



NY-Sun

# NY-Sun PV Trainers Network

## In-Depth Policy Workshop: Zoning for Solar Energy

Presented by the  
NY-Sun PV Trainers Network



# Your Trainer Today

**Jessica Bacher**

Land Use Law Center

Pace Law School

[jbacher@law.pace.edu](mailto:jbacher@law.pace.edu)

(914)422-4262

# About the PV Trainers Network

The NY-Sun PV Trainers Network aims to **lower the installation cost and expand adoption** of solar PV systems throughout the state.

[training.ny-sun.ny.gov](http://training.ny-sun.ny.gov)



# System Components

## The Grid Tied Solar Electric System

### Solar Panels

Sunlight creates DC Electricity



### Inverter

Changes DC Power to AC  
(AC Power used in Home)

### Net Metering

Excess (Unused) power turns  
your meter backward and  
travels back into the grid.  
Utility issues credits for power  
produced.

# Scale



**Residence**  
5-10 kW



**Factory**  
1 MW+



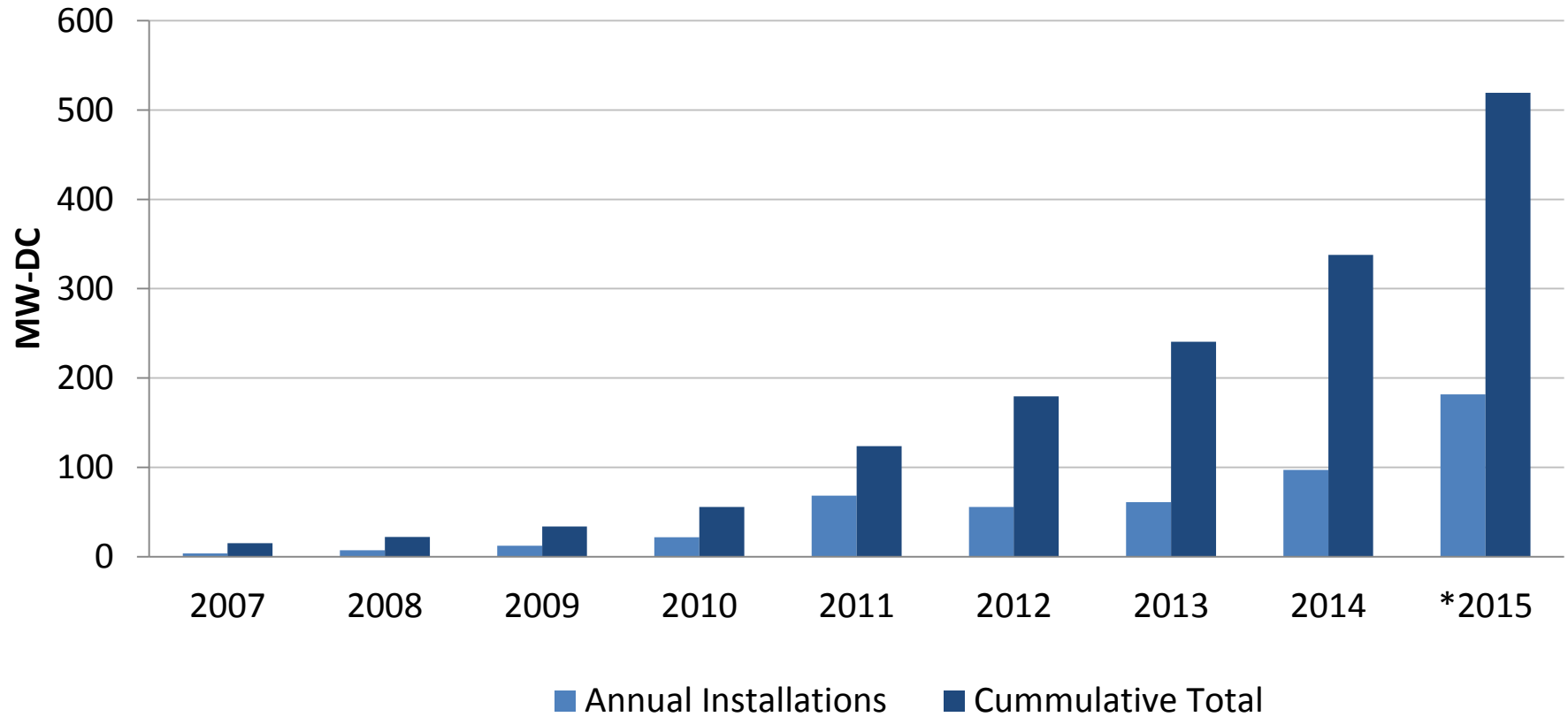
**Office**  
50 – 500 kW



**Utility**  
2 MW+

# NY State Solar Market

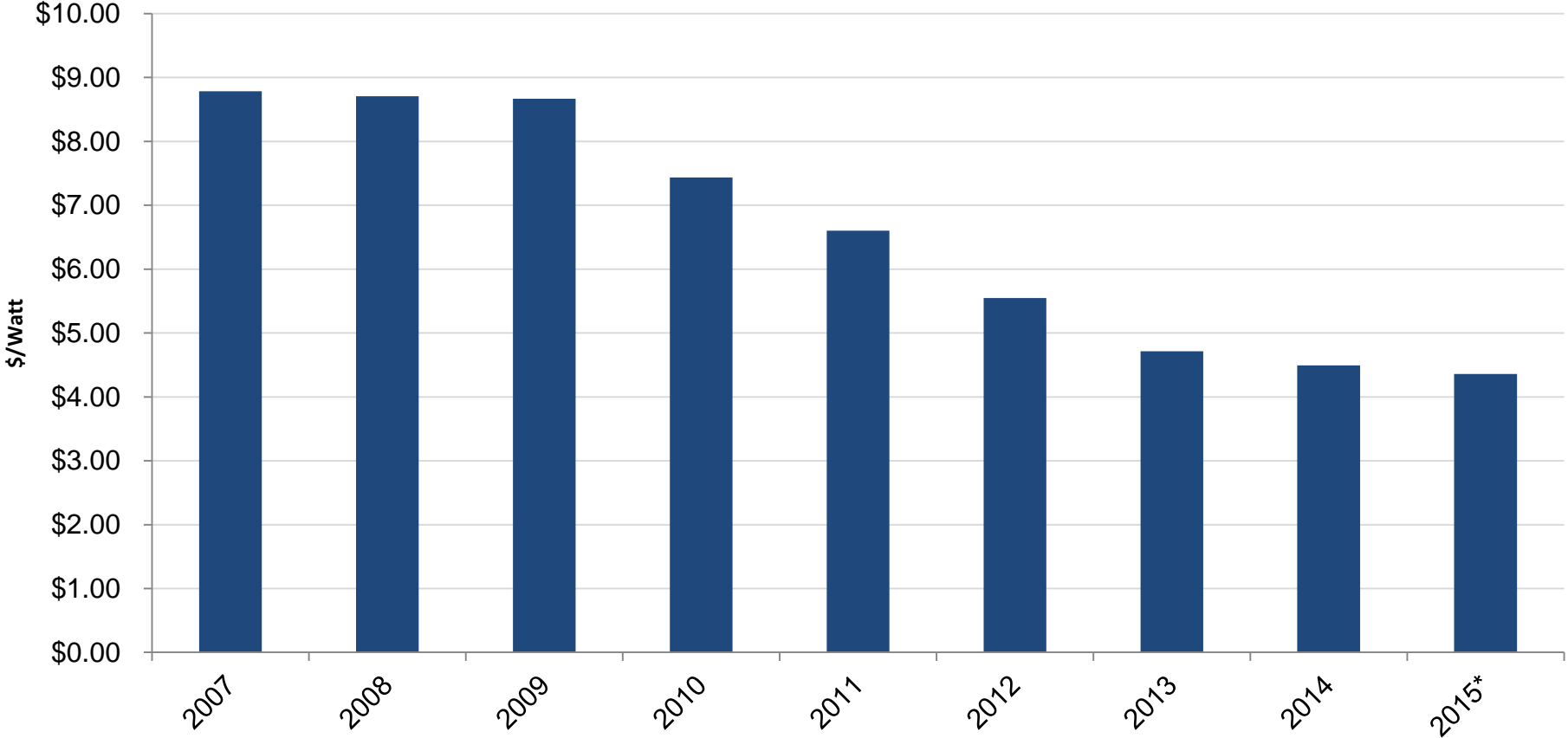
## Solar PV in New York State



\* 2015 figures through November 30, 2015

# NY State Solar Market

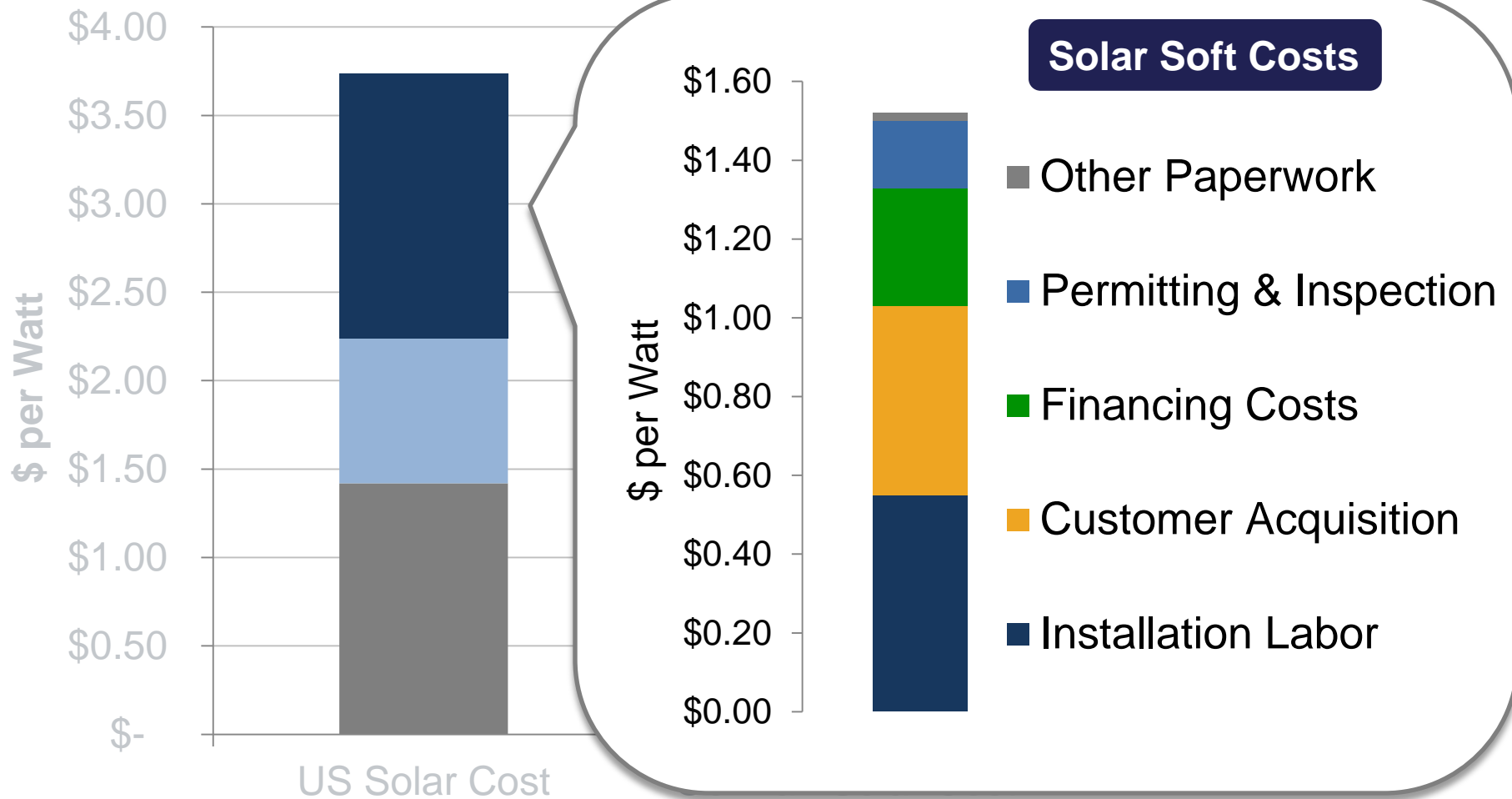
### Weighted Average Installed Cost NYS



\* 2015 figures through Nov. 30, 2015



# US Solar Costs



# Net Metering

Net metering allows customers with PV to export power to the grid during times of excess generation, and receive credits that can be applied to later electricity usage



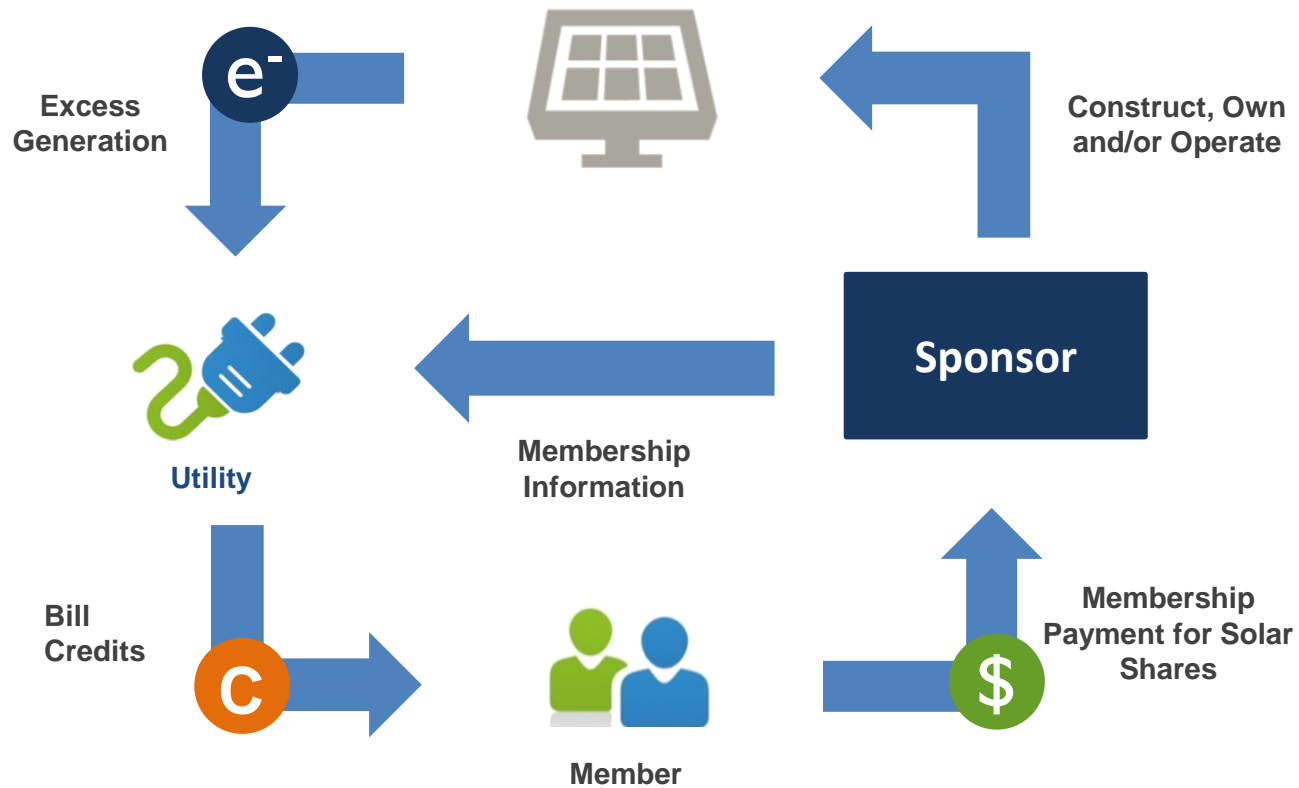
# Community Distributed Generation (Shared Solar)

## What is Shared Solar?

- Expands access to solar (and other clean energy) generation to utility customers who cannot site distributed generation directly
- Enables multiple customers to receive net metering credits from a single clean energy project
- Allows transferring of excess net metering credits to another customer
- Intended to allow residents and businesses to buy shares in larger community solar projects



