

Zoning for Small and Large Scale Solar Energy Projects

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Outline

The solar explosion

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The Solar Explosion

- Governor Cuomo has pledged \$1 billion in solar incentives to get to 3 gigawatts in solar generation by 2023
- Hundreds, if not thousands of solar companies vying for your business
- 1 million square foot solar panel plant in Buffalo opening in 2016
- Solarize – Volume discount pricing for residential solar programs
- Hundreds of certified contractors on a State list

The NY-Sun Initiative
Solar Powering New York

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Take-Away # 1

Be open to solar as a legitimate energy source (and land use) – it's here to stay.

Defining small solar energy projects

- Solar panels that produce energy from the sun for home/small commercial use
- Small systems are located on the same lot or in close proximity to the user
- PV (photovoltaic) systems are roof or pole mounted and generate from +/- 1 to 12-25 kW
- Systems can be grid-tied or off-grid
- Solar hot water (thermal) augments traditional hot water supply

Small scale solar energy projects

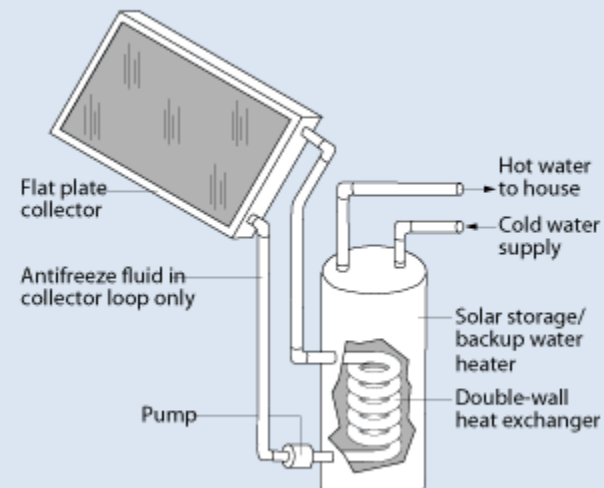




Small scale solar energy projects



Active, Closed Loop Solar Water Heater

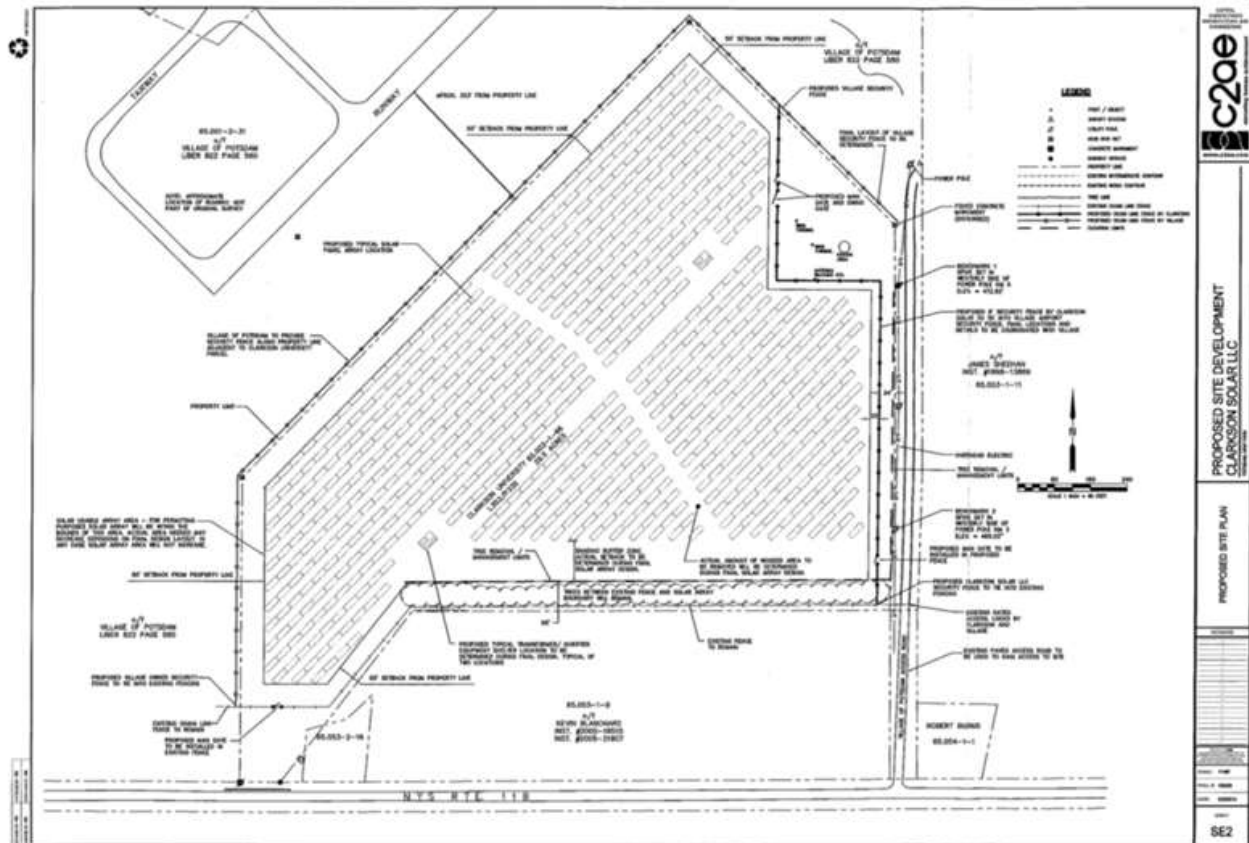


Defining large solar energy projects

- Solar panels that produce energy from the sun for commercial use
- Large systems are located on relatively flat, open, well drained areas or on roof tops
- Large solar hot water not as common as PV but does exist (drone hanger at Fort Drum)

Large scale solar energy projects





Why they are regulated

- Considered a primary or accessory use/structure (small scale)
- Are a land consuming utility (large scale)
- Need space, access to the sun and can cause glare and shade
- Have aesthetic implications

OBAMA SET TO INSTALL
SOLAR PANELS ON
WHITE HOUSE...

