Planning for Solar

Goal

To equip the leadership of Cayuga County's Town's and Village's with the information necessary to make balanced, informed decisions regarding solar energy development in their communities

Definitions

- **Watts –** *the absolute meter-kilogram-second unit of power equal to the work done at the rate of one joule per second or to the power produced by a current of one ampere across a potential difference of one volt*

- **Kilowatt (KW) –** *1,000 Watts*

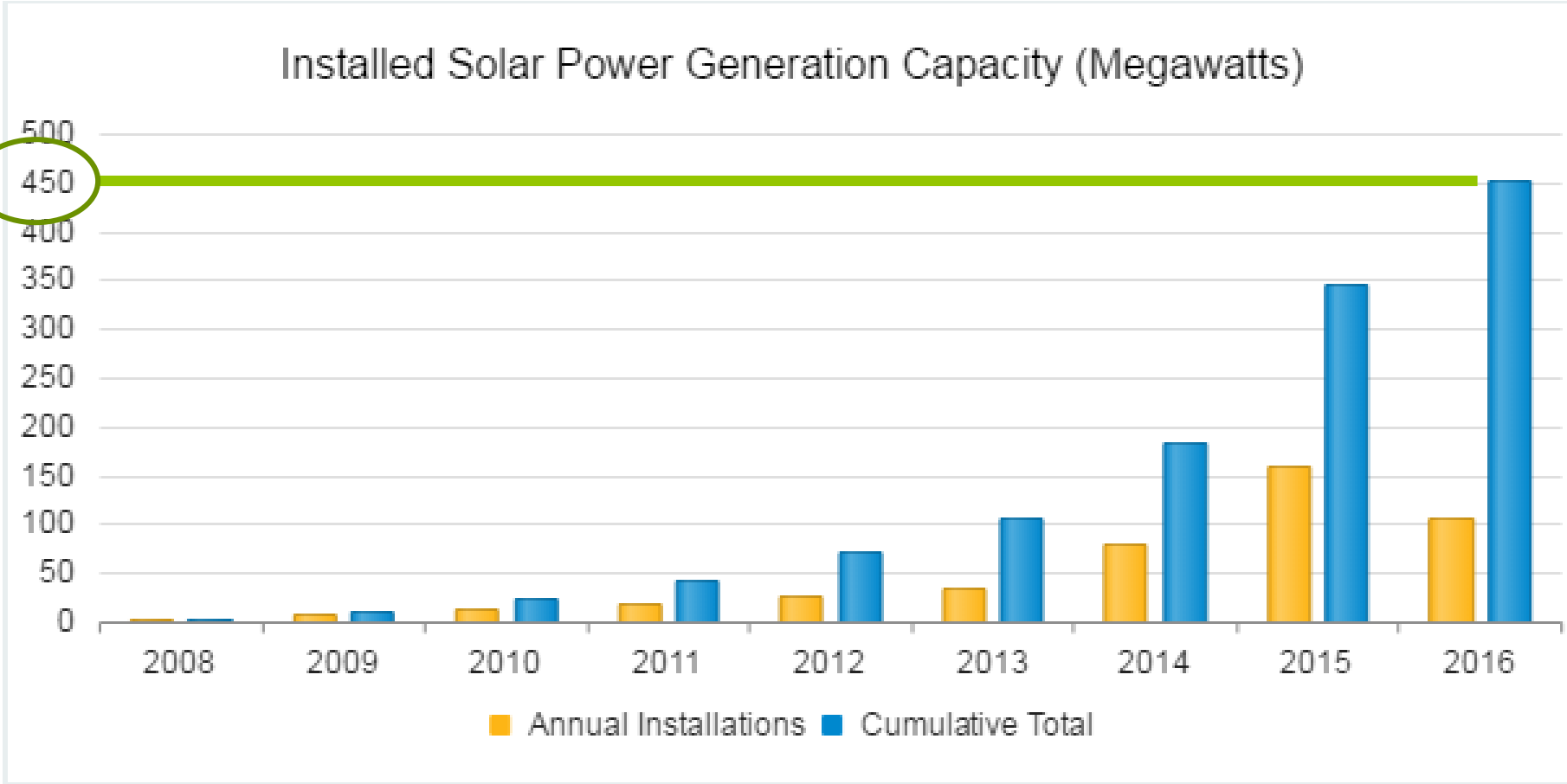
- **Kilowatt hour (KWH)-** a unit of work or energy equal to that expended by one kilowatt in one hour

- **Megawatt (MW) –** 1,000,000 watts

Reforming the Energy Vision

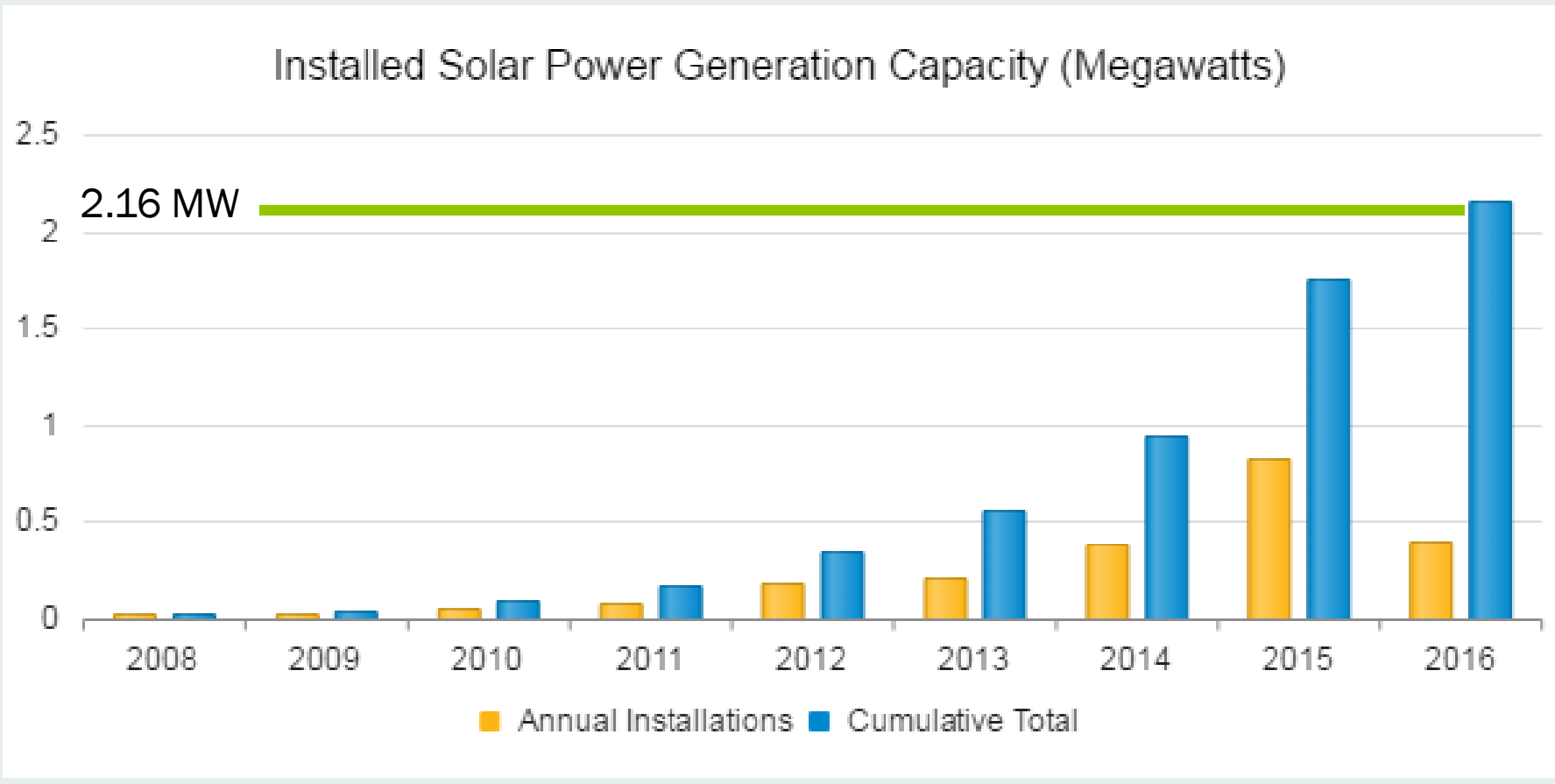
- NY's Clean Energy Standard requires that 50% of NY States Electricity will be from renewable resources by 2030
- NY Sun Initiative has a statewide goal of adding 3 Gigawatts of installed solar capacity by 2023
- Solar has grown 575% from 2012 – 2015