# How does shared solar work in New York?



# Size, Location & Cost of Shared Solar

## How large is a shared solar project?

- Limited to 2 MW\*
  - 1 kW  $\approx$  100 SqFt
  - 1 MW  $\approx$  6 acres
- 2 MW project serves 200-400 households

## Where can a project be located?

- Private land
- Public land
- Rooftops

## What is estimated cost?

- 2 MW project: \$6-8 million for project development (before incentives)



# Shared Solar for Municipality

## Opportunity for Municipalities to...

- Expand access to solar in the community
- Obtain energy savings for municipality and residents alike
- Provide a service to the community

## Municipalities can participate by...

- Sponsoring a Shared Solar Project
- Hosting a project on municipal land
- Becoming a member of a project
- Facilitating the zoning of a privately-driven project



# Shared Solar for Private Landowners

## Opportunity for landowners to...

- Increase income from leasing land
- Diversify income streams
- Boost local economy
- Lower energy bills

## Landowners can participate by...

- Hosting a project on privately owned land



*Resources available through and under development by  
NYSERDA's Community Solar New York initiative*

# Shared Solar Development Process

<b>Role</b>	<b>Public Entity</b>	<b>Private Entity</b>
<b>Host</b>	Follow existing procedures for leasing public land for private purposes	Not required to competitively procure, but suggested to ensure best offer
<b>Sponsor</b>	Required to competitively procure contracts through an RFP	Not required to competitively procure, but suggested to ensure best offer
<b>Member</b>	Required to competitively procure contracts through an RFP	Suggest comparing several offers



# Property Tax Considerations

- Has jurisdiction opted out of the RPTL for renewable energy facilities?
- Does the property receive an agricultural land assessment (Ag-Mkts L §305)?
- Does the property receive a forest exemption (RPTL §480-a)?

