

Solar Local Regulation Resource Sheet



Background

Problem

Zoning and land use regulations can be complex and may not always facilitate solar energy development effectively. Without comprehensive planning, solar energy development may lack a clear direction and face legal challenges. Developing effective solar regulations requires balancing local needs with existing plans and policies.

Solution

Local governments should review and update zoning codes to explicitly address solar energy projects. This includes specifying which types of solar systems are permitted (e.g., rooftop installations, ground-mounted arrays) and streamlining the permitting process for solar projects. Brownfields should be first choice for solar arrays and installations. Local governments should ensure solar regulations align with sustainability plans, climate action plans and other relevant policies, collect data on existing infrastructure to inform solar development, and involve stakeholders (residents, businesses, environmental groups) in the regulatory process.

Managing Large-scale Solar

In 2020, the American Planning Association released 7 steps to successfully manage large scale solar developments for municipalities to follow and subsequently integrate into their zoning code and municipal ordinances.

1. Lay the Groundwork:
 - Create comprehensive plans that identify solar resources similarly to other natural assets. Update regulations to encompass all types of solar installations, from large-scale to rooftop systems
2. Recognize Large-Scale PV (Photovoltaic) as a Unique Land Use:
 - Categorize land designated for solar energy appropriately
3. Identify a Development Pathway:
 - Differentiate between roof-mounted and ground-mounted solar systems. Consider establishing renewable energy overlay districts
4. Focus on Impacts:
 - Some zoning codes might require that solar energy generated on-site is also consumed on-site, affecting project viability
5. Avoid Treating PV Like a Building:
 - Limitations on lot coverage can restrict ground-mounted solar projects. Acknowledge that land under solar panels can be vegetated, aiding in stormwater management and erosion control
6. Address Community Concerns:
 - This can be done through community benefit agreements, extensive vegetative buffers, and informational meetings with the public on what large scale solar means for the community
7. Avoid Overly Burdensome Decommissioning Requirements:
 - Implement reasonable decommissioning requirements to avoid deterring solar development with overly complex regulations

Case Studies

TONAWANDA, NY



Introduction

In 2018, the Town of Tonawanda, located in Erie County, was designated as a SolSmart silver community. This designation was awarded based off of met criteria that Tonawanda achieved such as, online permitting checklist, zoning code review, by-right accessory use, and staff training.

Large Scale Solar Energy Systems

Permitted to occupy 100% of the buildable area of the site and shall not count towards a site's maximum lot coverage.

Siting requirements:

- Systems located in the G-I General Industrial District or WID Waterfront Industrial District

Rooftop-mounted:

- Maximum height of 15 feet measured from the finished surface of the roof
- Follow the general slope of the roof
- Shall not exceed horizontally beyond the plane of the roof surface

Building-mounted:

- Maximum height of 15 feet from lowest point where system is affixed to the vertical side of a building
- Not to extend beyond 8 feet from the vertical surface of a building
- Integrated into the design and should not obstruct windows, doors, or other architectural features of the building

Ground-mounted solar energy systems:

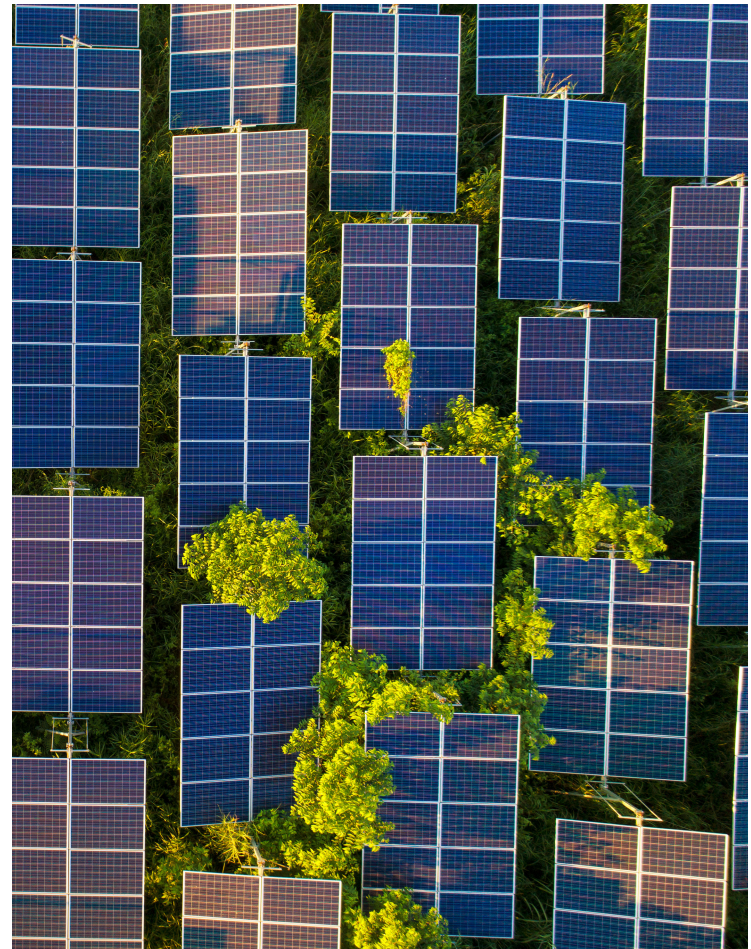
- Maximum height of 30 feet when measured from the finished grade

