New York State
Model Solar Energy Law

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Authors

Sustainable CUNY of the City University of New York (CUNY) is the primary author of the Model Solar Energy Law and Toolkit, supported by Pace Law School's Land Use Law Center and the NYSolar Smart Planning and Zoning Working Group. CUNY launched the NYSolar Smart program as part of a collaborative New York State (NYS) effort designed to lower the non-hardware soft costs of installing solar throughout the state. Since 2006, Sustainable CUNY has led comprehensive federal solar initiatives designed to support solar energy market growth in New York. Sustainable CUNY works in collaboration with the U.S. Department of Energy, the National Renewable Energy Laboratory (NREL), New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), the Mayor's Office of New York City, NYC Economic Development Corporation, Con Edison, and over 30 partners to strategically remove barriers to large-scale solar deployment.

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Disclaimers

Disclaimer: The primary objective of this guidance document is to assist municipalities in drafting local laws and ordinances, and to facilitate ideas for properly incorporating solar PV language into local zoning laws and policies. The following information should not substitute legal advice from an attorney familiar with the local codes and regulations.

Introduction

This Model Solar Energy Law (Model Law) is designed to assist communities in New York State adopt zoning provisions that promote solar energy systems while protecting community character and the environment. The Model Law is intended as a straightforward approach and leaves more complicated, site-specific issues to be handled through existing land use processes, such as the State Environmental Quality Review Act (SEQRA) and Stormwater Pollution Prevention Plans (SPPPs). It was developed by the NYSolar Smart Planning and Zoning Working Group (WG), as part of the U.S. Department of Energy SunShot Initiative Rooftop Solar Challenge, through a collaborative, negotiated process with several local government participants and with technical support from Sustainable CUNY of the City University of New York and Pace Law School's Land Use Law Center. The WG aimed to balance best practices that promote solar energy systems with common local requirements and concerns. As such, the Model Law is presented as a practical, streamlined approach for facilitating solar energy systems in New York State, rather than a compilation of the most pro-solar zoning language available. Many options for further promotion of solar energy systems are discussed in the directions and appendix of additional considerations.

The NYSolar Smart Program is a strategic effort led by Sustainable CUNY to implement solutions that lower the soft costs of installing solar across New York State and supports both Federal and State solar initiatives. Sustainable CUNY works in partnership with the New York Power Authority (NYPA); New York State Energy Research and Development Authority (NYSERDA); municipalities around the state; and more than 30 organizations representing utility companies, installers, government agencies, and industry leaders.

This toolkit contains three parts:

1. **The Model Solar Energy Law**
2. **Background information** on zoning for solar as well as **clear directions** on how to use each section of the model law.
3. **Additional considerations** when zoning for solar with citations to resources regarding each option discussed.

For further information on the topics covered in the Model Law and subsequent sections, the Land Use Law Center through its work under the NYSERDA's NY-Sun PV Trainers Network has prepared a useful Resource Guide providing background information and outlining technical details related to zoning for solar.

Note that the municipal attorney should be consulted regarding the Model Solar Energy Law. It is advisable to involve that person in the review and final drafting of your local Solar Energy Law as early in the process as possible.

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Model Solar Energy Law

1. Authority

This Zoning for Solar Energy Law is adopted pursuant to [sections 261-263 of the Town Law, sections 7-700 through 7-704 of the Village Law, or sections 19 and 20 of the City Law] of the State of New York, which authorize the [Insert Town, Village, or City Here] to adopt zoning provisions that advance and protect the health, safety, and welfare of the community, and "to make provision for, so far as conditions may permit, the accommodation of solar energy systems and equipment and access to sunlight necessary therefor."

2. Statement of Purpose

A. This Zoning for Solar Energy Law is adopted to advance and protect the public health, safety, and welfare of [Insert Name of Municipality], including:

1) Taking advantage of a safe, abundant, renewable, and non-polluting energy resource;

2) Decreasing the cost of energy to the owners of commercial and residential properties, including single-family houses; and

3) Increasing employment and business development in the region by furthering the installation of Solar Energy Systems.

3. Definitions

BUILDING INTEGRATED PHOTOVOLTAIC SYSTEM: A combination of photovoltaic building components integrated into any building envelope system such as vertical facades including glass and other facade material, semitransparent skylight systems, roofing materials, and shading over windows.

GROUND-MOUNTED SOLAR ENERGY SYSTEM: A Solar Energy System that is anchored to the ground and attached to a pole or other mounting system, detached from any other structure for the primary purpose of producing electricity for onsite consumption.

LARGE-SCALE SOLAR ENERGY SYSTEM: A Solar Energy System that is ground-mounted and produces energy primarily for the purpose of offsite sale or consumption.

ROOF-MOUNTED SOLAR ENERGY SYSTEM: A solar panel system located on the roof of any legally permitted building or structure for the purpose of producing electricity for onsite or offsite consumption.

SOLAR ENERGY EQUIPMENT: Electrical energy storage devices, material, hardware, inverters, or other electrical equipment and conduit of photovoltaic devices associated with the production of electrical energy.

SOLAR ENERGY SYSTEM: An electrical generating system composed of a combination of both Solar Panels and Solar Energy Equipment.

SOLAR PANEL: A photovoltaic device capable of collecting and converting solar energy into electrical energy.

4. Applicability

The requirements of this law shall apply to all Solar Energy Systems installed or modified after its effective date, excluding general maintenance and repair and Building-Integrated Photovoltaic Systems.

5. Solar as an Accessory Use or Structure

A. Roof-Mounted Solar Energy Systems.

1) Roof-Mounted Solar Energy Systems that use the electricity onsite or offsite are permitted as an accessory use in all zoning districts when attached to any lawfully permitted building or structure.

2) Height. Solar Energy Systems shall not exceed the maximum height restrictions of the zoning district within which they are located and are provided the same height exemptions granted to building-mounted mechanical devices or equipment.

3) Aesthetics. Roof-Mounted Solar Energy System installations shall incorporate, when feasible, the following design requirements:

a. 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.

4) Roof-Mounted Solar Energy Systems that use the energy onsite or offsite shall be exempt from site plan review under the local zoning code or other land use regulations.

B. Ground-Mounted Solar Energy Systems.

1) Ground-Mounted Solar Energy Systems that use the electricity primarily onsite are permitted as accessory structures in [Insert District(s)].

2) Height and Setback. Ground-Mounted Solar Energy Systems shall adhere to the height and setback requirements of the underlying zoning district.

3) Lot Coverage. Systems are limited to [Insert Lot Coverage Percentage]. The surface area covered by Ground-Mounted Solar Panels shall be included in total lot coverage.

4) All such Systems in residential districts shall be installed in the side or rear yards.

5) Ground-Mounted Solar Energy Systems that use the electricity primarily onsite shall be exempt from site plan review under the local zoning code or other land use regulations.

6. Approval Standards for Large-Scale Solar Systems as a Special Use

A. Large-Scale Solar Energy Systems are permitted through the issuance of a special use permit within [Insert District(s)], subject to the requirements set forth in this Section, including site plan approval. Applications for the installation of a Large-Scale Solar Energy System shall be reviewed by the Zoning Enforcement Officer and referred, with comments, to the [Insert Regulatory Body Here] for its review and action, which can include approval, approval on conditions, and denial.

B. Special Use Permit Application Requirements. For a special permit application, the site plan application is to be used as supplemented by the following provisions.

1) If the property of the proposed project is to be leased, legal consent between all parties, specifying the use(s) of the land for the duration of the project, including easements and other agreements, shall be submitted.

2) Blueprints showing the layout of the Solar Energy System signed by a Professional Engineer or Registered Architect shall be required.

3) The equipment specification sheets shall be documented and submitted for all photovoltaic panels, significant components, mounting systems, and inverters that are to be installed.

4) Property Operation and Maintenance Plan. Such plan shall describe continuing photovoltaic maintenance and property upkeep, such as mowing and trimming.