**Consult with your local tax assessor**

Sources: Dilorwoth Paxson. "Amendments to Farmland and Forest Land Assessment Act." Available at:

<http://www.dilworthlaw.com/NewsEvents/Alerts?find=55402>

New York State, Department of Taxation and Finance. "Agricultural assessment program - overview." Available at:

[https://www.tax.ny.gov/research/property/assess/valuation/ag\\_overview.htm](https://www.tax.ny.gov/research/property/assess/valuation/ag_overview.htm)

Homenick, E. Sullivan County Real Property Tax Services. "Solar Array's and Taxation.":

[https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/12866/SOLAR\\_ARRAY%E2%80%99S.pdf?1452808160https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/12866/SOLAR\\_ARRAY%E2%80%99S.pdf?1452808160](https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/12866/SOLAR_ARRAY%E2%80%99S.pdf?1452808160https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/12866/SOLAR_ARRAY%E2%80%99S.pdf?1452808160)

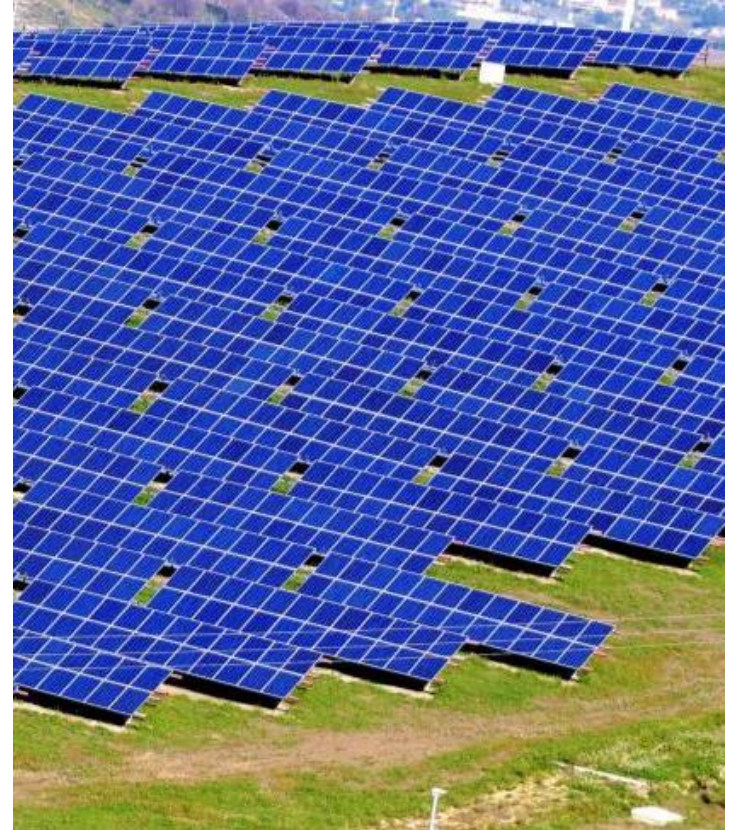
# Real Property Tax Exemption

*“Real Property which includes a solar energy system... shall be exempt from taxation to the extent of any increase in the value thereof by reason of the inclusion of such solar energy system for a period of 15 years...” - RPTL Section 487*

- Special ad valorem and special assessments are not exempt (sewer, water, fire, library, etc.)
- After 15 year period, the value is fully taxable
- All municipalities and school districts are automatically included in PTE unless they opt out through local law or resolution
- More than 92% of all jurisdictions continue to offer this exemption.

# Real Property Tax Exemption

- Jurisdictions use Payment In Lieu of Taxes (PILOT) for specific projects rather than opting out of PTE
- Jurisdictions have done PILOTS for projects above a certain size.
- PILOTS have been annual payments related to the system capacity (\$/MW).
- PILOT may not exceed the amount which would have been payable without the exemption.
- Jurisdictions remain opted in have collected equal or better PILOTS than those who had opted out.



Source: NY Solar Energy Industry Associations. (2014). "Webinar: Understanding the Property Tax Exemption for Solar in New York."

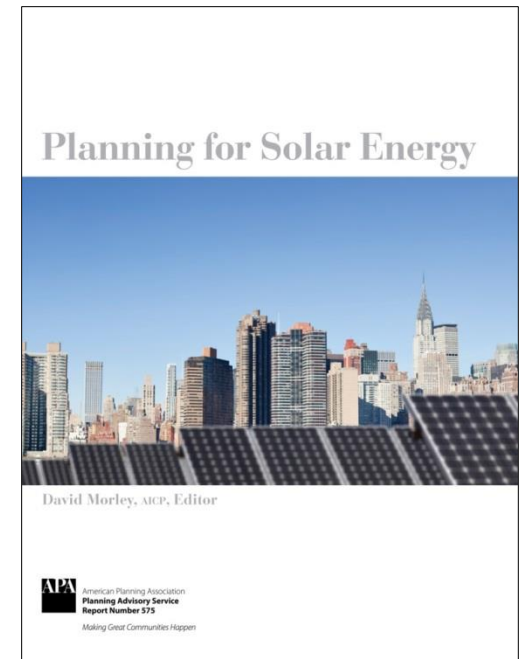
Recording Available at: <https://www.youtube.com/watch?v=A3Ull1-T0k>

NY Department of Taxation and Finance. Assessor's Manual , Volume 4, Exemption Administration. Available at:

[https://www.tax.ny.gov/research/property/assess/manuals/vol4/pt1/sec4\\_01/sec487.htm](https://www.tax.ny.gov/research/property/assess/manuals/vol4/pt1/sec4_01/sec487.htm)

# Land Use Planning for Solar Energy

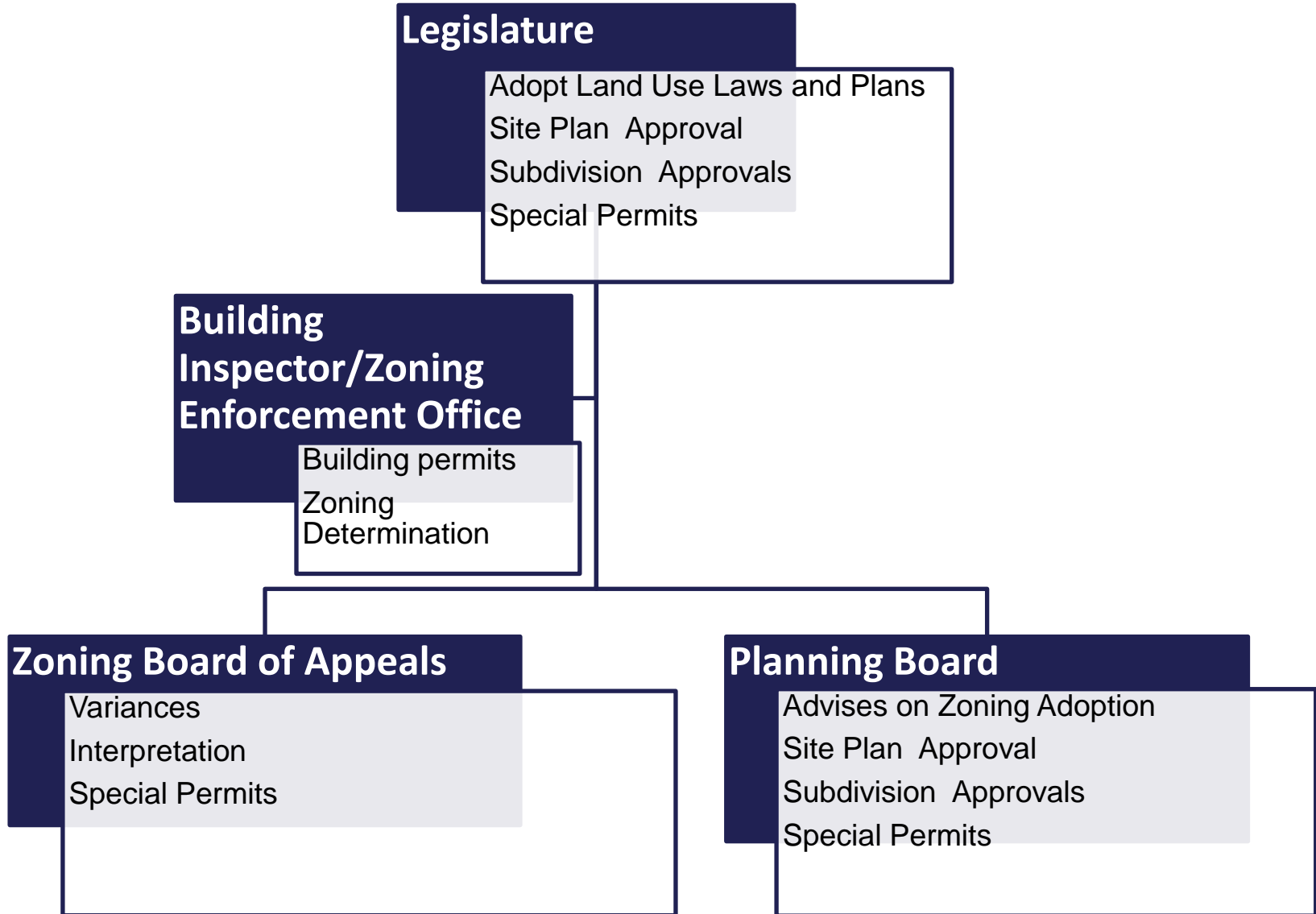
- Plan Making
- Policy Development
- Community Engagement