NY Solar Market



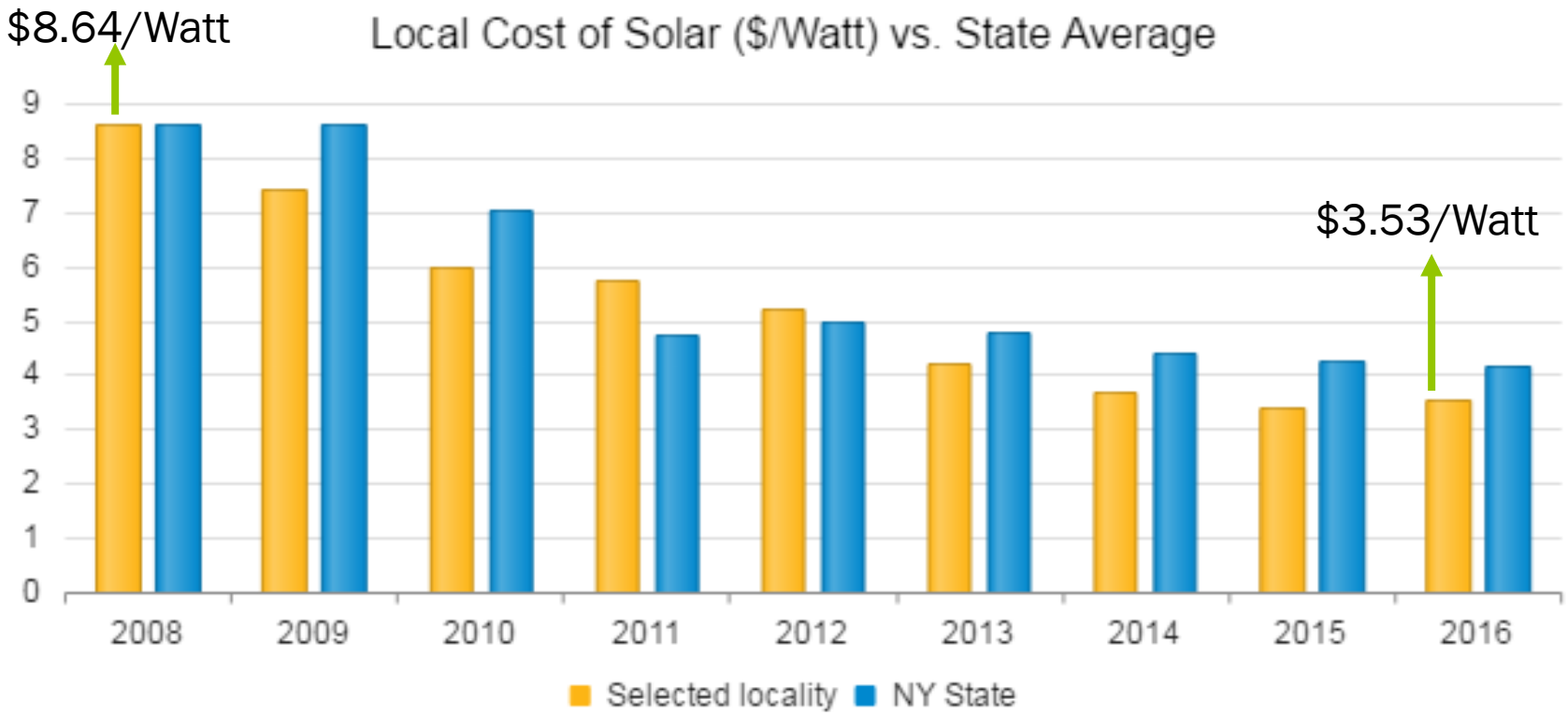
* 2016 numbers through 26 Oct 2016

Cayuga County Installed Capacity



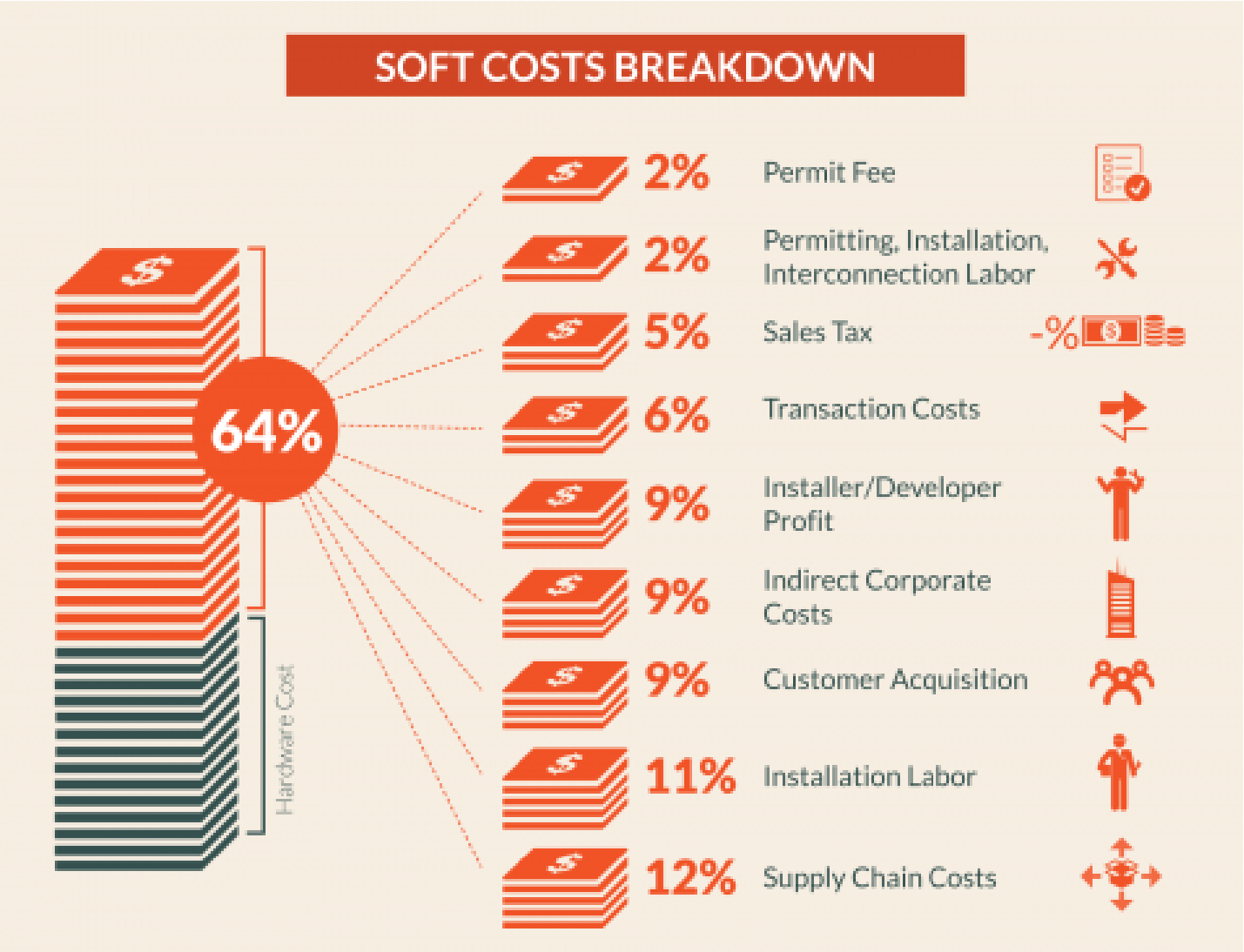
* 2016 numbers through 26 Oct 2016

Cayuga County Cost of Solar per Watt



* 2016 numbers through 26 Oct 2016

Soft Costs


SOFT COSTS BREAKDOWN
64%
Hardware Cost
2% Permit Fee
2% Permitting, Installation, Interconnection Labor
5% Sales Tax
6% Transaction Costs
9% Installer/Developer Profit
9% Indirect Corporate Costs
9% Customer Acquisition
11% Installation Labor
12% Supply Chain Costs

Types of Solar Development

- Residential and Business Use
  - Sized to meet the electricity needs of an individual home, business, farm or public site.
  - No more than 110% of annual electric usage
- Community Distributed Generation (Community DG, Shared Solar)