5) Decommissioning Plan. To ensure the proper removal of Large-Scale Solar Energy Systems, a Decommissioning Plan shall be submitted as part of the application. Compliance with this plan shall be made a condition of the issuance of a special use permit under this Section. The Decommissioning Plan must specify that after the Large-Scale Solar Energy System can no longer be used, it shall be removed by the applicant or any subsequent owner. The plan shall demonstrate how the removal of all infrastructure and the remediation of soil and vegetation shall be conducted to return the parcel to its original state prior to construction. The plan shall also include an expected timeline for execution. A cost estimate detailing the projected cost of executing the Decommissioning Plan shall be prepared by a Professional Engineer or Contractor. Cost estimations shall take into account inflation. Removal of Large-Scale Solar Energy Systems must be completed in accordance with the Decommissioning Plan. If the Large-Scale Solar Energy System is not decommissioned after being considered abandoned, the municipality may remove the system and restore the property and impose a lien on the property to cover these costs to the municipality.

C. Special Use Permit Standards.

1) Height and Setback. Large-Scale Solar Energy Systems shall adhere to the height and setback requirements of the underlying zoning district.

2) Lot Size. Large-Scale Energy Systems shall be located on lots with a minimum lot size of [Insert Size Requirement].

3) Lot Coverage. A Large-Scale Solar Energy System that is ground-mounted shall not exceed [Insert Lot Coverage Percentage] of the lot on which it is installed. The surface area covered by Solar Panels shall be included in total lot coverage.

4) All Large-Scale Solar Energy Systems shall be enclosed by fencing to prevent unauthorized access. Warning signs with the owner's contact information shall be placed on the entrance and perimeter of the fencing.

The type of fencing shall be determined by the [Insert Regulatory Body Here]. The fencing and the system may be further screened by any landscaping needed to avoid adverse aesthetic impacts.

5) Any application under this Section shall meet any substantive provisions contained in local site plan requirements in the zoning code that, in the judgment of the [Insert Regulatory Body Here], are applicable to the system being proposed. If none of the site plan requirements are applicable, the [Insert Regulatory Body Here] may waive the requirement for site plan review.

6) The [Insert Regulatory Body Here] may impose conditions on its approval of any special use permit under this Section in order to enforce the standards referred to in this Section or in order to discharge its obligations under the State Environmental Quality Review Act (SEQRA).

7. Abandonment and Decommissioning

Solar Energy Systems are considered abandoned after [Insert Time Period] without electrical energy generation and must be removed from the property. Applications for extensions are reviewed by the [Insert Regulatory Body Here] for a period of [Insert Time Period].

8. Enforcement

Any violation of this Solar Energy Law shall be subject to the same civil and criminal penalties provided for in the zoning regulations of [Insert Town, Village, or City Here].

9. Severability

The invalidity or unenforceability of any section, subsection, paragraph, sentence, clause, provision or phrase of the aforementioned sections as declared by the valid judgment of any court of competent jurisdiction to be unconstitutional shall not affect the validity or enforceability of any other section, subsection, paragraph, sentence, clause, provision or phrase, which shall remain in full force and effect.

Background, Development of Model Law, and Directions for Using the Model Law

Background

The amount of solar photovoltaic (PV) power installed across the United States is increasing at an exponential rate, becoming one of the fastest-growing industries in the nation and creating more local jobs than any other energy sector.[1] Solar PV is not only on the rise throughout the country, but also in New York State (NYS). NYS has become one of the leaders in solar adoption. Over the past five years, solar PV in NYS increased more than 300 percent, twice the rate of U.S. solar growth.[2] Solar's steady rise at both the national and local levels can be linked to a number of technological and policy advances. These include lower hardware costs, better financing options, and lower "soft costs," such as permitting, interconnection, and operations and maintenance, among others.

Although generating solar power is becoming increasingly popular, there is still untapped potential for solar to both produce the energy needed to satiate the growing demand for electricity as well as to generate a broad range of social, economic and environmental benefits for New York. Fortunately, there are a number of ways to advance solar across the state. This Model Solar Energy Law and accompanying documents focus on an opportunity for local communities to lead the way by using their planning and zoning authority to create a more hospitable environment for solar energy investment. As New York is a "home rule" state with more than 1,600 local legislatures responsible for determining acceptable uses for solar energy, incorporating solar-specific zoning regulations into the local codes will encourage both an increase in solar, a decrease in solar energy system costs, and a cleaner, more sustainable economy.

However, local zoning regulations are often vague or silent on solar requirements, leaving the solar industry and homeowners unclear about how to proceed. One important method of supporting the solar industry is the removal of regulatory barriers. Eliminating unnecessary requirements reduces municipal costs and increases the solar industry's ability to increase the amount of solar adopted. These materials offer guidance, best practices, and solutions to planners, municipal lawyers, and local officials. It is important to recognize that each type of solar system-whether ground-mounted or roof-mounted-has a range of implications and considerations for a local community. Therefore, the decision as to the types of solar energy systems to allow is heavily dependent on each community's unique circumstances. The Model Solar Zoning Law and accompanying

[1] *See National Solar Jobs Census Shows Solar Employment Prospects Strong, Expected To Grow*, SOLAR MODEL INDUSTRIES ASS'N (Oct. 13, 2010), http://www.seia.org/news/seia-national-solar-jobs-census-shows-solar-employment-strong-expected-grow (last accessed March 31, 2016).
[2] *Governor Cuomo Announces Solar Growth of More Than 300 Percent from 2011 to 2014 in New York State*, NEW YORK STATE OFFICE OF THE GOVERNOR (July 6, 2015), https://www.governor.ny.gov/news/governor-cuomo-announces-solar-growth-more-300-percent-2011-2014-new-york-state (last accessed March 31, 2016).

materials provide local governments with the fundamental principles, practical tools, and ideas needed to provide a strong foundation for supporting the type of solar systems that best meet the individual municipality's character while also promoting the economic growth and environmental benefits that attend the proliferation of solar energy systems.

Development of Model Law

As of May 2016, planning and zoning regulations across New York State do not greatly encourage solar. In fact, many local codes create barriers to advancing solar.[3] The requirements for variances and special use permits, approvals from planning boards and zoning boards of appeal, architectural review boards, as well as certificates of appropriateness from historic preservation commissions present difficulties for solar installers and their customers interested in solar. They also extend solar installation timelines and greatly increase costs. These processes are considered one type of "soft" or "balance of system" costs, which account for the majority of costs for solar. At approximately 64% of the total installed solar PV system price in the U.S.,[4] these soft costs create significant market barriers and limits to solar growth.[5]

For nearly a decade, the City University of New York, through its "Sustainable CUNY" program, has been successfully working to reduce the soft costs to solar deployment and to encourage a growing marketplace for solar in NYS. With funding from a range of federal, state and city programs, including the U.S. Department of Energy's SunShot Initiative, the NYS NY-Sun Initiative and the NYC "One City Built to Last" program, Sustainable CUNY has worked to implement solutions to expand solar capacity and access across the state. Through its "NYSolar Smart" plan, CUNY works in partnership with the New York Power Authority (NYPA), the New York State Energy Research and Development Authority (NYSERDA) and more than 70 organizations representing utility companies, installers, government agencies and industry leaders to develop and implement a comprehensive strategic process to lower the soft costs of installing.

As part of NYSolar Smart, Sustainable CUNY formed the NYS Planning and Zoning Working Group (WG) – a diverse collection of representatives from jurisdictions across the state including industry, as well as planning and zoning subject-matter experts – to draft a model solar zoning law for municipalities to adjust and adopt as their own. To develop the model solar language, the WG reviewed a range of zoning regulations from

[3] NEW YORK STATE NYSOLAR SMART SURVEY FINAL REPORT, CITY UNIV. OF NEW YORK (January 2014), *available at* https://www.cuny.edu/about/resources/sustainability/nyssolar/NYSSolarSurvey/NYSolarSmartSurveyReportQFinal.pdf.

[4] Barry Friedman, et al., BENCHMARKING NON-HARDWARE BALANCE-OF-SYSTEM (SOFT) COSTS FOR U.S. PHOTOVOLTAIC SYSTEMS, USING A BOTTOM-UP APPROACH AND INSTALLER SURVEY – SECOND EDITION, NAT'L RENEWABLE ENERGY LABORATORY, at iv, *available at* http://www.nrel.gov/docs/fy14osti/60412.pdf.