# Who's in the room?

- A. Land Use Board member
- B. Municipal Planning/Building Department staff
- C. Elected officials
- D. County government
- E. State Agency
- F. Solar industry
- G. Developer
- H. Planners, Attorneys or other professional
- I. Community member
- J. Other

# Delegation of Authority



# Role of Local Gov't & Planning

**1,550+** local jurisdictions in NY  
With land use authority

Source: [NREL](#)

# Policy Development Framework

Adopt a Resolution or Mayoral Proclamation that:

- Lists solar benefits and findings
- States intention to plan and regulate for solar
- Adopts a task force
- Authorizes research and studies
- Establishes a training program
- Authorizes an inter-municipal partnership
- Seeks state and federal funding and assistance
- Develop a community engagement process



# Policy Development

## Adopt a Resolution or Mayoral Proclamation

RESOLUTION SUPPORTING IMPLEMENTATION OF  
A SOLAR ENERGY PROGRAM

[City/Town/Village] of \_\_\_\_\_

Date Adopted: \_\_\_\_\_

*WHEREAS*, solar energy is an abundant, renewable, and non-polluting energy resource;

*WHEREAS*, it is the intention of the [City/Town/Village] to adopt a strategy for municipal-wide solar development for the purpose of accomplishing the multiple economic, health, environmental, and educational benefits of solar energy, while maintaining the community character, design standards, and livability of the [City/Town/Village];

*WHEREAS*, there are a number of solar energy facilities and technologies that can be deployed in the [City/Town/Village] and several strategies that the [City/Town/Village] can implement to ensure the maximum use of solar energy in the community;

*WHEREAS*, the deployment of many of these solar energy facilities and the pursuit of these strategies can greatly reduce the cost and consumption of energy, while lowering carbon emissions and reducing fossil fuels in the [City/Town/Village];

*WHEREAS*, it is the intent of the [City/Town/Village] to examine its current policies, plans, programs, strategies, and regulations to determine whether they facilitate and further the deployment of appropriate solar energy facilities in the [City/Town/Village];

*WHEREAS*, there are various policies, plans, and programs that the [City/Town/Village] can consider implementing to encourage the deployment of solar energy facilities, including:

- Appointing a task force responsible for solar programs by charging an existing sustainability task force or conservation advisory council or creating a Solar/Renewable Energy Task Force
- Evaluating opportunities, conducting studies, and performing

SANTA FE COUNTY

RESOLUTION NO. 2013-49

Introduced by Commissioner Daniel Mayfield and Commissioner Robert Anaya

---

**A RESOLUTION SUPPORTING CLEAN AND RENEWABLE ENERGY PROJECTS TO DEPLOY AND INSTALL ENERGY EFFICIENT AND RENEWABLE ENERGY TECHNOLOGY SYSTEMS ON SANTA FE COUNTY OWNED FACILITIES, WHICH WILL RESULT IN DECREASED UTILITY COSTS FOR TAXPAYERS, REDUCE NEGATIVE ENVIRONMENTAL IMPACTS FROM FOSSIL FUEL USE AND CONTRIBUTE TO CLEANER AIR QUALITY AND HEALTHIER COMMUNITIES**

---

*WHEREAS*, the Board of Santa Fe County Commissioners ("the Board") approved and adopted its Resolution No. 2013-7 on January 29, 2013, a resolution that requires that County government "lead by example" and implement sustainable resource management principles and cost-effective waste reduction, recycling and clean energy strategies in County operations;

*WHEREAS*, the Board adopted the Sustainable Growth Management Plan in 2010, which established, by policy, clean energy directives generally that includes the use of solar renewable energy in new development;

*WHEREAS*, consistent with these policy directives, Santa Fe County has already constructed various buildings that incorporated energy efficient and renewable energy including United States Green Building Council Leadership in Energy and Environmental Design Standards ("LEED");

*WHEREAS*, the Board recognizes that buildings consume a large proportion of energy used in the United States and that it is in the best public interest and the best interest of Santa Fe County to address the County's existing facilities to achieve the goal of conserving natural resources as well as to reduce the operational and maintenance costs at each County facility;

*WHEREAS*, Santa Fe County has the ability to lead by example and make Santa Fe County a clean energy leader by taking further affirmative public policy action on environmental stewardship and climate change and supporting and implementing clean and renewable energy projects to deploy and install energy efficient and renewable energy technology systems on County-owned facilities;

*WHEREAS*, Santa Fe County holds tremendous solar power potential that could reduce negative local impacts from fossil fuel use, create new jobs, and bring brighter possibilities for health, prosperity and sustainability to county communities;

# What Are the Benefits of Solar?

- A. Econ. Development & job creation
- B. Environ. & public health benefits
- C. Reduced & stabilized energy costs
- D. Energy independence & resilience
- E. Value to utility
- F. Community pride
- G. Other

# Appoint a Task Force

- Charge an existing sustainability task force or conservation advisory council
- Create a Solar/Renewable Energy Task Force

# Who sits on the Task Force?

- Municipal Officials
- Solar industry
- Chamber of Commerce
- HOAs
- Environmental/Non-profit Community
- Historic Preservation Representative
- Developers
- Landowners & Farmers
- Planning Board Member (required for Comp. Plan)

# What is the Task Force's Role?

- Conducting studies & performing research
- Establishing a training program
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes

# Best Practice

## AUSTIN LOCAL SOLAR ADVISORY COMMITTEE

The Austin Local Solar Advisory Committee was established to develop a strategic plan with specific recommendations to ensure the optimum utilization of Austin's local solar energy resource base.

For further information see [Resolution 20120426-081](#).

- Solar industry
- Chamber of Commerce
- Environmental Community
- Consumer Advocate
- Electric Utility Commission
- Resource Management Commission

# Best Practices

KENT COUNTY, MARYLAND



RENEWABLE ENERGY TASK FORCE  
Established 9 March 2010



Sustainable  
Dobbs



# Task Force

- Who has a Task Force?
- Who sits on your Task Force?
- What is the role of your Task Force?

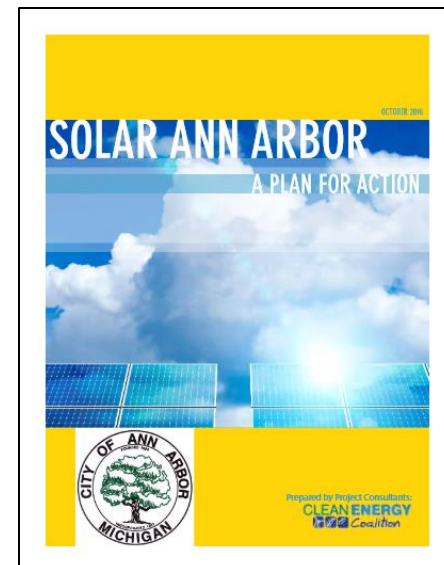
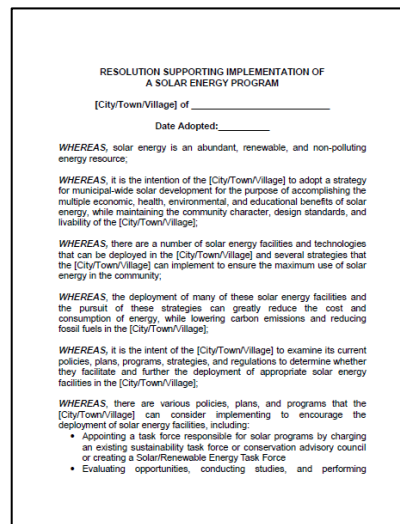
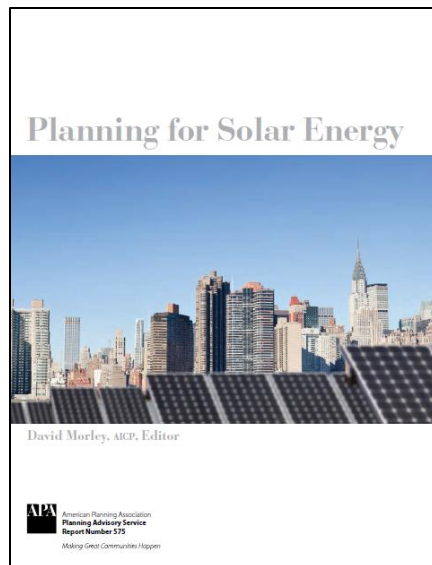