Small Scale Solar Energy Systems

- Small scale solar energy systems are encouraged to be installed on all preexisting structures
- Solar collector systems as an attached or separate accessory structure must follow permitting standards of the NYS Unified Solar Permit
- Subject to setback, offsets, lot area coverage, etc. of the district it occupies

Height restrictions:

- 5 feet above the current height maximum when in residential districts "A First" and "B Second"
- Follows height maximums for the district otherwise



Top View of Solar Panels By: Thongsuk
Source: Adobe Stock



Introduction

The Village of Ellicottville, located in Cattaraugus County, acknowledges the significance of solar energy as a clean and renewable resource. The Village's Comprehensive Plan recognizes that solar energy systems, especially utility-scale solar farms, may impact the community.

Tier 1 Systems

Roof mounted or building integrated systems that produce less than 25 kilowatts of energy.

- Permitted in all districts as an accessory use and subject to NYS Unified Solar Permit Application as well as section 8.2 of the local code
- Considered a SEQR Type 2

Tier 2 Systems

Ground mounted solar energy systems that generate electricity primarily for onsite consumption and have a total surface area of up to 2,000 sq. ft. generating up to 110% of the electricity consumed from the prior 12 months.

- Subject to setback requirements for the zone it occupies
- Permitted as an accessory structure in all districts
- In AR, LD, MD, and HD residential districts, shall only be installed in the side or rear yards
- Height limitations from highest natural grade to the highest point of each solar panel
- 10 feet maximum in C, LD, MD, and HD districts
- 15 feet maximum in AR, GC, and I districts
- Subject to SEQR and EIS

Tier 3 Systems

Utility scale systems that do not fall under Tier 1 or Tier 2.

- Produce energy for off site consumption and produce less than 25 megawatts of energy
- Only allowed as a primary use structure
- Lot size – The following or the standards for the zone it occupies, whichever is more restrictive
 - Minimum lot size of 10 acres
 - Minimum lot width of 500 feet
- Open space requirements for the underlying district shall apply to the leased area for a solar energy system

Setback Requirements

- Front: minimum 100 feet from the property line or road right-of-way, or boundary of the conservation district
- Rear: minimum 100 feet away from the property line or boundary of another residential district
- Side: minimum 200 feet from the property line or boundary from another residential district (HD, MD, LD) or conservation district
- Minimum 500 foot setback from existing non-participating residential structures and Tier 3 solar energy system facilities
- Maximum height of 15 feet from highest natural grade to the highest point on each solar panel
- Required to maintain 100% of the land disturbed with native perennial vegetation when located in prime farmland or farmland of statewide importance including the land directly beneath the solar panels
- Not permitted on properties with slopes steeper than 15%
- No more than 10 of a project or lease area may be cleared of existing trees
- Subject to SEQR and EIS

Case Studies

EVANS, NY



Introduction

The Town of Evans, located in Erie County, implemented an Utility Scale Solar Overlay District, which intends to balance solar development with the protection of the Town's rural character and the quality of its many agricultural, scenic, cultural, environmental, and community resources, including but not limited to, neighborhoods, commercial corridors, active farmlands, wetlands, woodlands, wildlife habitats, ecosystems, waterfronts, scenic views and vistas, and areas for recreation and outdoor activities.

Permit Required and Restrictions

A building permit is required for the installation of roof and building mounted Solar Photovoltaic Systems (SPS) and ground mounted systems for small-scale residential use.

- Review of these systems is the responsibility of the Town
- Utility-scale SPS require issuance of special permits application and review
- Cannot be located within the front yard beyond the principal building line



Solar Panels in Olean, NY By: Joed Viera

SPS Type 1

Large-scale, utility scale system designed for capturing solar energy and transferring it to the grid or selling to an electric company.

- Permitted in Utility Scale Solar Overlay District
- Not permitted in the boundaries of the Local Waterfront Revitalization Area or along Route 5 or Lake Shore Road
- Minimum lot size of 15 acres and coverage cannot exceed 80% of the lot
- 30 foot setback from all sides or rear property lines and 50 feet from residential properties
- Setback of 300 feet from the public roadway
- Height maximum of 16 feet from finished grade
- Per site energy generation may not exceed 5 megawatts and cannot exceed the maximum hosting capacity of the current infrastructure
- Not permitted in agricultural lands, zones, or districts

SPS Type 2

Small-scale systems designed to generate no more than 110% of the electricity consumed on a residential or commercial site over 12 months prior.

- Permitted in all zoning districts
- Ground mounted SPS Type 2s are permitted as accessory structures and must meet the setback requirements for the zoning district they are within
- Roof mounted cannot extend past the roof line
- No minimum lot size or maximum coverage
- Height maximum of 16 feet from finished grade

This publication was supported by an agreement with Cornell University in partnership with New York Sea Grant under Prime Agreement CM04068 from the New York State Department of Environmental Conservation.

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of Cornell University nor the opinions, interpretations or policy of NEW YORK STATE