  - Allows customers who cannot site solar or other DG on their property to buy into off site projects through remote net metering
  - Currently limited to 2MW
  - CAN NOT be owned by utility company
- Utility Scale
  - Large installations that are the primary use of the land
  - Intended for offsite use of energy or sale to the wholesale market

New Solar Frontiers

- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

New Solar Frontiers

- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

Kohl's Auburn
0.3 MW
~1.3 acres

New Solar Frontiers

- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

Fesko Farms,
Spafford
1,045 panels
303 kW
~1 acre

New Solar Frontiers

- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

Marshall Farms,
Clyde
650 kW
~2.2 acres

New Solar Frontiers

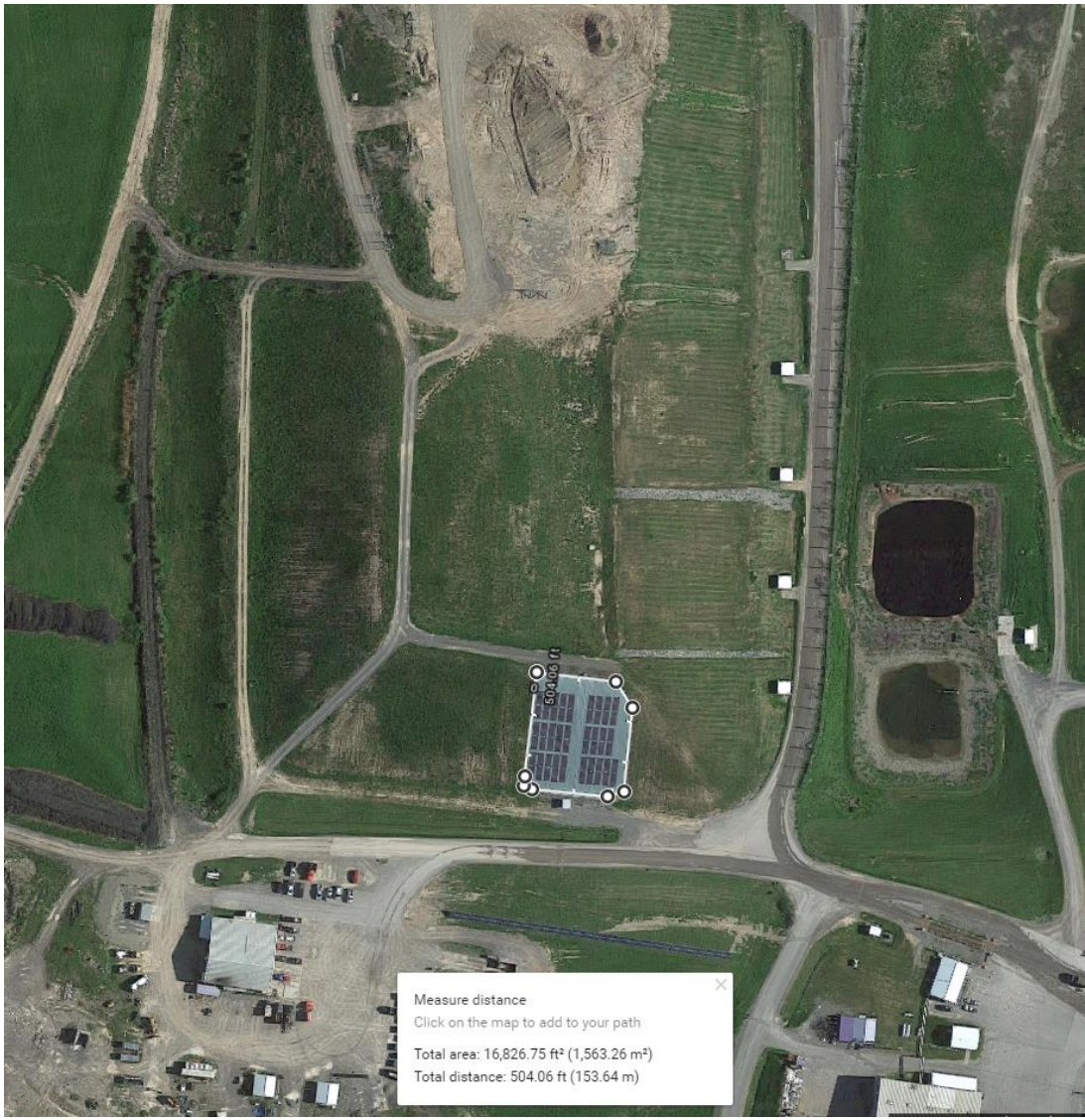
- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