[5] It should be noted that a streamlined permitting process is another key opportunity for reducing the soft costs of solar in NYS. Sustainable CUNY, NYSERDA and NYPA developed the NYS Unified Solar Permit (NYSUSP) to facilitate an expedited permitting process for small-scale, roof-mounted solar PV systems in NYS.

partner jurisdictions, current best practices across the country, and the results of state-wide survey of NYS-specific solar policies and processes. This "NYSolar Smart Survey" collected data on planning and zoning, among other soft costs related to solar.

The results of the Survey[6] relevant to planning and zoning suggested that New York municipalities suffered from inconsistent and unclear zoning requirements. The Survey also found that solar was not addressed in many zoning codes or comprehensive plans.[7] To address the significant variations among jurisdictional zoning codes and the current restrictions to solar in many local zoning regulations, the WG developed a draft Model Solar Zoning Law, which is the basis of this published Model Law, prepared by Sustainable CUNY in conjunction with Pace Law School's Land Use Law Center. The landscape for solar energy systems is constantly changing and the authors encourage municipalities to periodically reexamine their zoning language pertaining to solar energy systems as technology and regulatory changes occur.

Directions for Using the Model Law

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1. Authority

This Zoning for Solar Energy Law is adopted pursuant to [sections 261-263 of the Town Law, sections 7-700 through 7-704 of the Village Law, or sections 19 and 20 of the City Law] of the State of New York, which authorize the [Insert Town, Village, or City Here] to adopt zoning provisions that advance and protect the health, safety, and welfare of the community, and "to make provision for, so far as conditions may permit, the accommodation of Solar Energy Systems and equipment and access to sunlight necessary therefor."

Municipalities are specifically authorized to adopt legislation to accommodate Solar Energy Systems and equipment. The Model Law Authority Section references this

[6] *See* NEW YORK STATE NYSOLAR SMART SURVEY FINAL REPORT, *supra* note 3.
[7] *Id.*

delegated authority. The municipal attorney should be consulted regarding this Section as well as the Model Solar Energy Law in its totality.

Note that Solar Energy Systems producing 25 MW or more are permitted by the Board of Electric Generation Siting and the Environment under Article 10 of the New York State Public Service Law. The Siting Board is responsible for issuing Certificates of Environmental Compatibility and Public Need, authorizing the construction and operation of major electric generating facilities.

2. Statement of Purpose

This Zoning for Solar Energy Law is adopted to advance and protect the public health, safety, and welfare of [Insert Name of Municipality], including:

- *Taking advantage of a safe, abundant, renewable, and non-polluting energy resource;*
- *Decreasing the cost of energy to the owners of commercial and residential properties, including single-family houses; and*
- *Increasing employment and business development in the region by furthering the installation of Solar Energy Systems.*

The benefits of Solar Energy Systems may vary from community to community. This Section should be reviewed and adjusted accordingly. Any benefits of solar energy referred to specifically in the local comprehensive plan should be added to this list. Listing some of the major benefits on solar energy may be a strategy for securing the support of local stakeholder groups for the adoption of the model law. Which of these benefits should be listed in the law is dependent on the stakeholders involved in each community. The following are some suggestions for additional purposes that communities may choose to incorporate into their local law, where appropriate:

- Decreasing the use of fossil fuels, thereby reducing the carbon footprint of [Insert Name of Municipality];
- Investing in a locally-generated source of energy and increasing local economic value, rather than importing non-local fossil fuels;
- Aligning the laws and regulation of the community with several policies of the State of New York, particularly those that encourage distributed energy systems;
- Becoming more competitive for a number of state and federal grants and tax benefits;
- Making the community more resilient during storm events;
- Aiding the energy independence of the country;
- Diversifying energy resources to decrease dependence on the grid;
- Improving public health;
- Encouraging a sense of pride in the community;

- Encouraging investment in public infrastructure supportive of solar, such as generation facilities, grid-scale transmission infrastructure, and energy storage sites;
- Creating synergy between solar actions of the community and the sustainability provisions of the Comprehensive Plan; and/or
- Creating synergy between solar and [other stated goals of the community pursuant to its Comprehensive Plan], [such as urban/downtown revitalization, vacant land management, creating a walkable, healthy community, etc.].

3. Definitions

BUILDING INTEGRATED PHOTOVOLTAIC SYSTEM: A combination of photovoltaic building components integrated into any building envelope system such as vertical facades including glass and other facade material, semitransparent skylight systems, roofing materials, and shading over windows.

GROUND-MOUNTED SOLAR ENERGY SYSTEM: A Solar Energy System that is anchored to the ground and attached to a pole or other mounting system, detached from any other structure for the primary purpose of producing electricity for onsite consumption.

LARGE-SCALE SOLAR ENERGY SYSTEM: A Solar Energy System that is ground-mounted and produces energy primarily for the purpose of offsite sale or consumption.

ROOF-MOUNTED SOLAR ENERGY SYSTEM: A Solar Panel System located on the roof of any legally permitted building or structure for the primary purpose of producing electricity for onsite or offsite consumption.

SOLAR ENERGY EQUIPMENT: Electrical energy storage devices, material, hardware, inverters, or other electrical equipment and conduit of photovoltaic devices associated with the production of electrical energy.

SOLAR ENERGY SYSTEM: An electrical generating system composed of a combination of both Solar Panels and Solar Energy Equipment.

SOLAR PANEL: A photovoltaic device capable of collecting and converting solar energy into electrical energy.

These definitions are critical to the workability of the remaining sections of the law. There are five types of Solar Energy Systems identified here. Building-Integrated Photovoltaic Systems are exempt from the law under Section 4. Roof-Mounted Solar Energy Systems that use the electricity onsite or onsite are permitted as accessory uses and Ground-Mounted Solar Energy Systems that use the electricity primarily onsite are permitted as

accessory structures. Both are subject to standards contained in Section 5. Note that the Model Law is written for solar photovoltaic (PV) systems and does not cover solar hot water (solar thermal) systems. A municipality could consider incorporating solar hot water systems into its codes for a more comprehensive approach solar energy systems, but as this is beyond the scope of this toolkit, careful consideration should be given to the impact on each section of the Model Law.

Note that the local zoning codes routinely have definitions of accessory uses and buildings or structures. It is important to review those definitions and determine whether there might be any conflict between them and the requirements under this law. This law implicitly defines as an accessory use or structure Solar Energy Systems that produce energy primarily for onsite use, and states that such uses are subordinate to the principal use found on the lot. Anything that limits the definition of "subordinate" in the zoning law must be preempted by this law, and that should be done in the Applicability Section (Section 4).

The Model Law does not include a specific definition for Solar Energy Systems raised on canopy mounting, such as a solar parking canopy. These configurations are included within the definition of Ground-Mounted Solar Energy Systems or Roof Mounted Solar Energy Systems, depending on the location of the canopy. If a solar canopy system is anticipated to require special consideration, a municipality could consider using a waiver, such as the one described below in the directions for Section 6 A.

Large-Scale Solar Energy Systems are permitted under this law as special uses under Section 6. The definition of Large-Scale Solar Energy Systems includes only those systems that are ground-mounted and produce electricity primarily for offsite use. This would not include a system installed primarily for the purpose of supplying power onsite that, under net-metering or other arrangement, provides or sells power back to the grid or to other users. It would include any ground-mounted community solar or remote net metered system installed primarily for the purpose of supplying power offsite.

Since Solar Energy Systems vary significantly by size, a municipality may consider adding this factor to the zoning definitions. Zoning may define Solar Energy Systems according to their physical size using measurements similar to those found in the zoning ordinance's bulk and area requirements. Typically, bulk and area standards limit the size of a system using a minimum or maximum footprint or disturbance zone measured in acres, square feet, percent lot coverage, or percent of the primary structure's footprint. For example, a Large-Scale Solar Energy System could be defined as a system that is greater than 40,000 square feet. A municipality could also consider defining Solar Energy Systems based on energy capacity because the physical size of a solar energy system generally increases as kilowatts produced increases. Further, communities often use energy usage metrics to define Solar Energy Systems because many incentives are available based on

how much energy a system produces. For example, a Large-Scale Solar Energy System could be defined as a system that produces greater than 250 kilowatts.

