

A Community Perspective on Solar in New York State



Solar array, photo courtesy Lewis County Planning Dept.

Katie Malinowski

Executive Director

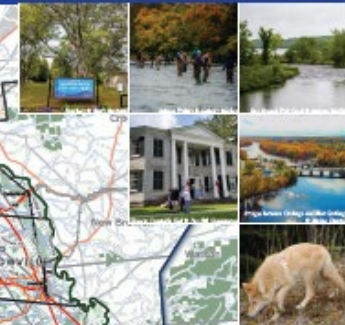
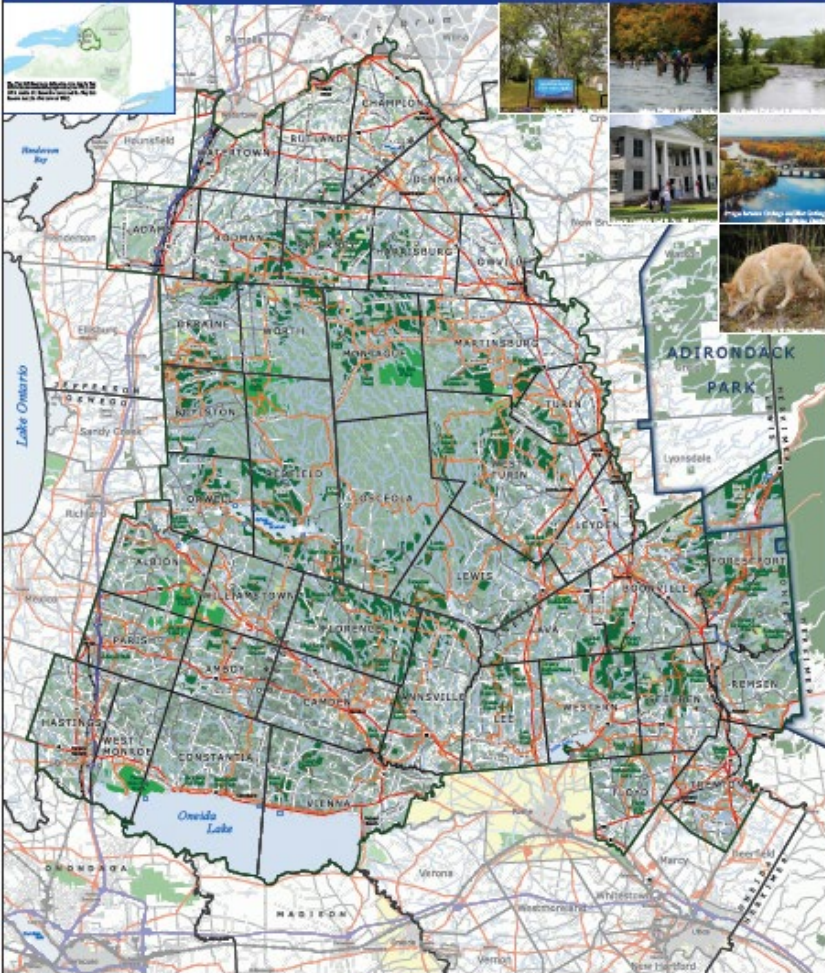
Matt Johnson

Planning Director

Matthew Smith

Planner





Tug Hill Region Facts and Figures

- 2,100 square miles, or 1.2 million acres
- 41 towns containing 18 villages
- 104,000 residents, 50 people per square mile



Mickey Dietrich, NYS Tug Hill Commission

Renewables in New York State

Climate Leadership and Community Protection Act (CLCPA), 2019

1. Increase the Renewable Energy Standard to 70% by 2030.
2. Double the target for distributed solar power to 6 gigawatts by 2025 and 10 gigawatts by 2030.
3. Install 1.5 gigawatts of statewide energy storage capacity by 2025 and 6 gigawatts by 2030.

Accelerated Renewable Energy Growth and Community Protection Act (FY2020-21 NYS budget)

1. Added Section 94-c to NYS Executive Law, created Office of Renewable Energy Siting to streamline and speed up permitting for 25 MW and larger.