Clarkstown Landfill
8,744 panels
2.4 MW
~13 acres

New Solar Frontiers

- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

Madison County Landfill
40 kW
~0.3 acres



New Solar Frontiers

- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

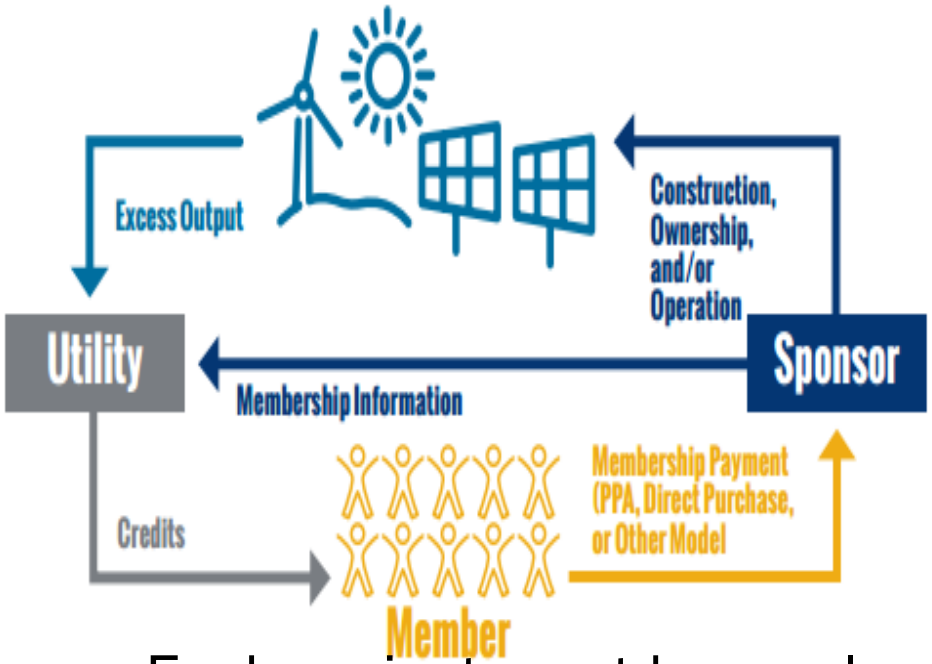
Avon
School District
1.5 MW
~7.2 acres

New Solar Frontiers

- Big Box Rooftops
- Farms (On-Site)
- Public Sector
- Community Distributed Generation

Onondaga County Metro Water Board
1.4 MW
~4.3 acres

Community Distributed Generation



- Allowed by PSC order in July of 2015
- Any utility customer may be a member of a project in the same utility and NYISO zone
- The sponsor may be the project developer, a private company, or other entity

- Each project must have a least 10 members, and each member must be allocated at least 1,000kWh per year.
- No more than 40% of the Community DG host's excess generation may serve members with an average monthly peak demand of 25kW or greater.

Community Concerns

- Community Concerns
  - Conversion of undeveloped land
  - Removal of trees and vegetation
  - Increase in stormwater runoff
  - Loss of habitat
  - Visual & cultural impacts / Change to community character
  - Loss of farmland / Agricultural Assessments
  - Fire Safety
  - Glare
  - Construction Impacts: noise, dust, etc.
  - Abandonment

A note on Agricultural Assessment

- Placement of a solar array on land that receives an agricultural assessment effectively **removes** that land from agricultural production.
- Acreage no longer used for agricultural purposes would not be eligible for an agricultural assessment.
- A penalty for conversion may apply.
- Solar Farms located on farm operations in agricultural districts do not receive protection under NYS Agriculture and Markets Law.
- Solar arrays on farm operations that are sized meet the electric needs of the farm (no more than 110% of anticipated demand), and are used solely for farm use are considered **Farming Equipment.**

Planning for Solar: Toolkit

1. Comprehensive Plan
2. Moratorium
3. Solar Ordinance
4. Decommissioning Plan
5. Unified Solar Permit

Planning for Solar – Comp. Plan

- The Comprehensive Plan is the legal foundation for local land use regulation.

> ***"…. All town land use regulations must be in accordance with a comprehensive plan…"***
>
> -*NYS* Town Law, §272-a, Village Law, §7-722 or General City Law, §28-a,

- Plan should establish a "policy foundation" for regulations that may affect solar energy development.
- Can be addressed explicitly or implicitly, but most straightforwardly in "Goals and Objectives."

Planning for Solar – Comp. Plan

Improved Public Utilities and Services

9. Improve communications infrastructure

a. Survey and assess where the need is greatest for high speed fiber optic internet options in Montezuma and encourage new internet providers to provide service in town. Consider fixed Wi-Fi service for areas that do not currently have internet service.

10. Explore potential benefits and impacts of renewable energy resource development

a. Assess the viability of various renewable energy forms throughout the town, including solar, wind, geothermal, and biomass.

b. Work towards the renewable energy goals written in the town's Climate Action Plan.

Agriculture and Farmland Protection

1. Preserve the rural-agrarian character of the town

a. Facilitate the protection of farmland balanced with managed community growth and preservation of open space through farmland protection and agricultural easements.

Land Use, Planning, and Subdivision Regulation Supportive of the Community's Vision

3. Protect the existing open space and scenic views of farmland and the river in the Town of Montezuma

a. Review and rework existing town land use regulations to support low-impact development patterns and land uses that conserve resources, complement the rural character of the residential setting, and encourage farms to remain in farm production while effectively planning for "Smart Growth" (see Appendix A).

Moratorium

A land use moratorium is a local enactment which temporarily suspends a landowner's right to obtain development approvals while the community considers and potentially adopts changes to its comprehensive plan and/or its land use regulations to address new circumstances not addressed by its current laws.

Moratorium

- Why adopt moratoria?
  - Prevent rush to development.
  - Prevent inefficient and ill-conceived growth.
  - Address a new kind of use (i.e. wind farms, solid waste facilities, big box stores) in comprehensive plans and land use laws.
  - Prevent hasty decisions that would disadvantage landowners and the public.
  - Prevent immediate construction that might be inconsistent with the provisions of a future plan.

Moratorium

- Basic Requirements of Land Use Moratoria

  1) have a reasonable time frame as measured by the action to be accomplished during the term;

  2) have a valid public purpose justifying the moratoria or other interim enactment;

  3) address a situation where the burden imposed by a moratorium is being shared substantially by the public at large;

  4) strictly adhere to the procedure for adoption laid down by the enabling acts; and

  5) have a time certain when the moratorium will expire.

- Moratoria are Type II actions under SEQRA and do not require a determination of significance.

Moratorium

Establish time frame

TOWN OF SENNETT
PROPOSED LOCAL LAW A-2016

Proposed Local Law A-2016 Imposes a six (6) month Moratorium on Free Standing Solar Panel Installations within the Town of Sennett

SECTION 1: TITLE

This local law shall be known as Local Law No. 1 of 2016, a local law imposing a six (6) month moratorium on free standing solar panel installations within the Town of Sennett.

SECTION 2: LEGISLATIVE INTENT

The Town of Sennett presently has in effect a Town Zoning Law which has established regulations for building, construction and allowable uses within the town. The Town Board is of the opinion that a period of time is necessary to adequately review the current regulations concerning free standing solar panel installations, and to determine whether additional local regulations are necessary in order to preserve and protect health, safety and welfare of its residents. Such free standing solar panel installations can be both residential, commercial, large, obtrusive, and can and may pose a hazard and danger to residents by distraction, obstruction, and the power supply systems involved with such installations that may pose a risk. This moratorium will enable town officials to review and comprehensively address the issues involved with free standing solar panel installations that are becoming increasingly popular in our rural community. The town recognizes the potential benefits and desirability of solar power and renewal energy sources, but determines time and research is necessary to determine how to properly regulate the installations. The Supervisor and Town Board deem this moratorium emergent and immediately necessary for the Town.

Valid public purpose

SECTION 3: DEFINITIONS

Free Standing Solar Panels – A device or combination of devices, structure, or part of a device or structure that transforms direct solar energy into thermal, chemical, or electrical energy. Such devices or installations may be free standing, pole mounted, building integrated or rooftop panels.

Person - The term person shall include any individual, partnership, association, corporation, landowner, lessee or licensee.