The Model Law deals with Solar Energy Systems as accessory or special uses; in the alternative, localities interested in promoting solar could permit systems as principal uses in appropriate districts (see Appendix 2: Additional Issues for Consideration).

4. Applicability

The requirements of this law shall apply to all Solar Energy Systems installed or modified after its effective date, excluding general maintenance and repair and Building-Integrated Photovoltaic Systems.

The Applicability Section establishes the effective date for implementation of the law. In addition, it carves out an exemption for maintenance and repair of systems and Building-Integrated Photovoltaic Systems. Building-Integrated Photovoltaic Systems are exempt from the requirements of the law because they are integrated into building envelope systems themselves, including vertical façades (made of glass and/or other façade materials), semitransparent skylight systems, roofing materials, and window shading elements. These systems are regulated in the same manner as the building envelope systems of which they are a part.

Note that other zoning code definitions and regulations and uses should be reviewed for conflict with the provisions of this law. One example of what to look for includes a provision that prevents an accessory use from existing on an accessory structure, which this law allows. If permitting Solar Energy Systems as defined conflicts with any provision in the zoning code that defines or limits the use of the term “subordinate,” this law should state that it preempts the more restrictive definition. Some local zoning laws prohibit accessory uses to other accessory uses, which this law allows. One solution to this and the other problems noted here is to include an amendment directly in the zoning law definition that defines solar accessory uses, and makes it clear that they are allowed despite restrictive definitions of “subordinate” or the prohibition of accessory uses to accessory buildings.

5. Solar as an Accessory Use/Structure

A. Roof-Mounted Solar Energy Systems.

1) Roof-Mounted Solar Energy Systems that use the electricity onsite or offsite are permitted as an accessory use in all zoning districts when attached to any lawfully permitted building or structure.

2) *Height. Solar Energy Systems shall not exceed maximum height restrictions within the zoning district it is located in and are provided the same height exemptions granted to building-mounted mechanical devices or equipment.*

3) *Aesthetics. Roof-Mounted Solar Energy System installations shall incorporate, when feasible, the following design requirements:*

    a. *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.*

4) *Roof-Mounted Solar Energy Systems that use the energy onsite or offsite shall be exempt from site plan review under the local zoning code or other land use regulations.*

B. *Ground-Mounted Solar Energy Systems.*

1) *Ground-Mounted Solar Energy Systems that use the electricity primarily onsite are permitted as accessory structures in [Insert District(s)].*

2) *Height and Setback. Ground-Mounted Solar Energy Systems shall adhere to the height and setback requirements of the underlying zoning district.*

3) *Lot Coverage. Systems are limited to [Insert Lot Coverage Percentage]. The surface area covered by Ground-Mounted Solar Panels shall be included in total lot coverage.*

4) *All such Systems in residential districts shall be installed in the side or rear yards.*

5) *Ground-Mounted Solar Energy Systems that use the electricity primarily onsite shall be exempt from site plan review under the local zoning code or other land use regulations.*

A. Directions for Roof-Mounted Solar Energy Systems

Roof-Mounted Solar Energy Systems regulated under this Section produce electricity for onsite or offsite consumption, are permitted as an accessory use in all zoning districts, and do not require site plan review. Because Roof-Mounted Solar Energy Systems are installed on existing structures, their placement has no effect on the impermeability of a property's surface area, nor the parcel's lot coverage, making it common to exclude Roof-Mounted Solar Energy Systems from lot coverage and impervious surface calculations. Most concerns related to these systems are attributed to aesthetics, which in some communities can be a major barrier to the approval of Solar Energy Systems. Understanding clearly the specific aesthetic concerns will help the community limit those

applicable to how Roof-Mounted Solar Energy Systems are regulated. To help regulate aesthetics, specific requirements regarding height, coloration and equipment placement can be incorporated into zoning regulations. The Model Law applies the zoning district height requirements, including the exemption for mechanical devices. Municipalities should evaluate their existing exemption for mechanical devices to determine if it is overly restrictive with regard to roof coverage or height. To promote the installation of Roof-Mounted Solar Energy Systems, municipalities could exempt Roof-Mounted Solar Energy Systems from height restrictions entirely. The Model Law also includes other aesthetic standards that address placement and tilt, but limits the enforcement to "when feasible" to avoid overly burdensome standards.

Municipalities particularly concerned with aesthetics may also consider adding the following provisions:

- *Solar Energy Equipment shall be installed inside walls and attic spaces to reduce their visual impact.*
- *If Solar Energy Equipment is visible from a public right of way, it shall be compatible with the color scheme of the underlying structure.*
- *Solar Panels affixed to a flat roof shall be placed below the line of sight from a public right of way.*

Note that where a community has generally applicable design guidelines or an Architectural Review Board, those guidelines and that board should be consulted to determine whether any additional standards should be inserted in this Section. If this is done, it may make it easier to exempt Solar Energy Systems from some or all Architectural Review Board requirements. Conflicts between this Model Law and the requirements of Historic District laws are discussed in Additional Issues for Consideration. If the community has a Historic District Law, the document's provisions regarding that option should be consulted.

B. Directions for Ground-Mounted Solar Energy Systems

Ground-Mounted Solar Energy Systems regulated under this Section produce electricity primarily for onsite consumption, are permitted as an accessory structures in those districts deemed appropriate by the local jurisdiction, and do not require site plan review. Ground-Mounted Solar Energy Systems are standalone structures, and have different implications than roof-mounted installations. Because system sizes are not limited to a structure's available roof space, it's important to think about the size of the parcel in relation to the allowable system size, after accounting for setbacks.

The Model Law limits the height and setbacks of Ground-Mounted Solar Energy Systems to the requirements in the underlying zoning district. Each municipality must adopt appropriate height restrictions based on local need. Alternatively, as described below,

implementing a graduated setback allows Ground-Mounted Solar Energy Systems to increase in height as a system's distance from a lot-line increases, helping to alleviate aesthetic concerns. The following is an example of this approach. *Ground Mounted Solar Energy Systems shall not exceed a height of [10ft] when located at a distance of less than or equal to [10ft] from a lot line; a height of [12ft] when located at a distance of greater than [10ft and less than or equal to15ft], and a maximum height of [15ft] when located at a distance greater than [15ft]. All height measurements are to be calculated when the Solar Energy System is oriented at maximum tilt.*

Solar Energy Systems on raised canopies, such as solar parking canopies, and other mounting configurations may be incompatible with height limits. Height limits should be examined carefully; and situations requiring exceptions could be handled through a waiver as described below in the directions of Section 6 A.

The Model Law leaves it to the locality to determine the permissible lot coverage and requires that the Solar Panels are used to calculate lot coverage. Localities may require that Ground-Mounted Solar Energy Systems meet lot coverage requirements of the underlying district in which they are located. The provision related to lot coverage could be handled by allowing the Ground-Mounted Solar Energy System to exceed total maximum lot coverage. Such a provision is more supportive of these systems. Since Ground-Mounted Solar Energy Systems do not include much impervious surface and since lot coverage requirements are designed, in large part, to reduce impervious surfaces and the run-off they create, such an add-on might be acceptable. Additionally, the local law can measure Ground-Mounted Solar Energy Systems by their actual impervious footprint, which will be less than measuring the square footage of the Solar Panels. Since these systems must meet setback requirements and, in residential districts, are restricted to side and rear yards, some flexibility in exceeding underlying lot coverage limitations is reasonable. Also, most lots are not built at the maximum lot coverage allowed, which means that many Ground-Mounted Solar Energy Systems will not exceed the underlying requirements. To avoid being overly restrictive, municipalities with rural or less dense areas may elect to remove the Model Law's requirement that Ground-Mounted Solar Energy Systems in residential districts must be installed in the side or rear yards. These systems might not be visible from the street in less dense areas.