# What is the Task Force's Role?

- Conducting studies & performing research
- Establishing a training program
- Partnering with adjacent communities
- Leveraging state and federal technical assistance grants
- Developing a community engagement process
- Amending the comprehensive plan
- Considering regulatory changes

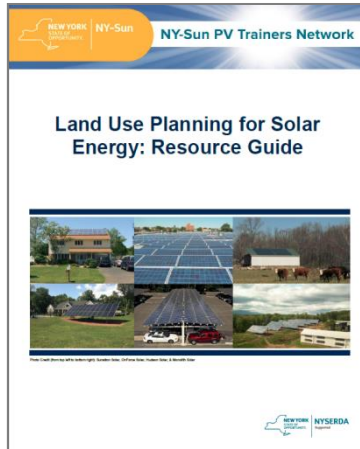
# Planning to Accommodate Solar

- Add Solar Energy Component to Comp Plan
- Adopt Solar Energy Policy or Plan



# Resources: NY-Sun PV Trainers Network

## Land Use Planning for Solar Energy



[https://training.ny-sun.ny.gov/images/PDFs/Land\\_Use\\_Planning\\_for\\_Solar\\_Energy.pdf](https://training.ny-sun.ny.gov/images/PDFs/Land_Use_Planning_for_Solar_Energy.pdf)

# Zoning for Solar Energy

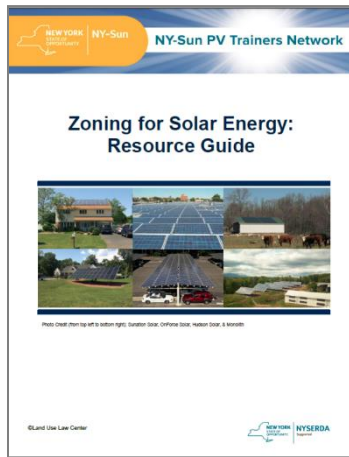
## Zoning Must Be in Accordance with Comprehensive Plan



Photo Credit (from top left to bottom right): Sunation Solar, OnForce Solar, Hudson Solar, & Monolith Solar

# Resources: NY-Sun PV Trainers Network

## Zoning for Solar Energy: Resource Guide



[https://training.ny-sun.ny.gov/images/PDFs/Zoning\\_for\\_Solar\\_Energy\\_Resource\\_Guide.pdf](https://training.ny-sun.ny.gov/images/PDFs/Zoning_for_Solar_Energy_Resource_Guide.pdf)

## Zoning for Solar: Webinar

<https://training.ny-sun.ny.gov/zoning-for-solar-webinar>

# Types of Solar Energy Systems



Building Integrated



Small-Scale Roof



Large-Scale Roof



Small-Scale Ground



Large-Scale Ground

# Example Zoning Chapter

- Purpose
- Definitions
- Establishment of Districts & Zoning Map
- District Use, Lot and Bulk Regulations
- Special Permit Regulations
- Supplemental Regulations
- Off-street Parking, Driveways and Loading Areas
- Nonconforming Uses, Buildings and Structures
- Site Plan and Special Permit Review & Approval

# Example: Model Solar Zoning Law

## Sections



**Section 1:** Purpose

**Section 2:** Definitions

**Section 3:** Applicability

**Section 4:** Solar as an Accessory Use/Structure

**Section 5:** Solar as a Principal Use

**Section 6:** Historic Districts

**Section 7:** Abandonment and Removal

**Section 8:** Severability



# Defining Solar Energy Systems

## Zoning Definitions Section



### § 300-4 Definitions and word usage.

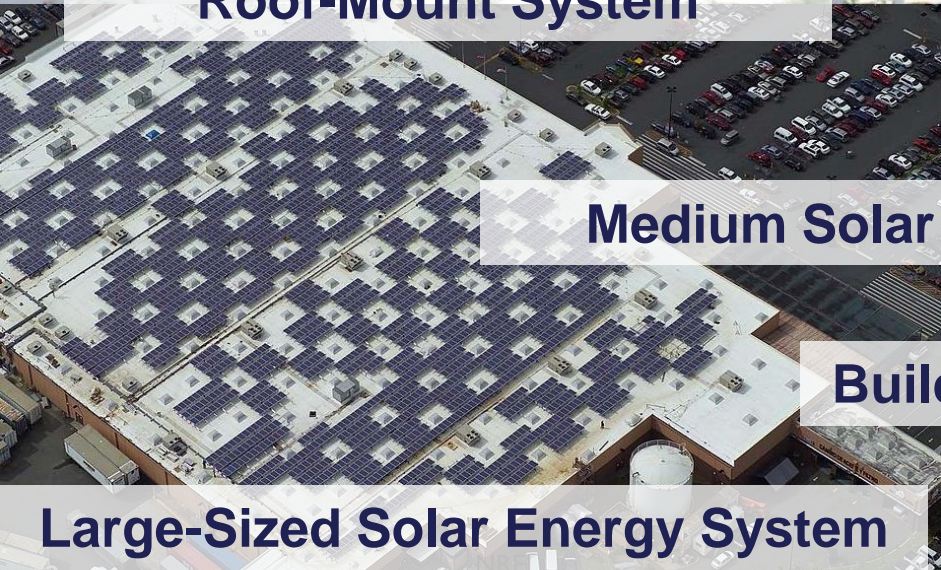
- A. Word usage. Except where specifically defined herein, all words used in this chapter shall carry their customary meanings. Words used in the present tense include the future, and the plural the singular. The word "lot" includes the word "plot"; the word "building" includes the word "structure"; the word "shall" is intended to be mandatory; and "occupied" or "used" shall be considered as though followed by the words "or intended, arranged or designed to be used or occupied."
- B. Definitions. As used in this chapter, the following terms shall have the meanings indicated:

# Defining Solar Energy Systems



**Solar Electric Systems**

**Small-Scale Solar**



**Roof-Mount System**

**Medium Solar Energy System**

**Large-Sized Solar Energy System**



**Ground-Mounted Solar Facility**

**Principal Solar Energy System**



**Solar Energy Facility**

**Building-Integrated Photovoltaic Systems**

# Defining Solar: Four Factors To Consider

- Energy System Type
- Location Where System-Produced Energy is Used
- Bulk & Area of System Dimensions
- System Energy Capacity

# Defining Solar: System Type

- Roof- or Building-Mounted
- Ground-Mounted or Freestanding
- Building-Integrated



# Defining Solar: Energy Usage

Energy is Used:

- Entirely Onsite with Some Net Metering
- Entirely Offsite
- Onsite & Offsite



# Defining Solar: Bulk & Area

Define according to physical size of system:

- Min. or Max. Footprint or Disturbance Zone

- Measured in:

acres, square feet, % lot coverage, or  
% of primary structure's foot print



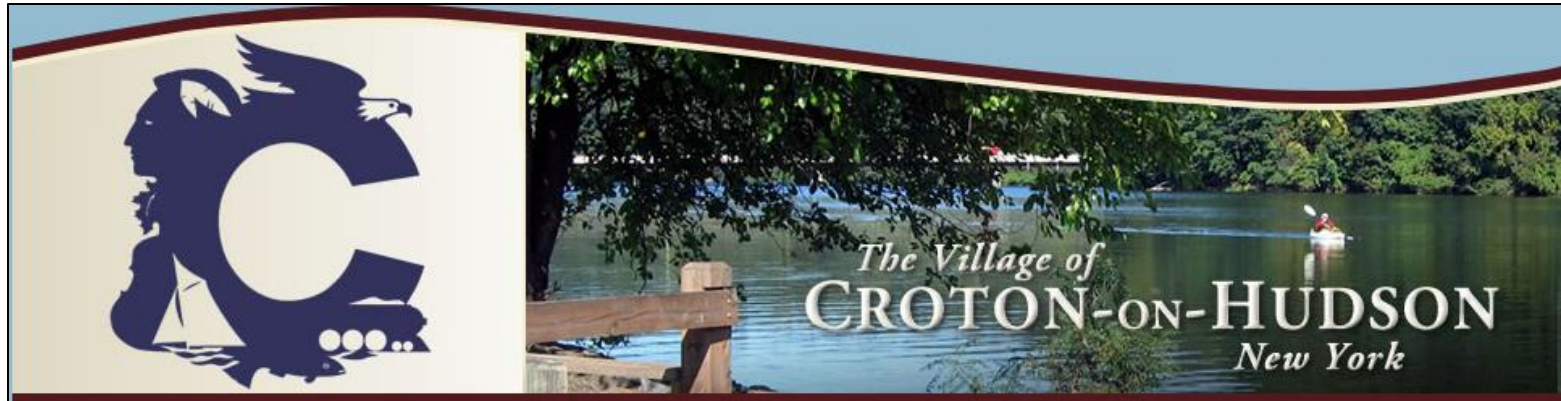
# Defining Solar: Energy Capacity

Minimum or Maximum kW:

- Generating Capacity
- Rated Capacity
- Rated Storage Volume



# Example: System Type and Energy Capacity



## **New York State Unified Solar Permit**

Expedited Solar Permit Process for Small-Scale Photovoltaic Systems

For Small-Scale Solar Electric Systems:

→ Rated capacity of 12 kW or less

→ Roof-Mounted



# Example: System Type & Energy Usage



## **New York State Model Solar Zoning Ordinance**

- Building-Integrated Photovoltaic
- Ground-Mounted
- Roof-Mounted
- Large-Scale System → offsite energy consumption

# Example: System Type, Energy Usage, Energy Capacity



## Large SES

- Ground-mounted
- Rated capacity of  $\geq 200$  kW
- Offsite use (sell to power grid)

## Medium SES

- Ground-mounted & rated capacity of  $< 200$  kW but  $> 5$  kW
- Roof-mounted & rated capacity of  $> 5$  kW & serving single or multiple lots or parcels

## Small SES

- $\leq 5$  kW & serving single parcel or lot

# Example: System Type, Energy Usage, Energy Capacity



The Official Website of

**Worcester County, Maryland**

worcestercountymd.gov // www.co.worcester.md.us

## **SOLAR ENERGY SYSTEM, LARGE**

A ground-mounted solar energy system with a rated capacity of two hundred kilowatts up to and including two and one-half megawatts, the principal purpose of which is to provide electrical power for sale to the general power grid or to be sold to other power consumers through a power purchase agreement as part of a net metering project which may include both physical or virtual aggregation, or be consumed on-site.

[Added 3-15-2011 by Bill No. 11-2; amended 11-18-2014 by Bill No. 14-6]

## **SOLAR ENERGY SYSTEM, MEDIUM**

A ground-mounted solar energy system with a rated capacity greater than five kilowatts but less than two hundred kilowatts or a roof mounted solar energy system of any capacity in excess of five kilowatts and serving, or designed to serve, any agricultural, residential, commercial, institutional or industrial use on a single lot or parcel or group of adjacent lots or parcels.

[Added 3-15-2011 by Bill No. 11-2]

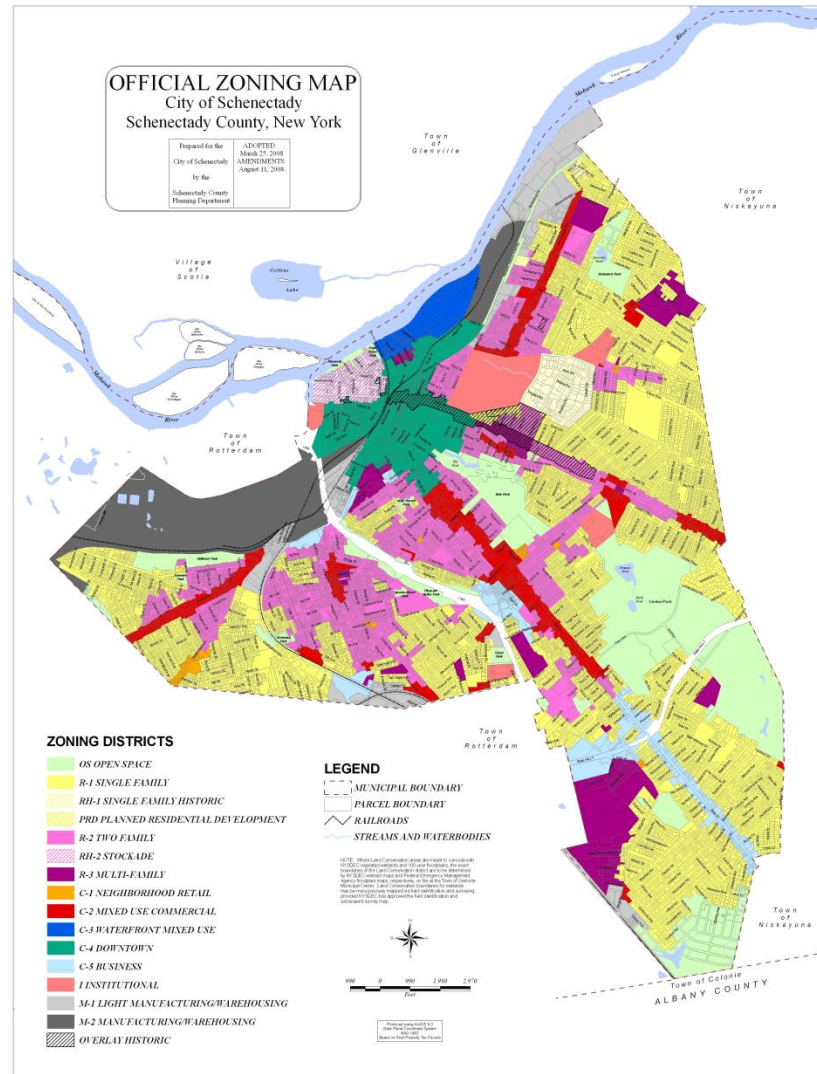
## **SOLAR ENERGY SYSTEM, SMALL**

A solar energy system with a rated capacity of five kilowatts or less and serving, or designed to serve, any agricultural, residential, commercial, institutional or industrial use on a single parcel or lot. Individual photovoltaic cells or small groups of such cells attached to and used to either directly power, or charge a battery which does so, an individual device such as a light fixture, fence charger, radio or water pump shall not be considered as a small energy power generation facility as defined herein and may be used in any zoning district without regard to lot or setback requirements.

[Added 3-15-2011 by Bill No. 11-2]

# Update Zoning Code

Siting: Determine which zoning districts to permit each defined system



# Example: Model Solar Zoning Law

- Roof-mounted systems are permitted as an accessory use in **all zoning districts** when attached to lawfully permitted principal and accessory structures, subject to requirements.
- Ground-mounted solar energy systems are permitted as an accessory structure **in [Insert district(s)]**, subject to the requirements.
- Large-scale solar energy systems are permitted through the issuance of a special-use permit **within [Insert district(s)]** subject to requirements.

# Amending District Use Regulations to Allow Solar

## Land Uses Allowed in Districts As:

1. Principal Use
2. Accessory Use
3. Secondary Use
4. Special Use

# 1. Solar as Principal Use



# 2. Solar as Accessory Use/Structure





# 3. Solar as Secondary Use



# 4. Solar as Special Use



# Example: Model Solar Zoning Law

- Roof-mounted systems are permitted as an **accessory use** in all zoning districts when attached to lawfully permitted principal and accessory structures, subject to the requirements.
- Ground-mounted solar energy systems are permitted as an **accessory structure** in [*Insert district(s)*], subject to the requirements.
- Large-scale solar energy systems are permitted through the issuance of a **special-use permit** within [*Insert district(s)*] subject to requirements.

# Review and Approval Process

Project review and approval requirements generally intensify as impacts associated with permitted solar energy systems increase.

# Land Use Review Options

## For Building-Integrated:

- Building parts exempt from land use review
- Subject to building code compliance



# Land Use Review Options

## For Small-Scale, Accessory Systems:

- Review by Zoning Enforcement Officer
- Building Permit Review
- Some may Require Site Plan Review



# Land Use Review Options



## For Small-Scale, Accessory Systems:

- Must be 12 kW or less & roof-mounted
- Exempt from zoning review
- Expedited review for combined building and electrical permit

# Land Use Review Options

For Larger Systems with Greater Impacts:

- Major & Minor Site Plan Review
- Special Use Permit Review





# Example: Model Solar Zoning Law

- Roof-mounted systems are permitted as an **accessory use** in all zoning districts when attached to lawfully permitted principal and accessory structures, subject to the requirements.
- Ground-mounted solar energy systems are permitted as an **accessory structure** in [*Insert district(s)*], subject to the requirements.
- Large-scale solar energy systems are permitted through the issuance of a **special-use permit** within [*Insert district(s)*] subject to requirements.
  - **Site plan** approval is required.



