related items shall be met.
2. That all building permits shall be obtained prior to construction.
3. That all utility systems related to the solar energy system shall not be visible from any adjacent street and from neighboring residential properties.
4. That additional screening of any utility conduits and systems related to the solar energy system may be required after installation has been completed, as determined by the Development Services Department.
5. That the petitioner submit a notarized affidavit to staff confirming that the proper notices were sent to the surrounding properties.

DEVELOPMENT SERVICES, PLANNING AND ENGINEERING COMMITTEE DISCUSSION
On November 19, 2018, the Development Services, Planning and Engineering Committee, reviewed the petition, recommended the project for approval, and referred the item to the Village Board of

Trustees for consideration.

The Development Services Department is currently working on drafting a text amendment to the Land Development Code, which will streamline the review and approval process for solar panels.

DEVELOPMENT SERVICES PLANNING AND ENGINEERING COMMITTEE MOTION

On November 19, 2018, the Development Services Planning and Engineering Committee voted 3-0 to recommend to the Village Board of Trustees approval of the Environmental Clean Technology Review for a roof-mounted solar energy system at 11353 Longwood Circle as fully referenced below.

This case is now before the Village Board of Trustees for final consideration.

Recommended Action/Motion

I move to approve the Environmental Clean Technology Review for a roof-mounted solar energy system at 11353 Longwood Circle as recommended at the November 19, 2018 Development Services, Planning and Engineering Committee meeting and as indicated in the below fully referenced motion.

THIS SECTION FOR REFERENCE ONLY (NOT NECESSARY TO BE READ)

I move to approve the Environmental Clean Technology review for a roof-mounted solar energy system at 11353 Longwood Circle, as depicted on the plan set “Customer Residence: Barbara Halper” prepared by Sunrun, project number 711R-353HALP, dated 7/13/2018 and received 10/02/2018, and the specification sheets, subject to the following conditions:

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5. That the petitioner submit a notarized affidavit to staff confirming that the proper notices were sent to the surrounding properties.