SECTION 4: MORATORIUM

A. The Town Board hereby enacts a moratorium which shall prohibit Free Standing Solar Panels anywhere within the Town.

Shared burden

B. For a period of six (6) months following the effective date of this Local Law, or sooner if the Town Board so determines by resolution that the intent and purpose of this law has been satisfied, the Town Board, the Town Planning Board, the Zoning Board of Appeals and the Code Enforcement Officer and all other officers and employees of the Town of Sennett shall not accept, process, review or grant approval of any Building Permit, Site Plan, Use Variance, Area Variance or Specific/Special Permit applications or any other land use approval pursuant to the Zoning Law of the Town of Sennett or any other laws of the Town, in connection with Free Standing Solar Panels within the Town of Sennett, regardless of whether such applications have been submitted to the Town Board, Planning Board, Zoning Board of Appeals or Code Enforcement Officer prior to the effective date of this Local Law.

C. This moratorium shall apply to all zoning districts and all real property within the Town.

D. Free Standing Solar Panels that have been previously approved are expressly excluded from this moratorium.

SECTION 5: RELIEF FROM PROVISIONS OF THIS LOCAL LAW

A. The Town Board reserves to itself the power to vary or adapt the strict application of the requirements of this Local Law in the case of unusual hardship which would deprive the owner of all reasonable use of the lands involved.

B. Application for relief shall be filed in triplicate with the Town Clerk together with a filing fee of $250.00. The application shall specifically identify the property involved, recite the circumstances pursuant to which the relief is sought and the reasons for which the relief is claimed. Any costs, including expert consulting fees or attorneys' fees, incurred by the Town, shall be reimbursed to the Town by the Applicant. The Town Board shall apply Use Variance criteria as set forth in the New York State Town Law, Section 267-b(2) in reviewing any application for relief.

C. The Town Board may refer any applications for relief herein to the Town Planning Board for its advice and recommendations, but all decisions on granting or denying such relief shall be made by the Town Board solely after determining whether or not the requested relief is compatible with any contemplated amendments to the Town Zoning Law. Unless completely satisfied that the proposed relief is compatible, the Town Board shall deny the application.

D. The Town Board shall conduct a public hearing on any request for relief within forty-five (45) days of receipt by the Town Clerk, and shall issue its final decision on requests for relief within thirty (30) days from the date of the public hearing.

Solar Ordinance

- Local Law or w/in Zoning Code
- Empower municipalities to regulate solar generating facilities when they may have public impacts.
- Components:
  - Basic Distinctions
  - Statement of Intent / Purpose
  - Definitions: lack of definitions may create uncertainty about the legality of various types of solar development.
  - Statement of Applicability
  - Regulatory Mechanisms
  - Abandonment and Decommissioning Plans
- Examples

Solar Ordinance: Basic Distinctions

- Use Types:
  - **Accessory Use:** Any use that is ancillary, incidental, or subordinate to a primary use.
    - Roof-mounted
    - Small-Scale ground-mounted
  - **Primary / Principal Use:**
    - Energy generated for sale and consumption off-site

- Size Distinctions:
  - **Small-Scale:** Less than **[10 kW to 300 kW]** or **[1 to 2 acres]**.
  - **Large-Scale:** Greater than **[10 kW to 300 kW]** or **[1 to 2 acres]**.

Solar Ordinance: Basic Distinctions

- Mounting Types:
  - **Roof-Mounted System:** A solar photovoltaic system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted systems or as modules fixed to frames which can be tilted toward the south at an optimal angle.

Solar Ordinance: Basic Distinctions

- Mounting Types:
  - **Building-Mounted / -Integrated System:** A solar photovoltaic system attached to any building component such as vertical facades, semitransparent skylight systems, roofing materials, and shading over windows.

Solar Ordinance: Basic Distinctions

- Mounting Types:
  - **Ground-Mounted System:** A solar photovoltaic system mounted on a structure, pole, or series of poles constructed specifically to support the photovoltaic system and not attached to any other structure.

Solar Ordinance: Intent / Purpose

- "This local law is adopted to protect the health, safety, and welfare…"
- "To protect and promote the visual, aesthetic, and rural character…"
- "To encourage investment in, and facilitate access to, sustainable energy practices."
- "To integrate solar energy systems seamlessly into the community without diminishing quality of life."

Solar Ordinance: Definitions

- Solar-Related Terms:
  - **Array:** Any number of electrically connected photovoltaic (PV) modules providing a single electrical output.
  - **Cell:** The smallest basic solar electric device which generates electricity when exposed to light.
  - **Interconnection:** The technical and practical link between the solar generator and the grid providing electricity to the public.
  - **Kilowatt:** A unit of electrical power equal to 1,000 Watts, which constitutes the basic unit of electrical demand.
  - **Remote Net Metering:** The allowance of solar photovoltaic owner generators to apply excess generation credits from the generator system ("Host Account") to other meters on the property that is owned or leased by the same customer and are within the same load zone as the generator ("Satellites").

Solar Ordinance: Definitions

- Other Pertinent Terms:
  - **Drip Line:** The outermost edge of a roof including eaves, overhangs, and gutters.
  - **Farmland of Importance:** Land that has been identified by an agency or agencies as prime farmland due to the best combination of physical and chemical characteristics, or farmlands necessary for the production of food, feed, fiber, forage, and oilseed crops. Farmlands of Importance may include tracts of land that have been designated for agriculture by local ordinance or state law.

Solar Ordinance: Applicability

- "The requirements of this law shall apply to all solar photovoltaic systems installed or modified after the effective date of the Law."
- "Solar photovoltaic systems constructed prior to the effective date of this Law are not required to meet the provisions of this Law."
- "Any upgrade, modification, or structural change that alters the size or placement of an existing solar photovoltaic system by 50% or more shall comply with the provisions of this Law."

Solar Ordinance: Level of Review

- Not all solar projects are the same. Consider the solar system's potential for impacts.

Level of Intensity	Type of Installation	Approval Method	Review Authority
Level 1	Roof-Mounted, Accessory Use	Allowed By Right	
Level 2	Ground-Mounted, Small-Scale	Special Conditions	CEO
Level 3	Ground-Mounted, Large-Scale	Special Use Permit*	Planning Board / Elected Board