6. Approval Standards for Large-Scale Solar Systems as a Special Use

A. *Large-Scale Solar Energy Systems are permitted through the issuance of a special use permit within [Insert District(s)], subject to the requirements set forth in this Section, including site plan approval. Applications for the installation of a Large-Scale Solar Energy System shall be reviewed by the Zoning Enforcement Officer and referred, with comments, to the [Insert Regulatory Body Here] for its review and action, which can include approval, approval on conditions, and denial.*

B. Special Use Permit Application Requirements. For a special permit application, the site plan application is to be used as supplemented by the following provisions.

1) If the property of the proposed project is to be leased, legal consent between all parties, specifying the use(s) of the land for the duration of the project, including easements and other agreements, shall be submitted.

2) Blueprints showing the layout of the Solar Energy System signed by a Professional Engineer or Registered Architect.

3) The equipment specification sheets shall be documented and submitted for all photovoltaic panels, significant components, mounting systems, and inverters that are to be installed.

4) Property Operation and Maintenance Plan. Such plan shall describe continuing photovoltaic maintenance and property upkeep, such as mowing and trimming.

5) Decommissioning Plan. To ensure the proper removal of Large-Scale Solar Energy Systems, a Decommissioning Plan shall be submitted as part of the application. Compliance with this plan shall be made a condition of the issuance of a special use permit under this Section. The Decommissioning Plan must specify that after the Large-Scale Solar Energy System can no longer be used, it shall be removed by the applicant or any subsequent owner. The plan shall demonstrate how the removal of all infrastructure and the remediation of soil and vegetation shall be conducted to return the parcel to its original state prior to construction. The plan shall also include an expected timeline for execution. A cost estimate detailing the projected cost of executing the Decommissioning Plan shall be prepared by a Professional Engineer or Contractor. Cost estimations shall take into account inflation. Removal of Large-Scale Solar Energy Systems must be completed in accordance with the Decommissioning Plan. If the Large-Scale Solar Energy System is not decommissioned after being considered abandoned, the municipality may remove the system and restore the property and impose a lien on the property to cover these costs to the municipality.

C. Special Use Permit Standards.

1) Height and Setback. Large-Scale Solar Energy Systems shall adhere to the height and setback requirements of the underlying zoning district.

2) *Lot Size. Large-Scale Energy Systems shall be located on lots with a minimum lot size of [Insert Size Requirement].*

3) *Lot Coverage. A Large-Scale Solar Energy System that is ground-mounted shall not exceed [Insert Lot Coverage Percentage] of the lot on which it is installed. The surface area covered by Solar Panels shall be included in total lot coverage.*

4) *All Large-Scale Solar Energy Systems shall be enclosed by fencing to prevent unauthorized access. Warning signs with the owner's contact information shall be placed on the entrance and perimeter of the fencing. The type of fencing shall be determined by the [Insert Regulatory Body Here]. The fencing and the system may be further screened by any landscaping needed to avoid adverse aesthetic impacts.*

5) *Any application under this Section shall meet any substantive provisions contained in local site plan requirements in the zoning code that, in the judgment of the [Insert Regulatory Body Here], are applicable to the system being proposed. If none of the site plan requirements are applicable, the [Insert Regulatory Body Here] may waive the requirement for site plan review.*

6) *The [Insert Regulatory Body Here] may impose conditions on its approval of any special use permit under this Section in order to enforce the standards referred to in this Section or in order to discharge its obligations under the State Environmental Quality Review Act (SEQRA).*

A. Directions for Large-Scale Solar Energy Systems

Large-Scale Solar Energy Systems regulated under this Section are permitted through the issuance of a special use permit within districts selected by the local jurisdiction and subject to site plan approval. The Model Law instructs the community to insert which of its zoning districts should permit large-scale systems. This is purely a matter of local discretion and will be based, in each case, on the number and types of zoning districts in each locality and the development in each of those districts. Some communities may wish to exclude Large-Scale Solar Energy Systems from high and medium density residential districts or exclude them from residential districts altogether. The same can be said for some retail districts where conditions suggest that Large-Scale Solar Energy Systems should not be allowed. Since the adoption of this Model Law will be the municipality's first effort to permit Solar Energy Systems, it may be deemed prudent to limit the zones that permit Large-Scale Solar Energy Systems, understanding that the zones in which they are allowed can be increased in the future. It is important that municipalities incorporate all the conditions and requirements for a special use permit into the notice of decision.

Site plan approval is not required for any Solar Energy Systems except for Large-Scale Solar Energy Systems under this law. This is because most zoning codes have extensive requirements for site plan approval, most of which do not apply to Solar Energy Systems. Subjecting such systems to such approval can greatly increase the costs and time involved in the land use approval process.

Note that by defining Large Scale Solar Energy Systems as those ground-mounted systems that produce energy primarily for the purpose of offsite sale or consumption, the Model Law necessarily includes all ground-mounted community solar systems into section 6 and subjects them to the requirements in this section. This is true no matter what the scale of the solar system is or where it is to be located. A municipality may consider a waiver of for smaller scale projects or projects in preferred locations. The following provision could be added after 6 A:

B. Waiver: The [Insert Regulatory Body Here] may, in its discretion, waive the requirements of this section for a Large-Scale Solar System that it believes is harmonious with land uses in the area where it is proposed to be built and where, because of its size or other considerations, the [Insert Regulatory Body Here] believes that it does not need to be subjected to the special use permit and site plan regulations imposed by this section. This waiver may be a partial waiver, allowing the [Insert Regulatory Body Here] to require a Large-Scale Solar System to comply with individual requirements found in this section.

Adding this provision will require re-lettering the following sub-sections of section 6. Such a waiver could also be used to remove Special Use Permit Standards, such as required fencing, for smaller scale projects or other situations where these standards are deemed unnecessary by the community.

B. Special Use Permit Application Requirements.

As the Model Law contemplates Solar Energy Systems as a specially permitted use, there is a high probability that to require separate site plan and special permit applications would result in a great deal of redundant information. Therefore, the site plan application can be used, as supplemented by the additional special permit provisions of Section 6(B).

Note that it is important to consolidate the review of application for Solar Energy System approval in one board. In some communities, the local zoning law may allocate responsibilities for special use permits and site plan approvals to different boards. Moving the application back and forth between two boards can add months and unnecessary costs to the provision of Solar Energy. Where it is the case, the community should determine which board should be primarily responsible for Solar Energy System approvals and consolidate special use permit and site plan approval there by adding the following language to the Model Law. “All site plan and special use permit approvals for

Solar Energy Systems shall be the responsibility of the [Insert Regulatory Body Here] in order to avoid delays in the review of Solar Energy System applications."

Including specific requirements for special permit approval ensures that potential issues that may arise with a solar project are addressed in the initial stages of the project. Where the proposed project will be constructed on leased land, an important component for submission is the documentation of legal consent between all parties that specifies all use(s) the land will be put to (including all access easements and other agreements); this ensures that all parties are aware of and consent to the installation of the Solar Energy System as well as any required access easements for maintenance, etc. The requirements for submission of blueprints and equipment specification sheets provide a reliable visual for the reviewing board and ensure the safety of the project. A Property and Maintenance Operation Plan provides assurance that the System will continue to be maintained throughout its useful life at an appropriate standard reflective of aesthetics and safety.

Finally, requiring a Decommissioning Plan straddles the line between promoting Solar Energy Systems, which the Plan burdens, and protecting community character and the environment, which the Plan furthers. In considering whether to include or strengthen this provision, it is recommended that the community discuss its impact with property owners, installers, and energy companies. The cost of removing the system at the end of its useful life is a finite number, which when calculated over numerous years may not be a serious disincentive to the proliferation of larger systems. Having such a requirement may greatly increase the prospects of winning approval for a special permit, since it addresses a critical concern of the project's neighborhoods. In considering the requirement that the site must be restored to its "original state," the inclusion of specific language regarding the degree of restoration is useful in resolving ambiguities. For example, "original state" may be defined to mean removal of all panels and other equipment (and may or may not, at the municipality's discretion, include removal of all foundations) and the seeding of grass (as opposed to, e.g., the complete restoration of vegetative cover). The municipality may choose the degree to which the site must be restored that is most appropriate for its unique needs and character.