# Example



## Minor Site Plan Review for:

- Ground-mounted
- Between 2,000 sq.ft. & 10 acres in size

## Preliminary & Final Site Plan Review for:

- > 10 acres in size
- Site plan must include: transmission line/equipment location, changes to existing substations, how facility will connect to grid, landscape maintenance plan, decommissioning plan, etc.

# Example: Model Solar Zoning Law

- Large-Scale System → offsite energy consumption
  - Subject to Site Plan Review

# Reviewing Bulk & Area Requirements

SEC.	DISTRICT	MAXIMUM HEIGHT		MINIMUM REQUIREMENTS				MINIMUM YARDS (7)			
		FT.	STY.	LOT AREA Sq. Ft.	LOT WIDTH	LOT DEPTH	FRONT DEPTH	EACH SIDE YARD	TOTAL BOTH SIDES	REAR DEPTH	
1	R-1 Single Family Residential	35	2.5	20,000	100'	100'	30'	10'	30'	30'	
2	R-2 Two-Family Residential	35	2.5	7,000	50'	100'	20'	6'	16'	20'	
3	R-3 Multi-Family Residential	40	4	1 FAMILY: 7,000	50'	100'	20'	1,2,2.5 STORY:	6'	16'	20'
	2 FAMILY: 3,000@DU(1)			40'	3 OR 4 STORY:			15'	30'	20'	
	3+ FAMILY: 1,500@DU			40'							
7	C-3 Commercial			TOWN HOUSE: 2,000(2)	18'						
4	B-1 Neighborhood Business	35(3)	2.5(3)	For Dwls: same as R-3 Other Bldgs: -- -- --			50'	NOTE (4)			
5	C-1 General Commercial	40(3)	3(3)				50'	NOTE (4)			
6	C-2 Central Commercial	45(3)	3				NOTE (4)				
8	M-1 Light Industrial	45(3)	3	(11) 1500 @DU	NONE	NONE	50'	20'	50'	NONE(5)	
9	M-2 Heavy Industrial	125(6)	--	(11) 1500 @DU	NONE	NONE	50'	20'	50'	NONE(5)	
10	FW Flodway	NO BUILDING PERMITTED		NONE	NONE	NONE	NO BUILDING EXECPT UTILITY				
10	FF Flod-Fringe	DEVELOPMENT SHALL BE UNDERTAKEN IN STRICT COMPLIANCE WITH FLOOD-PROOFING AND RELATED PROVISIONS CONTAINED IN ALL OTHER APPLICABLE CODES AND ORDINANCES.									

# Example: Model Solar Zoning Law

- Roof-mounted systems:
  - Height and setback requirements from underlying zoning
    - Height exemptions granted to building-mounted mechanical devices or equipment apply
- Ground-mounted
  - Size: Systems are limited to [Insert Lot Coverage Percentage].
    - Panel surface area shall be included in total lot coverage
  - Setback: Requirements of the zoning district.
  - Height:

Ground-mounted Height and Setback Requirements	
Setback	Permissible Height
Less than or equal to 10ft	6ft
Greater than 10ft and less than or equal to 15ft	12ft
Greater than 15ft	15ft

# Example: Model Solar Zoning Law

Large-scale solar energy systems:

- *Height and Setback:*
  - requirements of the underlying zoning district.
  - Additional restrictions may be imposed during the special-use permit process.
- Minimum lot size of [*Insert Size Requirement*] square feet.

# Development Standards

Some municipalities impose specific development standards to mitigate land use impacts associated with solar energy system



# Development Standards for Accessory-Use SESs

## Roof-Mounted:

- Max height
- Min tilt, angle
- Color & location restrictions



## Ground-Mounted:

- Setback, yard requirements
- Max height
- Blending or screening



# Development Standards for Principal-Use SESs

## Requirements To Mitigate Impacts:

- Siting
- Height Limits
- Setbacks
- Screening
- Safety (fencing, signage)
- Utility Interconnection
- Required Studies (environmental, economic)
- Decommissioning/Site Restoration



# Decommissioning & Local Government Authority

*Main form of protection against an abandoned project is the decommissioning clauses and requirements in the land lease agreement. Should stipulate what duties developers will have when the agreement comes to an end.*

## Not Authorized

- According to the NYS DOS Counsel's office, **municipalities may not require a removal bond as part of a land use approval.**

## Authorized

- Require the submission of a decommissioning plan.
- Local permitting authorities can establish decommissioning requirements including establishing decommissioning escrow accounts, post a letter of credit, or bond to pay for decommissioning.
- Include a removal clause for non-operation for a specified time in a local zoning law. Non-removal would then become a zoning enforcement matter.

# Example: Model Solar Zoning Law

## Roof-Mounted

### *Aesthetics:*

- Equipment shall be installed inside walls and attic spaces to reduce their visual impact. If visible from a public right of way, it shall be compatible with the color scheme of the underlying structure.
- Panels facing the front yard must be mounted at the same angle as the roof's surface with a maximum distance of 18 inches between the roof and highest edge of the system.
- Panels affixed to a flat roof shall be placed below the line of sight from a public right of way.

# Example: Model Solar Zoning Law

## Large Scale System

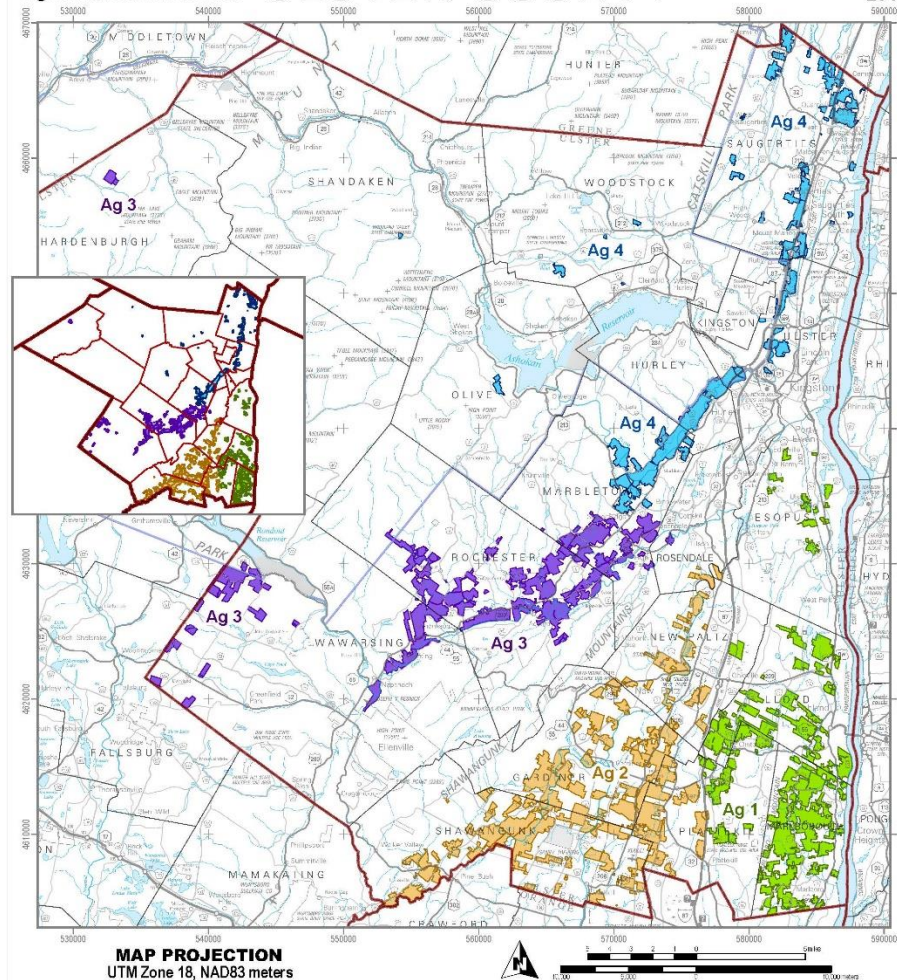
- Enclosed by fencing to prevent unauthorized access.
- Warning signs with the owner's contact information
- Other requirements:
  - verification of utility notification,
  - copies of easements and other agreements,
  - blueprints showing the layout of the solar installation signed by a Professional Engineer or Registered Architect,
  - equipment specification sheets,
  - Property Operation and Maintenance Plan, and
  - Decommissioning Plan.