*Special Use Permits should invoke Site Plan Review

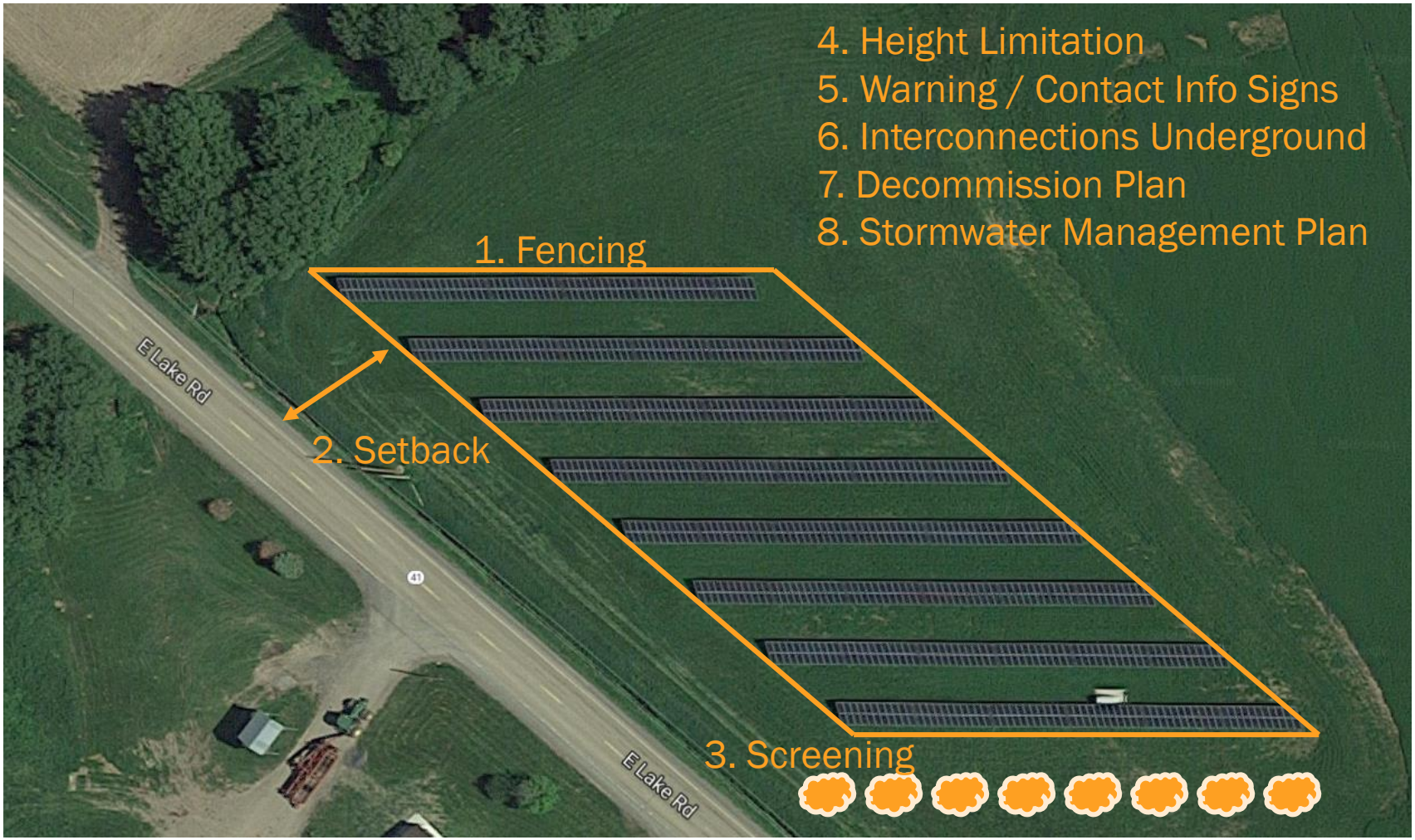
Solar Ordinance: Level of Review

- Level 2 or Special Conditions should be prescriptive measures
  - Minimum setback
  - Maximum height
  - Minimum lot size

- Level 3 or Special Use Permit / Site Plan Review measures can be discretionary
  - Prescriptive measures +
  - Measures may be development-specific

Solar Ordinance: Site Plan Items

- Ground-Mounted / Free-Standing



Abandonment

- When a solar energy system is out of use for a period of time, it can be considered abandoned.
- Municipalities may designate in their code the amount of time after which a solar energy system is considered abandoned.
- The Municipality may then bring enforcement actions, such as imposing fines or removing the facilities and imposing a lien to cover the costs of removal.

Abandonment & Decommissioning

Projects can have environmental impacts on farmland, habitat, and aesthetics within the community.

Decommissioning is the process of removing a photovoltaic system and remediating the land

Decommissioning

A Decommissioning plan outlines the required steps to remove a PV system, dispose (or recycle) the components, and restore the land to its original state

Decommissioning Plans

- Plan Components
  - Removal of all structures – <u>above and below ground</u>
    - Fencing
    - Solar structures and equipment
    - Removal of switches, conduit, etc.
    - Removal of foundations (ex. 4' depth)
  - Restoration of land to original grade and topography
  - Removal of access roads and any material such as fill and fabric
  - Restoration of disturbed soil to condition consistent with land at time of construction – **may need E&SC plans!**
  - Safe disposal of all hazardous materials consistent with Federal and State regulations
  - Decommissioning Schedule
  - Plans for updating decommissioning cost estimates at regular intervals

***** Documentation of pre-construction condition of the project site including photographs may be helpful*****

Decommissioning Plans: Regulatory Mechanisms

- <u>Abandonment and Removal Clause</u>
  - Can be included in the zoning code
  - Abandonment of a solar panel system becomes and zoning enforcement action
  - Project owners can be mandated to remove the equipment by the imposition of civil fines or by imposing a lien on the property to recover removal costs.
  - A municipality should be very specific about the length of time that must pass or under what conditions a solar project is considered abandoned

Decommissioning Plans: Regulatory Mechanisms

- <u>Special Permit/Site Plan</u>
  - A municipality can also require that decommissioning plan be submitted as part of a Special Permit and/or Site Plan review.
  - The decommissioning plan then becomes enforceable as a condition of the project's approval
  - In cases of non-compliance the project is subject to civil penalties or a lien against the property

Decommissioning Costs: 2 MW Project

Tasks	Estimated Cost ($)
Remove Rack Wiring	$2,459
Remove Panels	$2,450
Dismantle Racks	$12,350
Remove Electrical Equipment	$1,850
Breakup and Remove Concrete Pads or Ballasts	$1,500
Remove Racks	$7,800
Remove Cable	$6,500
Remove Ground Screws and Power Poles	$13,850
Remove Fence	$4,950
Grading	$4,000
Seed Disturbed Areas	$250
Truck to Recycling Center	$2,250
Current Total	$60,200
Total After 20 Years (2.5% inflation rate)	$98,900

Decommissioning Plan Example

Potential Environmental Effect	Affected Significant Feature	Performance Objective(s)	Mitigation Strategy	Residual Effects	Monitoring Plan				Contingency Measures
					Methodology	Monitoring Locations	Frequency/ Duration	Reporting Requirements	
Natural Features									
Loss of edge vegetation in Significant Woodland and assumed Provincially Significant Wetland due to the deposition of dust and/or overland release of silt derived from site grading	Significant Woodlands & assumed Provincially Significant Wetlands	No negative effects on woodland /wetland vegetation as indicated by excessive mortality of edge species	▪ Minimize soil exposure ▪ Install E&SC measures (e.g., silt fence ▪ Use appropriate grading techniques ▪ Restrict vegetation clearing and construction lay-down areas to the project location	None.	Visual assessment of edge vegetation	Along edge of woodlands	At the end of the decommission phase	Submit annual monitoring report to the MNR	Replace vegetation lost as a result of excessive dust deposition and/or siltation with appropriate native species, as permitted by landowner(s)
					Monitor deficiencies in E&SC measures	Along silt fence and at other E&SC structures	Monthly and/or after 10 mm rain events		
Water Bodies									
N/A									
Air Quality and Environmental Noise/Land Use									
Increased air emissions from decommissioning equipment Increased dust from on-site activities	Local Residents	No noticeable increase in dust/air emissions	Maintain all vehicles and equipment in good running condition and in compliance with regulatory requirement Suppress dust with water on exposed soil surfaces if necessary Cover loads of materials that could create dust	None expected	Residents complaints monitoring	NA	NA	Document any complaints and follow-up actions taken	Adherence to Complaint Resolution Process
Increase noise levels from equipment usage during decommissioning	Local Residents	No local resident noise complaints	Vehicle and equipment idling will be prohibited where possible; Construction activities resulting in noise emissions will take place only during normal business hours; The contractor will be required to abide by local municipal noise by-laws; All equipment will be maintained in good working order with effective muffling devices where appropriate;	None	Residents complaints monitoring	NA	NA	Document any complaints and follow-up actions taken	Adherence to Complaint Resolution Process

Financial Mechanisms

- Decommissioning Trust or Escrow Account – a cash account or trust fund. Regular payments are made during project life until the fund reaches the estimated cost of decommissioning
- Bonds – decommissioning security in the form of a bond to guarantee funds are available for decommissioning. Bond must be renewed or replaced to account for changes in decommissioning cost
- Letter of Credit – Issued by a bank and assures land owners a payment up to a specified amount if certain conditions are met. A letter of credit should clearly specify the conditions of payment and any supporting documentation that may be required. Must be continually renewed to remain effective.

