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Solar Farms

By: Kate Schmidt, AICP, Planner

Solar energy is abundant, non-polluting and does not emit greenhouse gases responsible for global warming. Even in the northeastern United States, where sunlight is variable, solar energy helps light many buildings and can make a significant contribution to meeting demand for electricity. Small scale solar PV is providing power to a growing number of individual homes, farms, businesses and institutions, helping to make them energy-independent and adding power to New York's electricity grid during peak demand times on hot summer days.

Most people are familiar with solar photovoltaic (PV) technology. PV cells (often referred to as "solar cells") convert sunlight directly into electricity. Solar cells are connected together to form solar panels. Multiple panels together form the solar arrays commonly seen on roofs and as free-standing installations. Solar technologies can be applied at both large and small scales. Large commercial scale solar power plants feed electricity directly to the utility electric grid. Large-scale PV arrays, sometimes referred to as "solar farms," can generate commercial electric power. Solar farms, or large-scale systems, are solar energy systems located on large tracks of land which are primarily used to convert solar energy into electricity for offsite energy consumption.

As solar power continues to expand in the United States large solar farms have been popping up across the country. While the expansion of renewable energy is undoubtedly a good thing for the nation's energy portfolio, the solar farms are becoming a source of conflict between local residents and solar advocates.

The Town of Chester's planning board is grappling with a proposal to install 50 rows to total over 8,000 panels on a 166 acre solar farm. Last winter, the Town of Warwick amended their zoning to be more solar-friendly and the Town of Minisink has recently proposed new zoning to regulate solar energy systems. In September, the Town of Wallkill enacted a local law establishing a moratorium on the permitting, construction and



installation of any new commercial power generating systems in residential districts. Outside of our county, the Towns of Riverhead and Southold in the County of Suffolk have both proposed restricting where power-generating solar farms that would sell energy back to their utility company can be built.

When solar is used as a principal use, increased zoning precautions should be taken, such as:

- height and setback.
- minimum lot size.
- if and when fencing is necessary, as well as height and type. A buffer of dwarf trees should be planted around the perimeter.
- signage, with owner's contact information, placed at entrance(s) and perimeter.
- on-site electrical interconnection lines and distribution lines shall be placed underground.
- limit the removal of existing vegetation to the extent necessary for the construction and maintenance of the solar installation. The replanting of mature replacement trees off-site should be mandatory for every tree removed in site preparation.
- require Decommissioning Plan to ensure the proper removal of large-scale systems at the end of their useful life. The plan shall include the removal of all infrastructures and the remediation of soil and vegetation back to its original state prior to construction, unless otherwise permitted. A cost estimate detailing the projected cost of executing the decommissioning plan shall be prepared by a Professional Engineer or contractor. Cost estimations shall take into account inflation. A form of surety, through escrow, bond or the equivalency of, shall be established prior to the commencement of construction to cover the cost of decommissioning the site. The amount of surety required by the municipality may not exceed 125 percent of the cost.

Solar farms typically take up less than 5% of the ground they occupy leaving huge scope for biodiversity enhancements in a protected space, produce no noise, emissions, odor or pollutants. The land can remain in agricultural use since it can be simultaneously grazed by livestock. This renewable form of clean energy can be installed faster than other energy plants and is most efficient at the time of day when utility rates and usages are at their highest.

To learn how municipalities can procure solar facilities and update their zoning to best accommodate new solar installations, please join us on Monday November 30th at 6:30 pm at the Emergency Service Center located at 22 Wells Farm Road in Goshen. Contact Martha Boulanger or Kate Schmidt at 845-615-3840 or planning@orangecountygov.com with any questions. Register at [Eventbrite solar procurement & zoning](#)

For additional information, visit:

[Pace - Barrier Removal for Solar](#)

[Permitting](#)

[Pace Solar Model Resolution](#)

[Resource List](#)