C. Special Use Permit Standards.

The Model Law Special Use Permit Standards require that the System adhere to the height and setback requirements of the underlying zoning district. The Model Law leaves it to the locality to determine the minimum lot size needed to qualify for a permit for a Large-Scale Solar Energy System. Depending on the need of each locality, lot size requirements should be expressed in acreage or square feet. Determining this should be done in conjunction with determining in which zoning districts such systems shall be allowed. One solution is to require a different minimum for each district depending on what development is present in each one. Because the community can use its power

under SEQRA to mitigate environmental impacts in given situations, a relatively small minimum lot size can be used, but that size can be increased as a SEQRA mitigation condition if the nearby impacts of the system are adverse.

The Model Law requires that the panel be used to calculate lot coverage, but leaves it to the locality to determine the permissible lot coverage. Localities may require that the system meet lot coverage requirements of the underlying district in which they are located. The provision related to lot coverage could be handled by allowing the Ground-Mounted Solar Energy System to exceed total maximum lot coverage. Such a provision is more supportive of Solar Energy Systems.

The Model Law requires Solar Energy Systems be enclosed by fencing and warning signs posted. Additional screening may be required when necessary to avoid adverse aesthetic impacts. As smaller scale Solar Energy Systems or Solar Energy Systems in remote locations may not require fencing from a practical standpoint, municipalities could consider adding the Waiver section described above or remove this section if they decide it is unnecessary.

In general, the locality should think through how helpful SEQRA can be in mitigating adverse impacts of any proposed system approved as a special permit under this Section (see Section 6(C)(6). All applications will have to be accompanied by an Environmental Impact Form, which can be supplemented to include any impacts of concern in any particular location. This authority justifies limiting the standards for the special permit, removing standards in the site plan requirements, and other provisions that are supportive of Solar Energy Systems. All impacts of concern can be identified and mitigated using the locality's SEQRA authority.

While this Section requires site plan approval, it also permits the applicable body to waive any and all provisions of local site plan regulations that do not or should not be applied to Solar Energy Systems. As stated above, many of the requirements of site plan applications and standards are not applicable to Solar Energy Systems, so if they are not waived the site plan approval process can significantly burden Solar Energy System applicants and become a barrier to solar energy. The Model Law specifies that the zoning enforcement officer (ZEO) should recommend to the appropriate board those provisions of site plan regulations that should be waived. The ZEO's recommendations are not binding on the reviewing board. Over time, the appropriate board will develop clear standards for what site plan requirements must be met for these Systems. An option here is to remove the ZEO's function and state that the appropriate board itself shall review each application and decide which site plan standards to apply and which to waive.

In the absence of site plan review, the community can protect itself from adverse impacts of Large-Scale Solar Energy Systems by:

- Not waiving applicable site plan standards;
- Adding needed protective standards to the special permit standards section;
- Codifying the specific site plan standards required by creating a minor site plan approval process and standards for Large-Scale Solar Energy Systems, including in the minor site plan language all provisions of the current site plan regulations that are applicable to Large-Scale Solar Energy Systems; or
- Requiring the applicant to submit to the appropriate board the Long Environmental Assessment Form under SEQRA, including any supplemental information that the Planning Board requests. The Board may then use that form to identify and require the mitigation of any aspect of the Large-Scale Solar Energy System that constitutes a significant adverse environmental impact.

See more on this approach in Appendix 2: Additional Issues for Consideration.

7. Abandonment and Decommissioning

Solar Energy Systems are considered abandoned after [Insert Time Period] without electrical energy generation and must be removed from the property. Applications for extensions are reviewed by the [Insert Regulatory Body Here] for a period of [Insert Time Period].

Solar Energy Systems may dramatically increase impervious coverage, habitat and farmland loss, and aesthetic impacts; therefore, they may be required to adhere to more rigorous development standards than other types of uses. These include regulations that define when a Solar Energy System is abandoned and must be decommissioned, and provide recourse if the property owner does not comply with such provisions.

Abandonment occurs when Solar Energy System is inactive (not in use) for a certain period of time. Abandonment as it applies to Solar Energy Systems requires that the Solar Energy System be removed after a specified amount of time. Establishing a timeframe for the removal of a Solar Energy System can be based on aesthetics, system size, location, and system complexity. Municipalities, in their codes, can designate the amount of time after which a Solar Energy System is considered abandoned. If a Solar Energy System is considered abandoned (as defined in the municipality's code), the municipality can then bring enforcement actions such as imposing civil penalties/fines and/or removing the system and imposing a lien to recover the associated costs. It is also important to note that despite many municipalities' choice to require a financial mechanism for decommissioning, similar to telecommunications installations, there is no specific authority to do so as part of a land use approval for solar PV projects. Therefore, a municipality should consult the municipal attorney when evaluating financial mechanisms.

Decommissioning is the process by which an abandoned/inactive Large-Scale Solar Energy System is removed and the land upon which it stood is remediated. When

describing requirements for decommissioning, it is prudent to be specific; for example, to require physical removal of infrastructure, as well as disposal of all hazardous waste and restoration (e.g. stabilization/re-vegetation) of the site. A decommissioning plan is required for Large-Scale Solar Energy Systems pursuant to Section 6.

8. Enforcement

Any violation of this Solar Energy Law shall be subject to the same civil and criminal penalties provided for in the zoning regulations of [Insert Town, Village, or City Here].

This Section provides that any violation of the Solar Energy Law will result in the same assessment of the civil and criminal penalties already laid out in the existing enforcement provision(s) of the municipality's zoning code.

9. Severability

The invalidity or unenforceability of any section, subsection, paragraph, sentence, clause, provision or phrase of the aforementioned sections as declared by the valid judgment of any court of competent jurisdiction to be unconstitutional shall not affect the validity or enforceability of any other section, subsection, paragraph, sentence, clause, provision or phrase, which shall remain in full force and effect.

Local laws typically have a provision that saves the entire law from invalidation by the courts if one or a few provisions are found invalid. The language in Section 8 can be adjusted to match that of the language already found in the severability clauses in a locality's other laws.

Additional Issues for Consideration

The following is a non-exhaustive list of considerations in which localities may be interested as they update their zoning laws. In the left hand column below are found considerations that may be applicable, or of interest, to a particular community. In the corresponding right hand column are references to the section or subsection of the resources cited below, where helpful information can be found to assist the community in adapting the Model Law to its specific needs.

Additional Considerations for Municipalities	
Expansion & Alternatives Addressed in Model Law and Review Process Considerations	
If You Are A Municipality…	**Then…**
interested in making some Solar Energy Systems **as-of-right or principal uses** within your zoning district(s)	Refer to Section I(A)
interested in the inclusion of heightened provisions for the **decommissioning** of Large-Scale Solar Energy Systems	Refer to Section I(B)
Permitting and Review Process Considerations	
If You Are A Municipality…	**Then…**
interested in streamlining the permitting process through the adoption of the **NYS Unified Solar Permit**	Refer to Section II(A)
interested in in **state building codes** that relate to Solar Energy Systems	Refer to Section II(B)
interested in the application of the **State Environmental Quality Review Act (SEQRA)** to Solar Energy Systems	Refer to Section II(C)
interested in the application of **stormwater management programs**	Refer to Section II(D)
Special Districts	
If You Are A Municipality…	**Then…**
containing **architectural design districts** or wish to incorporate **architectural design standards** into your solar law	Refer to Section III(A)

Additional Considerations for Municipalities	
Special Districts	
If You Are A Municipality…	**If You Are A Municipality…**
containing **historic districts** or wish to incorporate **historic design standards** into your solar law	Refer to Section III(B)
concerned about the impacts of solar on your **agricultural communities** and/or must meet **N.Y. Agricultural District** requirements	Refer to Section III(C)
Special Considerations	
If You Are A Municipality…	**Then…**
interested in the **State Reforming the Energy Vision Initiative** and how it relates to Solar Energy Systems	Refer to Section IV(A)
interested in local options for **solar access standards** and **solar access protection**	Refer to Section IV(B)
located in close proximity to an **airport** and would like to learn more about regulations specific to Solar Energy Systems located at airports	Refer to Section IV(C)
Other Resources	