Financial Mechanisms

There is no specific authority for municipalities to require a financial mechanism for the decommissioning of a solar generation system. Consult with a municipal attorney when evaluating the use of financial mechanisms.

Solar Ordinance: Town of Geneva

Chapter 130: Solar Energy Systems

§ 130-1 **Purpose.**

§ 130-2 **Definitions.**

§ 130-3 **Solar collectors and installations for minor systems.**

§ 130-4 **Solar collectors and installations for major systems or solar farms.**

Solar Ordinance: Town of Geneva

Chapter 130: Solar Energy Systems

§ 130-1 **Purpose.**

§ 130-2 **Definitions.**

§ 130-3 **Solar collectors and installations for minor systems.**

§ 130-4 **Solar collectors and installations for major systems or solar farms.**

- "Because it is in the public interest to provide for and encourage renewable energy systems and a sustainable quality of life, the purpose of this chapter is to facilitate the development and operation of renewable energy systems based on sunlight. Solar energy systems are appropriate in all zoning districts when measures are taken … to minimize adverse impacts on neighboring properties and protect the public health, safety, and welfare."

Solar Ordinance: Town of Geneva

Chapter 130: Solar Energy Systems

§ 130-1 **Purpose.**

§ 130-2 **Definitions.**

§ 130-3 **Solar collectors and installations for minor systems.**

§ 130-4 **Solar collectors and installations for major systems or solar farms.**

- MAJOR SOLAR COLLECTION SYSTEM or SOLAR FARM: An area of land … principally used to capture solar energy and convert it to electrical energy to transfer to the public electric grid.
- MINOR or ACCESSORY SOLAR COLLECTION SYSTEM: A solar photovoltaic cell, panel, or array … secondary to the use of the premises … with the total surface area of all solar collectors on the lot not to exceed 4,000 square feet.

Solar Ordinance: Town of Geneva

Chapter 130: Solar Energy Systems

§ 130-1 **Purpose.**

§ 130-2 **Definitions.**

§ 130-3 **Solar collectors and installations for minor systems.**

§ 130-4 **Solar collectors and installations for major systems or solar farms.**

- Rooftop permitted in all zoning districts.
- Ground-mounted permitted in all zoning districts ***as accessory structures.***
  - Must meet all applicable setbacks.
  - Must meet all height restrictions.
  - Location in side or rear yard.
  - Must prevent glare on adjacent properties and roads.

Solar Ordinance: Town of Geneva

Chapter 130: Solar Energy Systems

§ 130-1 **Purpose.**

§ 130-2 **Definitions.**

§ 130-3 **Solar collectors and installations for minor systems.**

§ 130-4 **Solar collectors and installations for major systems or solar farms.**

- Shall be constructed pursuant to a site plan permit from the Town Planning Board.
- Additional Regulations:
  - Total coverage shall not exceed 50% of lot.
  - Minimum setback of 25 feet.
  - Landscaped buffer.
  - On-site utility and transmission lines shall, to the extent feasible, be placed underground.
  - "Proof of Concept" letter from the utility company.

Solar Ordinance: Town of Geneva

Chapter 130: Solar Energy Systems

§ 130-1 **Purpose.**

§ 130-2 **Definitions.**

§ 130-3 **Solar collectors and installations for minor systems.**

§ 130-4 **Solar collectors and installations for major systems or solar farms.**

- Additional Regulations (cont.):
  - Signage that lists facility name, owner, and phone number.
  - Warning sign concerning voltage.
  - Decommissioning Plan that ensures "site will be restored to a useful, nonhazardous conditions … including … removal of above-ground and below-ground equipment, structures, and foundations, restoration of surface grade and soil, and revegetation.

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

§ 185-78 **Purpose and intent.**

§ 185-79 **Definitions.**

§ 185-80 **Applicability.**

§ 185-81 **Permit required; construction and placement requirements.**

§ 185-82 **Safety.**

§ 185-83 **Solar farms and solar power plants.**

§ 185-84 **Appeals.**

§ 185-85 **Building permit fees for solar panels.**

§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

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§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

- "This article aims to promote the accommodation of solar energy systems … and to balance the potential impact on neighbors when solar collectors may be installed near their property."
- "In particular, this legislation is intended to apply to freestanding, ground-mounted, or pole-mounted solar energy system installations…"

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

§ 185-78 **Purpose and intent.**

§ 185-79 **Definitions.**

§ 185-80 **Applicability.**

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§ 185-84 **Appeals.**

§ 185-85 **Building permit fees for solar panels.**

§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

- "The requirements of this article shall apply to all solar energy systems … modified or installed after the effective date of this article."
- "Solar collectors … shall be permitted only to provide power for use by owners … or other occupants of the premises on which they are erected."

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

§ 185-78 **Purpose and intent.**

§ 185-79 **Definitions.**

§ 185-80 **Applicability.**

§ 185-81 **Permit required; construction and placement requirements.**

§ 185-82 **Safety.**

§ 185-83 **Solar farms and solar power plants.**

§ 185-84 **Appeals.**

§ 185-85 **Building permit fees for solar panels.**

§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

- "Freestanding and ground-mounted solar collectors are permitted as accessory structures in all zoning districts except the R-3 District."
- "In the R-2 District, a lot must have a minimum size of 40,000 square feet."
- Minimum side yard and rear yard setbacks listed for each zoning district.
- Height limit of 20 feet
- Screening where possible

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

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§ 185-85 **Building permit fees for solar panels.**

§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

- "All solar collector installations must be performed by a qualified solar installer."
- "Solar energy systems shall be marked in order to provide emergency responders with appropriate warning and guidance with respect to isolating the solar electric system."

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

§ 185-78 **Purpose and intent.**

§ 185-79 **Definitions.**

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§ 185-84 **Appeals.**

§ 185-85 **Building permit fees for solar panels.**

§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

- "Solar farms and solar power plants shall be permitted in the Industrial District as an electric generating use subject to site plan review by the Planning Board."
- Enclosed by perimeter fencing.
- Landscaping / Screening.
- Average height of array shall not exceed 12 feet.
- On-site power lines placed underground.
- Decommissioning: site shall be restored to natural condition.

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

§ 185-78 **Purpose and intent.**

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§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

- "If a building permit for a solar energy device is denied based upon a failure to meet the requirements of this article, the applicant may seek relief from the ZBA in accordance with the established procedures and time limits of the Zoning Code and New York State Town Law."

Solar Ordinance: Town of Newburgh

Article XVII: Solar Siting

§ 185-78 **Purpose and intent.**

§ 185-79 **Definitions.**

§ 185-80 **Applicability.**

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§ 185-84 **Appeals.**

§ 185-85 **Building permit fees for solar panels.**

§ 185-86 **Guidelines for future solar access.**

§ 185-87 **Penalties for offenses.**

- "To permit maximum solar access to proposed lots and future buildings, wherever reasonably feasible, … new streets shall be located on an east-west axis to encourage building siting with the maximum exposure of roof and wall area to the sun."
- "Every effort shall be made to avoid shading possible locations of solar collectors" (i.e. tree location)
- "Structures should be sited as close to the north lot line as possible to increase yard space to the south for reduced shading of the south face of a structure.
- "A tall structure should be sited to the north of a short[er] structure."