# Special Districts



# Agricultural Districts

- **AUTHORITY:** Article 25-AA of the Agriculture and Markets Law
- **PROCESS:** Landowner initiates, preliminary county review, state certification, and county adoption
- **COVERAGE:**
  - 224 agricultural districts
  - 24,130 farms
  - 8.8 million acres
  - about 30 percent of the State's total land area



**KEY**

Ag District 1	<span style="color: green;">■</span>
Ag District 2	<span style="color: orange;">■</span>
Ag District 3	<span style="color: purple;">■</span>
Ag District 4	<span style="color: blue;">■</span>

**DISTRICT CERTIFICATIONS and TOWNS**

DISTRICT 1	DISTRICT 2	DISTRICT 3	DISTRICT 4
CERTIFIED 9/19/2013	CERTIFIED 6/2/2006	CERTIFIED 11/13/2005	CERTIFIED 8/14/2007
Esopus New Paltz Lloyd Plattekill Marlborough	Esopus Plattekill Gardiner Rosendale New Paltz Shawangunk	Hardenburgh Rosendale Marbletown Wawarsing Rochester	Hurley Shandaken Marbletown Ulster Olive Woodstock Saugerties

**MAP SOURCE INFORMATION**  
 Map created at Cornell IRIS (Institute for Resource Information Sciences) <<http://iris.css.cornell.edu>> for the NYS Department of Agriculture and Markets  
 Agricultural Districts boundary data is available at CUGIR (Cornell University Geospatial Information Repository) website: <<http://cugir.mannlib.cornell.edu>>

Base Map: state250\_bw.tif 1998  
 Scale: 1:250,000; County boundaries imported from the file nysshore.e00 from the NYSGIS Clearinghouse website: <<http://gis.ny.gov>>

**Contains data copyrighted by the NYS Office of Cyber Security**

**DISCLAIMER**  
 This is a general reference to Agricultural District boundaries; not a legal substitute for actual tax parcel information.

Boundaries as certified prior to January 2014

Open Enrollment Annual Additions are not included in this data. Check with county agencies to confirm the status of individual parcels.

# Farmer Benefits & Protections

- Preferential real property tax treatment
- Protections against
  - overly restrictive local laws
  - government funded acquisition or construction projects
  - private nuisance suits involving agricultural practices



# Benefits & Protections for Solar

- Electrical output from the solar device cannot exceed 110% of the farm's anticipated electrical needs
  - If shared meter with residence, then conduct an energy audit to separate the farm's energy requirements from the residential usage.
  - If remote net metering, multiple meters combined to determine the electrical needs of the on-farm equipment.
- Solar devices that do not exceed 110% of the farm's anticipated electrical needs are on-farm equipment.
  - If considered structure or building by local government, then it is an on-farm building.

# Generally Unreasonable Local Laws

- Site plan review, special use permits or non-conforming use requirements
- Height restrictions and excessive setbacks from buildings and property lines
- Long Environmental Assessment Form (EAF)
  - Designated Type II actions & do not require preparation of EAF and are not subject SEQR
- Visual impact assessments

# Reasonable Local Laws

- **Model streamlined site plan review process**
  - Shorter Time Period
  - Less Submission Requirements
- **Building Permit**
  - Requirements for local building permits and certificates of occupancy to ensure that health and safety requirements are met are also generally not unreasonably restrictive.

# Recommended Process for Review

- Sketch of the parcel on a location map (e.g., tax map) showing boundaries and existing features
- Show the proposed location and arrangement on the site
- Copies of plans or drawings prepared by the manufacturer
- Provide a description of the project and a narrative of the intended use
- A legible electrical diagram showing all major system components

# Agricultural District Resources

Agricultural Districts Website

<http://www.agriculture.ny.gov/ap/agservices/agdistricts.html>

Guideline for Review of Local Zoning and Planning Laws

<http://www.agriculture.ny.gov/ap/agservices/guidancedocuments/305-aZoningGuidelines.pdf>

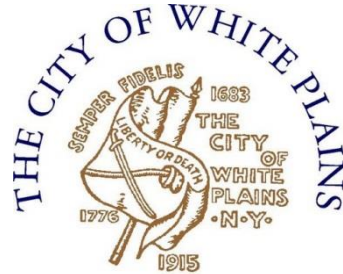
Guideline for Review of Local Laws Affecting Small Wind Energy Production Facilities and Solar Devices

[http://www.agriculture.ny.gov/ap/agservices/guidancedocuments/Guidelines\\_for\\_Solar\\_and\\_Small\\_Wind\\_Energy\\_Facilities.pdf](http://www.agriculture.ny.gov/ap/agservices/guidancedocuments/Guidelines_for_Solar_and_Small_Wind_Energy_Facilities.pdf)

# Review by Additional Local Boards



# Example



SES exempt from design review if:

- On 1- or 2-family structures w/o variance
- Rated capacity  $\leq$  12 kW
- Mounted parallel to roof or with minimal tilt

# Review by Additional Local Boards





# Example: Model Solar Zoning Law

## ***Solar in Historic Districts or Treatment of individual historic properties***

- Solar panels and BIPV systems are permitted by right on accessory structures that do not contribute to the historic significance of the site.
- Solar panels shall not alter a historic site's character defining features.
- All modifications to site must be reversible to reveal the original appearance of site.
- Exposed solar energy equipment must be compatible with the underlying structure.
  - Panels shall be placed flush to the roof's surface
  - BIPV shall complement the styles and materials of the building.
- The issuance of a Certificate of Appropriateness is required by a historic review board for ground-mounted systems, BIPV, exterior improvements to all historic structures.
  - Preference given to solar panels placed on new construction or additions.
  - Ground-mounted systems shall be screened from the public right of way by fencing or vegetation

# Resource: APA's Solar Planning & Zoning Data Search

The screenshot shows the American Planning Association's website. At the top, there is a navigation menu with links for About APA, Membership, Events, Education, Outreach, Resources, Jobs & Practice, and APAPanningB. Below the navigation menu is the APA logo and the tagline "Making Great Communities Happen". A search bar is located on the right side of the page.

The main content area is titled "Solar Planning & Zoning Data Search". It includes a search bar with the text "Enter search word(s)" and a "GO" button. Below the search bar, there is a "Geographic Region" filter with a dropdown arrow. To the left of the main content area is a map of the United States with different regions highlighted in various colors.

The sidebar on the right side of the page contains several filter categories, each with a dropdown arrow:

- Type of Place**: City (633), County (124), State (80)
- Population Range**: <25K (291), 100K to 250K (108), 250K+ (120)
- Population Density**: <1,000/square mile (215), 1,000-2,999/square mile (297), 3,000-4,999/square mile (169), >5,000/square mile (107)
- Tool Type**: A Map (5), Comprehensive Plan (181), Design Guidelines (29), Development Guide (31), Development Regulations (486), Model Development Regulations or Plan Policy Statements (22), Subarea Plan (8), Sustainability Plan, Energy Plan, Climate Plan (76)
- Solar Practice**: Addresses Competing Priorities (105), Limits Covenants, Conditions, and Restrictions (15), Supports Accessory Solar Energy Use (655), Supports Primary Solar Energy Use (206), Supports Solar Access Protections (217), Supports Solar Siting (212), Supports Solar-Ready Homes (50)

The main content area also includes a welcome message: "Welcome to the Solar Planning & Zoning Data Search! From this portal you can search hundreds of examples of solar-supportive plans, development regulations, and other planning-related implementation tools. Whether your community is large or small and has mild or harsh winters, you're likely to find some peers here that have taken steps that make it easier for residents and businesses to use solar energy." Below this message is a link: "The Solar Planning & Zoning Data Search is a new pilot program. [Suggestions or comments? Let us know.](#)"

[www.planning.org/solar/data/](http://www.planning.org/solar/data/)

# Available Training Topics

**Expanding Commercial Solar With a PACE Program**

**Introduction to Solar Policy Workshop**

**Introduction to Solarize: Stimulating Local Solar Market Growth**

**Land Use Planning for Solar Energy**

**Safety and Fire Considerations for Solar PV**

**Solar Procurement for Local Governments**

**Solar PV for Engineers and Architects**

**Solar PV Permitting and Inspection Methods**

**Streamlining Solar Permitting**

**Zoning for Solar Energy**

# Resources: NY-Sun PV Trainers Network

The screenshot shows the top navigation bar with links for Home, Trainings, Technical Assistance, Training Calendar, Resources, NY-Sun, and Search. Below the navigation is a large image of solar panels with a semi-transparent overlay on the left containing the NY-Sun logo and the text "PV Trainers Network". At the bottom of the page, there are six icons with corresponding text labels: "Training Info" (calendar icon), "Sign up for a Training" (calendar icon with a plus sign), "Host a Training" (calendar icon with a plus sign), "News" (newspaper icon), "Ask The Expert" (wrench and screwdriver icon), and "View Our Latest Resources" (open book icon).

Visit: <https://training.ny-sun.ny.gov/>



NY-Sun

# NY-Sun PV Trainers Network

# Thank You!

## Contact us:

[info@training.ny-sun.ny.gov](mailto:info@training.ny-sun.ny.gov)

[training.ny-sun.ny.gov](http://training.ny-sun.ny.gov)

Jessica Bacher

Land Use Law Center

Pace Law School

[jbacher@law.pace.edu](mailto:jbacher@law.pace.edu)