NEXT
WE'LL DO
AIR FORCE
ONE!



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SOLAR HALL OF SHAME



How they are regulated

- Solar access and solar energy systems regulated through stand alone local law, as separate chapter/section, or as site plan review considerations in zoning code
- Residential and smaller installations usually regulated as accessory uses; similar to swimming pools, garages, home occupations, etc.
- Larger installations regulated through special use permit process
- Setbacks and height restrictions can include or exclude panels
- Tree placement can be regulated to ensure solar access
- Building code addresses issues such as weight on roof, fire access, etc.

Topics to be addressed in regulations

Permitted Uses: Types of solar energy systems permitted as a primary vs accessory use; zoning districts in which different types of solar energy systems are permitted

Dimensional Standards: Height, lot coverage, and setbacks applicable to solar energy systems

Development Standards: Screening, placement (on building or side), and site planning for solar access (lot and building orientation)

Definitions: Types of solar energy systems, solar access considerations, and related terminology (solar skyspace, Perry NY)

Additional Regulatory Considerations

SEQRA

- Most residential solar projects will be Type II – “construction...placement of minor accessory...structures, including garages, decks, swimming pools, barns (etc.)...or other buildings not changing land use or density” 6 NYCRR § 617.5 (c)(10).
- Commercial projects may be Unlisted or Type I, but should still be eligible for a Negative Declaration

Unified Solar Permit (USP)

- NY-Sun initiative to expedite approvals of systems less than 12 kW
- State incentivizing adoption of USP with up to \$5,000 per municipality
- Project not eligible for a USP if it needs “...a zoning variance or special use permit”

Take-Away # 2

Look at what other communities have done to regulate solar ([Google ecode360/ny](https://www.google.com/search?q=ecode360/ny)).

Regulatory Examples

<http://www.generalcode.com/ecode360/NY> -- A great resource!

Town of LeRay -- § 158-130 *Solar Energy Systems*

- Minimum lot size for all freestanding solar arrays is 20,000 square feet.
- Building-mounted solar energy systems shall comply with the maximum height requirements in the applicable zoning district.

Town of Brownville -- § 165-8 (A, d)

- The applicant must submit modeling showing that reflection from the roof top or building mounted solar collectors will not cause undue reflection onto neighboring properties...such reflection information must also be shown not to interfere with aviation.

Regulatory Examples

Village of Dexter -- § 325-39.1 (H)

- If a solar collector ceases to perform its originally intended function for more than 12 consecutive months, the property owner shall remove the collector, mount and associated equipment...no later than 90 days after the end of the 12 month period.”

Town of Henderson -- § 150.62

- If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the NYS Building Code...

Regulatory Examples

Town of Ithaca -- § 270-219.1 *Solar collectors and installations*

- The height of the solar collector and any mounts shall not exceed 20 feet when oriented at maximum tilt.
- The total surface area of all ground-mounted and freestanding solar collectors on the lot shall not exceed 1,000 square feet.

Section 234-25 Solar Access

- The Planning Board may require subdivisions to be platted so as to preserve or enhance solar access for either passive or active systems, consistent with the other requirements of these regulations.

Regulatory Examples

City of Albany -- § 375-93 *Solar energy equipment*

- Placements of solar collectors on a gabled, hipped or mansard roof shall be mounted parallel to and no more than 12 inches from the roof surface.
- Ground-mounted solar collectors shall be located in a side or rear yard.
- Installations in designated historic districts as shall require a certificate of appropriateness from the Historic Resources Commission as per § 42-90 and 375-57.
- The location of the solar collector meets all applicable setback requirements for accessory structures as identified in § 375-136.

Regulatory Examples

Town of Elmira -- § 217-73 *Solar energy systems and solar access*

- Roads should be oriented on an east-west axis to the greatest possible extent.
- Buildings shall, to the greatest extent possible, be sited as close to the north lot line or lines as possible to increase yard space to the south for better owner control of shading.

Village of Massena -- § 300-20 *Solar access*

- In all districts, solar access for the purpose of using solar energy for space heating and water heating or the generation of electric power should be protected to the maximum extent practical. ...the maximum lot area that may be shaded from an adjacent property is 20% of the buildable area on the lot on the winter solstice.

Village of Potsdam -- § 180-32 *Site plan review*

- Solar access: no aspect of the development shall unreasonably block other properties' access to sunlight or air circulation.

Take-Away # 3

Next time your zoning regulations are being revised add language addressing solar installations if it's not already there.

Additional Resources

Planning for Solar Energy 2014 (American Planning Association)
Google Planning for Solar Energy, PAS 575

Columbia Law School, Center for Climate Change Law
Model Small-Scale Solar Siting Ordinance (2012)

<http://web.law.columbia.edu/climate-change/resources/model-ordinances/model-small-scale-solar-siting-ordinance>

New York Sun Initiative (State Incentive Program)

<http://ny-sun.ny.gov/>

State Department of Environmental Conservation Solar Energy
Resource page

<http://www.dec.ny.gov/energy/43231.html>

Questions?

State Park Picnic Shelter, Minnesota



Clarkson Solar Array, Town of Potsdam