Unified Solar Permit

- $2,500 grant award available.
- Streamlines permitting process.
- 13 Municipalities in Cayuga Co.
- County assistance available.

David Nelson, AICP
Planner

Cayuga County
Department of Planning & Economic Development
County Office Building, 5th Floor
160 Genesee Street
Auburn, New York 13021
Phone: (315) 253-1276 Fax: (315) 253-1499
email: dnelson@cayugacounty.us

Unified Solar Permit

NY-Sun
Solar Powering New York
ny-sun.ny.gov

New York State Unified Solar Permit

Expedited Solar Permit Process for Small-Scale Roof-Mounted Residential and Commercial Solar Electric

Requirements for Application Submittal - *Part A*

For use in all New York State counties with the exception of Nassau County and Suffolk County.

The expedited solar permitting process uses a unified permit across participating municipalities in New York State.

A combined building and electrical permit for a grid-tied solar electric system will be issued pending proper completion of forms, submission of approved plans, and approval by municipality. All applicants must submit:

1. Unified Solar Permit for Small-Scale Solar Electric Systems Eligibility Checklist - PART B

2. One (1) set of plans that include:

- **Site Plan showing location of major components of solar system and other equipment on roof or legal accessory structure. This plan should represent relative location of components at site, including, but not limited to, location of array, existing electrical service location, utility meter, inverter location, system orientation, and tilt angle. This plan should show access and pathways that are compliant with New York State Fire Code, if applicable.**
- **One-Line or 3-Line Electrical Diagram. The electrical diagram required by NYSERDA for an incentive application and/or utility for an interconnection agreement can be used here.**
- **Specification Sheets for all manufactured components. If these sheets are available electronically, a web address will be accepted in place of an attachment, at the discretion of the municipality.**
- **All diagrams and plans must be prepared by a PE or RA as required by New York State law and include the following: (a) Project address, section, block, and lot number of the property; (b) Owner's name, address, and phone number; (c) Name, address, and phone number of the person preparing the plans; and (d) System capacity in kW-DC.**

Submit Applications to:

Village of Port Byron
PO Box 398
52 Utica St
Port Byron, NY 13140

Ph: 315-776-4321
Fx: 315-776-9733

Email: villageofportbyron@tds.net

Contact:
Code Enforcement Office Jay Moose
315-427-3231

3. Unified Solar Permit for Small-Scale Solar Electric Systems Application - PART C

4. Permit Fee Amount

$75.00

Permit Review and Inspection Timeline

Permit determinations will be issued within 14 calendar days upson receipt of complete and accurate applications. The municipality will provide feedback within 7 calendar days of receiving incomplete or inaccurate applications. If an inspection is required, a single inspection should be sufficient and will be provided within 7 calendar days of inspection request.

The NY-SUN initiative, a dynamic public-private partnership, will drive growth of the solar industry and make solar technology more affordable for all New Yorkers.

Visit ny-sun.ny.gov for more information on the NY-Sun initiative.

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NY-Sun
Solar Powering New York
ny-sun.ny.gov

Eligibility Checklist - *Part B*

To determine if you are eligible for the expedited permitting process, answer the questions below.

- ❑ Yes ❑ No 1. Solar installation has a rated capacity of 12 kW or less.
- ❑ Yes ❑ No 2. Solar installation is not subject to review by an Architectural or Historical Review Board.
- ❑ Yes ❑ No 3. Solar installation does not need a zoning variance or special use permit/conditional use permit.
- ❑ Yes ❑ No 4. Solar installation is to be mounted on a permitted roof structure of a building, or on a legal accessory structure. If on a legal accessory structure, a diagram showing existing electrical connection to structure is attached.
- ❑ Yes ❑ No 5. Solar installation is compliant with all applicable electrical and building codes.
- ❑ Yes ❑ No 6. Solar installation is compliant with New York State Fire Code.
- ❑ Yes ❑ No 7. The Solar Installation Contractor complies with all licensing and other requirements of the jurisdiction and the State.
- ❑ Yes ❑ No 8. The proposed equipment is permitted by code and equipment meets all relevant certification standards.
- ❑ Yes ❑ No 9. The solar electric system and all components will be installed per the manufacturer's specifications.
- ❑ Yes ❑ No 10. The project will comply with adopted National Electrical Code® requirements.
- ❑ Yes ❑ No 11. The roof has no more than a single layer of roof covering (in addition to the solar equipment).
- ❑ Yes ❑ No 12. The system is to be mounted parallel to the roof surface, or tilted with no more than an 18 inch gap between the module frame and the roof surface.
- ❑ Yes ❑ No 13. The system will have a distributed weight of less than 5 pounds per square foot and less than 45 pounds per attachment point to roof.

If you answered "No" to any of Questions 1-10, you are not eligible to participate in the expedited permitting process and must go through the standard permitting process dictated by the municipality. If you answered "No" to any of Questions 11-13, in order to use this form, in addition to other New York State PA or RA requirements, you must provide a letter from a Professional Engineer or Registered Architect certifying that the existing structure can support the additional weight and wind loads of the solar electric system. If you answered "Yes" to all of the above questions, please sign below to affirm that all answers are correct, and you have met all the conditions and requirements to participate in this expedited process.

Property Owner's Signature _____ Date _____

Solar Installation Contractor Signature _____ Date _____

The NY-Sun initiative, a dynamic public-private partnership, will drive growth of the solar industry and make solar technology more affordable for all New Yorkers.

Visit ny-sun.ny.gov for more information on the NY-Sun initiative.

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Unified Solar Permit

NY-Sun
Solar Powering New York
ny-sun.ny.gov

Application – *Part C*

1. Property Owner:

Property Owner's Name _____ Phone _____ Email _____

Property Address _____

Section _____ Block _____ Lot Number _____

2. Existing Use:

❑ Single Family ❑ 2-4 Family ❑ Commercial ❑ Other _____

3. Provide the total system capacity rating (sum of all panels)

Solar Electric System: _____ kW-DC

4. Solar Installation Contractor and Electrician:

Installer Business Name _____

Installer Business Address _____

Installer Contact Name _____ Installer Phone Number _____

Installer License Number(s) _____ Installer Email _____

Electrician Business Name _____ Electrician License Number _____

5. What is the existing roofing material?

_____

6. Provide method and type of weatherproofing for roof penetrations (i.e., flashing, caulk).

_____

7. Is the mounting structure an engineered product designed to mount solar electric modules? ❑ Yes ❑ No
If no, provide details of structural attachment in a letter certified by a design professional.

continued >

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Application – *Part C (continued)*

8. For manufactured mounting systems, provide the following information about the mounting system:

a. Mounting System Manufacturer _____

b. Product Name and Model Number _____

c. Total Weight of Solar Electric Modules and Rails _____ lbs.

d. Total Number of Attachment Points _____

e. Weight per Attachment Point (c ÷ d) _____ lbs.

f. Maximum Spacing Between Attachment Points on a Rail _____ Inches
(see product manual for maximum spacing allowed based on maximum design wind speed)

g. Total Surface Area of Solar Electric Modules (square feet) _____ ft^2

h. Distributed Weight of Solar Electric Module on Roof (c ÷ g) _____ $lbs./ft^2$

9. Indicate quantity, brand, make and model of the:

Inverter(s):

Quantity _____ Make _____ Model _____

Modules:

Quantity _____ Make _____ Model _____

Please sign below to affirm that all answers are correct and that you have met all the conditions and requirements to participate in this expedited process.

Property Owner's Signature _____ Date _____

Solar Installation Contractor Signature _____ Date _____

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Questions?

Have a good night!