I. Expansion & Alternatives Addressed in Model Law

A. Making some Solar Energy Systems as As-of-Right Use/Principal Use

The Model Law does not define any Solar Energy System that is permitted as-of-right; rather, all systems are either exempt, accessory uses/structures, or subject to a special permit. If you are a municipality interested in making some Solar Energy Systems as-of-right or principal uses within your zoning district(s), please refer to the following resources:

- **Zoning for Solar Energy Resource Guide (Part 3.1)**: This Guide is designed to help NYS localities amend zoning and other land use regulations to permit the development of Solar Energy Systems in their jurisdictions. It provides guidance on how a municipality can amend

zoning to permit these systems either as principal, secondary, accessory, or specially permitted land uses in existing zoning districts, as well as how to exempt certain systems from zoning altogether. *Available at*: https://training.ny-sun.ny.gov/images/PDFs/Solar%20Zoning%20Resource%20Guide.pdf

B. Abandonment and Removal

If you are a municipality interested in the inclusion of heightened provisions for the abandonment and removal of Large-Scale Solar Energy Systems, please refer to the following resources:

- **Zoning for Solar Energy Resource Guide (Part 3.4)**: This Guide is designed to help NYS localities amend zoning and other land use regulations to permit the development of Solar Energy Systems in their jurisdictions. It provides guidance on development standards for solar, including decommissioning provisions. *Available at*: https://training.ny-sun.ny.gov/images/PDFs/Solar%20Zoning%20Resource%20Guide.pdf

II. Permitting and Review Process Considerations

A. The NYS Unified Solar Permit System

If you are a municipality interested in streamlining the permitting process through the adoption of the NYS Unified Solar Permit System and exempting such Systems from your solar law, then further information may be found at the following resources:

- **NY Solar Smart, NYS Unified Solar Permit:** This Checklist walks through the requirements for Unified Solar Permit application submittal. *Available at*: http://www.cuny.edu/about/resources/sustainability/nyssolar/NYS_unified_solar_permit.pdf
- **Zoning for Solar Energy Resource Guide (Part 3.2)**: This Guide is designed to help NYS localities amend zoning and other land use regulations to permit the development of Solar Energy Systems in their jurisdictions. It provides guidance on how to streamline the solar review process using the Unified Solar Permit. *Available at*: https://training.ny-sun.ny.gov/images/PDFs/Solar%20Zoning%20Resource%20Guide.pdf

B. State Building Codes

If you are a municipality interested in state building codes that relate to Solar Energy Systems, please see the following resources:

- **APA, Planning for Solar**: This report includes specific guidance to help communities integrate solar-supportive goals, objectives, policies, and actions into local comprehensive plans; key strategies for promoting solar energy use through development services and public-private partnerships; discussion on how local governments can make direct investments in solar through installations on public facilities and through economic development and educational programs; and touches on some emerging trends that may affect community efforts to promote solar energy use in the future. The appendices include a checklist to help communities evaluate how well their existing policy frameworks support solar energy use, a tool to help communities work through the steps of drafting new regulations for solar development, and examples of solar-supportive plan policies and development regulations from communities across the country. *Available at*: http://www.growsolar.org/wp-content/uploads/2014/10/Planning-for-Solar-Energy-2014_PAS-575.pdf.
- **National Renewable Energy Laboratory, Solar Ready Buildings Planning Guide**: This document identifies the important aspects of building design and construction to enable installation of Solar PV and heating Systems after a building has already been constructed. *Available at*: http://www.nrel.gov/docs/fy10osti/46078.pdf.
- The **NYS Department of State (DOS)** serves as NYS's planning agency. It promotes business growth by facilitating business formation, compiles state agency rules and regulations, as well as publishes official state documents with an eye towards reinvigorating the State's economy. There are a number of divisions within the DOS that may be relevant for zoning for solar, including the Division of Building Standards and Codes (BSC), which administers the mandatory statewide Uniform Fire Prevention and Building Code and the State Energy Conservation Construction Code, as well as the Division of Local Government Services, which provides training and technical assistance on issues related to public works, municipal organization, planning, land use and regulatory controls, and community development. The Division of Local Government Services published a useful Guide to Planning and Zoning Laws in NYS.
- **Zoning for Solar Energy Resource Guide (Part 7)**: This Guide is designed to help NYS localities amend zoning and other land use regulations to permit the development of Solar Energy Systems in their jurisdictions. It provides guidance on incentivizing solar development through providing building-ready standards in local building codes. *Available at*: https://training.ny-sun.ny.gov/images/PDFs/Solar%20Zoning%20Resource%20Guide.pdf

C. Use of Environmental Impact Review to Protect the Neighborhood

If you are a municipality interested in the application of SEQRA review to solar projects and/or opportunities for streamlining the process, please refer to the following resources:

- **The New York State Department of Environmental Conservation (DEC)** implements and enforces legislative mandates targeted at protecting public health and safety, such as SEQRA. The DEC has created a number of helpful resources to clarify the requirements for SEQRA, including those relevant for installing solar energy systems.
- **Zoning for Solar Energy Resource Guide (Part 5, SEQRA)**: This Guide is designed to help NYS localities amend zoning and other land use regulations to permit the development of Solar Energy Systems in their jurisdictions. It provides guidance on navigating the SEQRA process for solar projects. *Available at*: https://training.ny-sun.ny.gov/images/PDFs/Solar%20Zoning%20Resource%20Guide.pdf

D. Stormwater Considerations

If you are a municipality interested in the application of stormwater management programs (including compliance with NPDES permits or other stormwater discharge requirements of your local laws), then please refer to the following resources:

- The New York State Department of Environmental Conservation (DEC) implements and enforces legislative mandates targeted at protecting public health and safety, such as SPDES. The DEC has created a number of helpful resources to clarify the requirements for SPDES, including those relevant for installing solar energy systems.

III. Special Districts

A. Architectural Design Districts

If you are a municipality containing architectural design districts or wish to incorporate architectural design standards into your solar law, please refer to the following resources:

- **Zoning for Solar Energy Resource Guide (Part 3.4)**: This Guide is designed to help NYS localities amend zoning and other land use regulations to permit the development of Solar Energy Systems in their jurisdictions. It provides guidance on development standards for solar. *Available at*: https://training.ny-sun.ny.gov/images/PDFs/Solar%20Zoning%20Resource%20Guide.pdf

B. Solar in Historic Districts or Treatment of Individual Historic Properties

If you are a locality containing historic districts or wish to incorporate historic design standards into your solar law, please refer to the following resources:

- **National Trust for Historic Preservation**: The National Trust for Historic Preservation (National Trust) is a nonprofit organization whose primary goal is to preserve historical places. The National Trust has prepared design guidelines and draft language for preservation ordinances that meet solar access requirements while protecting solar resources.
- **National Alliance of Preservation Commissions**: The National Alliance of Preservation Commissions (NAPC) is a nonprofit organization that aims to build local preservation through educations, advocacy, and training. The NAPC offers solar guidelines for historic projects and other resources to support historic preservation.
- **Department of Interior**: The Department of Interior (DOI) is a U.S. government agency with the mission of protecting the country's natural resources and heritage. As it manages a large amount of U.S. land, the DOI is also responsible for supplying the country with energy. Among other resources, it has produced "Guidelines on Sustainability for Rehabilitating Historic Buildings." These Guidelines provide specific guidance on how to make historic buildings more sustainable through interpreting basic preservation principles. Within the DOI, the National Park Service provides additional information and recommendations on solar and historic buildings.
- **US Department of Energy & City of San Antonio, Building a Solar Powered Home in a Historic Neighborhood:** This case study discusses the construction and permitting of Solar-powered homes in San Antonio's historic district. *Available at*: https://www.sanantonio.gov/Portals/0/Files/Sustainability/SolarPoweredHomeCaseStudy.pdf
- **APA, Balancing Solar Energy Use with Potential Competing Interests (see Briefing Paper No. 5, pg. 45):** This Briefing Paper discusses the potential conflicts between promoting Solar and preserving historic districts and suggest strategies for addressing them. *Available at*: https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/research/solar/briefingpapers/pdf/solarpaperscompendium.pdf.
- **NYS Department of State, Legal Aspects of Municipal Historic Preservation**: This paper provides an overview of historic preservation law in NYS that may be helpful for localities interested in new regulatory

schemes for historic preservation that are more solar-friendly. *Available at*: http://www.dos.ny.gov/lg/publications/Legal_Aspects_of_the_Municipal_Historic_Preservation.pdf.

C. Solar in Agricultural Communities/Agricultural Districts

If you are a rural municipality concerned about the impacts of solar on your agricultural communities and/or must meet N.Y. Agricultural District requirements, please refer to the following resources:

- **Guideline for Review of Local Zoning and Planning Laws**: This resource discusses guidelines for managing potential conflicts between farm operations and local land use controls that may occur. *Available at*: 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**: This guide discusses farming operations and the installation of solar equipment for the purpose of providing onsite energy to the farm. *Available at*: http://www.agriculture.ny.gov/ap/agservices/guidancedocuments/Guidelines_for_Solar_and_Small_Wind_Energy_Facilities.pdf.
- **New York State Department of Agriculture and Markets:** The New York State Department of Agriculture and Markets regulates and promotes a competitive food and agricultural industry. To assist municipalities in drafting local law and ordinances that may affect farming in an agricultural district, the Department of Agriculture and Market has prepared guidelines or reviewing local laws affecting solar as well as a guidance document on how local laws and agriculture districts relate.

IV. Special Considerations

A. Inclusion of a Reference to Regulating Other Clean Energy Systems Promoted by REV

If you are a municipality interested in the State Reforming the Energy Vision Initiative and how it relates to Solar Energy Systems:

- The **NYS Department of Public Service (DPS)** has information on Reforming the Energy Vision (REV) at its website, including a White Paper prepared by staff: http://www3.dps.ny.gov/W/PSCWeb.nsf/All/CC4F2EFA3A2355158525 7DEA007DCFE2?OpenDocument.

B. Protecting Solar Access

If you are a municipality interested in local options for solar access standards and solar access protection, please refer to the following resources:

- **A Comprehensive Review of Solar Access Law in the United States**: This report reviews the ability of existing law and regulation in the United States to protect solar access, outlines a comprehensive approach to protecting solar access, and provides a model solar statute based on best practices. *Available at*: http://www.solarabcs.org/about/publications/reports/solar-access/pdfs/Solaraccess-full.pdf.
- **DSIRE, Solar Easements & Local Option Solar Rights Laws:** This resource provides a concise summary of the provisions of NYS real property law that allow for the creation of access easements. *Available at*: http://programs.dsireusa.org/system/program/detail/309.

C. Federal Aviation Administration (FAA) Provisions

If you are a municipality located in close proximity to an airport and would like to learn more about regulations specific to Solar Energy Systems located at airports, please refer to the following resources:

- **Federal Aviation Administration:** The Federal Aviation Administration is the national aviation authority in the U.S. that regulates all aspects of civil aviation, including solar technologies. The FAA has produced Technical Guidance for Evaluating Selected Solar Technologies on Airports to address the increasing interest in placing solar systems on airports. It provides information on airport regulations and information needed for FAA personnel and airport sponsors. The FAA has also developed a policy for solar energy projects on federally obligated airports.

V. Other Resources

For further information on the topics covered in the Model Law and Directions documents, the following two resources, prepared by the Pace Land Use Law Center through its work under the NYSERDA's NY-Sun PV Trainers Network, provide an excellent overview:

Zoning for Solar Resource Guide: This Guide is designed to help NYS localities amend zoning and other land use regulations to permit the development of Solar Energy Systems in their jurisdictions. It provides guidance on how a municipality can amend zoning to permit these systems either as principal, secondary, accessory, or specially permitted land uses in existing zoning districts, as well as how to exempt certain systems from

zoning altogether. The resource then explains how relevant bulk and area requirements must be amended to accommodate permitted Solar Energy Systems. Subsequently, the guide discusses how to amend site plan requirements to include standards for Solar Energy Systems, examines how local governments can modify environmental impact review under SEQRA, and considers the role of other local boards in streamlining the approval process for Solar Energy Systems. Beyond permitting Solar Energy Systems, the Guide also discusses ways to amend land use laws to either require or encourage them. *Available at*:
https://training.ny-sun.ny.gov/images/PDFs/Solar%20Zoning%20Resource%20Guide.pdf

Planning for Solar Resource Guide: This Guide was created to help NYS localities develop and adopt solar friendly policies and plans. It describes how municipalities should begin a solar energy initiative through an official policy statement that provides support for solar energy and that authorizes a task force to shepherd the process, appropriate studies, training programs for staff and board members, inter-municipal partnerships, and outside funding sources. Next, the document explains how municipalities should engage the entire community in the solar energy initiative process to ensure support for the initiative and its implementation. Finally, the resource presents local planning best practices that communities can incorporate into their comprehensive plans, subarea plans, or other plans. *Available at*:
https://training.ny-sun.ny.gov/images/PDFs/Land_Use_Planning_for_Solar_Energy.pdf.

NY Solar Smart: The NYSolar Smart Program is a strategic effort led by the City University of New York (CUNY) that supports both Federal and State solar initiatives and works in partnership with the New York Power Authority (NYPA); New York State Energy Research and Development Authority (NYSERDA); municipalities around the state; and more than 30 organizations representing utility companies, installers, government agencies, and industry leaders to implement solutions that lower the soft costs of installing solar across New York State. Since 2006 CUNY has led the implementation of multiple state and federal solar grants and was recently awarded funding through DOE's SunShot Initiative Rooftop Solar Challenge II. Under this DOE Initiative, CUNY is leading committed Jurisdictional partners and PACE to create model ordinances that plan for the growth of solar installations in NYS and create an implementation plan to guide and encourage all jurisdictions across the state who are interested in removing barriers to the solar market. *Available at*:
http://www.cuny.edu/about/resources/sustainability/nyssolar/USDOESunShotInitiative.html.

Planning for Solar Energy: With support from DOE's SunShot Initiative, the American Planning Association's Planning for Solar Energy provides communities with a basic rationale for planning for solar energy use, summarizes fundamental characteristics of the U.S. solar market related to local solar energy use, and explains how communities

can promote solar energy use through public engagement, planning and regulatory best practices, development services and public-private partnerships, public solar installations, and economic and educational programs. *Available at*: www.planning.org/resources/.

Solar Powering Your Community: A Guide for Local Governments: The Department of Energy (DOE) created Solar Powering Your Community as a comprehensive resource local governments and stakeholders can use to design and implement a strategic local solar policy, plan, and regulations. The guide features local examples and models, many of which come from DOE's Solar America Communities program. *Available at*: http://www4.eere.energy.gov/solar/sunshot/resource_center/sites/default/files/solar-powering- your-community-guide-for-local-governments.pdf.

SunShot Solar Outreach Partnership: The Solar Outreach Partnership (SolarOPs) is designed to help accelerate solar energy adoption on the local level by providing timely and actionable information to local governments. Funded by the U.S. Department of Energy (DOE) SunShot Initiative, SolarOPs achieves its goals through a mix of educational workshops, peer-to-peer sharing opportunities, research-based reports, and online resources. To access SolarOPs resources and apply for technical assistance, *visit* http://solaroutreach.org.

Solar Roadmap: To help increase cost-effective Solar Energy System installations, Solar Roadmap provides governments, organizations, residents, businesses, and electric utilities with a comprehensive resource library of best practices, case studies, how-to guides, templates, tools, and program materials from over 100 unique author organizations. Additionally, Solar Roadmap partners with municipalities to create customized Individual Solar Roadmaps that provide tailored actions organized into simplified actionable goals for each participating community. To access Solar Roadmap's resource library and local examples, visit www.solarroadmap.com.

APA's Solar Planning & Zoning Data Search: The American Planning Association hosts an online Solar Planning & Zoning Data Search database. From this portal, users can search hundreds of examples of solar- supportive plans, development regulations, and other planning-related implementation tools by place type, population range and density, tool type, and solar practice. The database includes example policies, plans, and regulations from communities across the nation. To access the portal, go to https://www.planning.org/solar/data/.