ISSUE PAPER SERIES

Planning for Solar Energy Projects

June 2023



NEW YORK STATE TUG HILL COMMISSION

DULLES STATE OFFICE BUILDING - 317 WASHINGTON STREET - WATERTOWN, NY 13601 - (315) 785-2380 - WWW.TUGHILL.ORG

IN COLLABORATION WITH:

Cornell Cooperative Extensions of Jefferson, Lewis, Oneida and Oswego Counties
Development Authority of the North Country
Jefferson, Lewis, Oneida, Oswego and St. Lawrence County Planning Departments
Jefferson and Lewis County Industrial Development Agencies
Jefferson, Lewis and Oswego County Soil & Water Conservation Districts
Mohawk Valley EDGE

The Tug Hill Commission Technical and Issue Paper Series are designed to help local officials and citizens in the Tug Hill region and other rural parts of New York State. The Technical Paper Series provides guidance on procedures based on questions frequently received by the Commission. The Issue Paper Series provides background on key issues facing the region without taking advocacy positions. Other papers in each series are available from the Tug Hill Commission. Please call us or visit our website for more information.



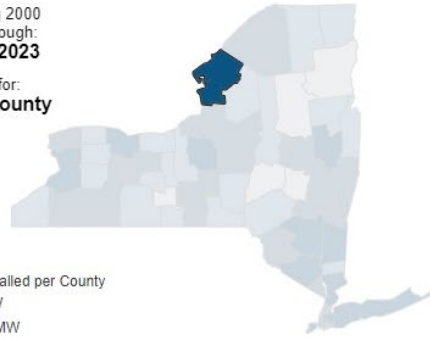
[Planning for Solar Energy Projects 2023](#)

THE BUILDOUT SO FAR

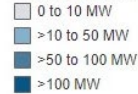
Jefferson County

Data beginning 2000 and current through: **August 31, 2023**

Showing Data for: **Jefferson County**



Megawatts installed per County

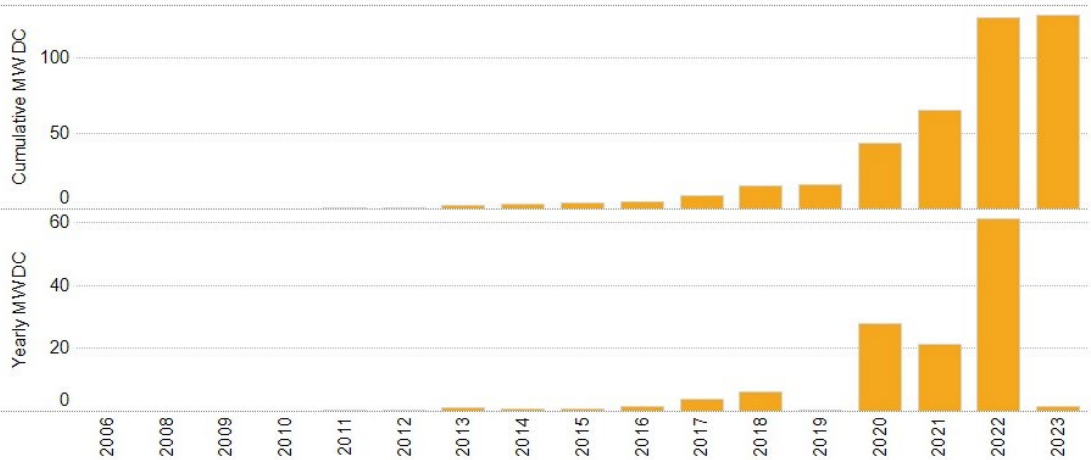


Total Capacity (MW DC)
127.8 MW

Number of Projects
486

Data Sources: NYS DPS, NYISO. [Click icon for more info](#)

Annual Trends (Completed Projects Only) Total Capacity



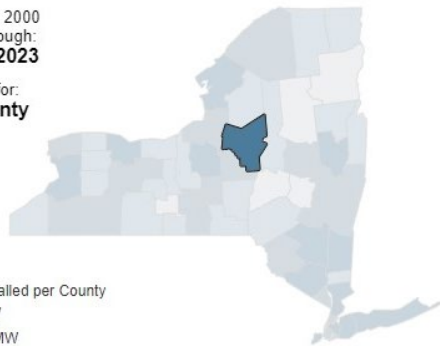
[View All Data](#)

THE BUILDOUT SO FAR

Oneida County

Data beginning 2000 and current through: **August 31, 2023**

Showing Data for: **Oneida County**



Megawatts installed per County

- 0 to 10 MW
- >10 to 50 MW
- >50 to 100 MW
- >100 MW

Total Capacity (MW DC)

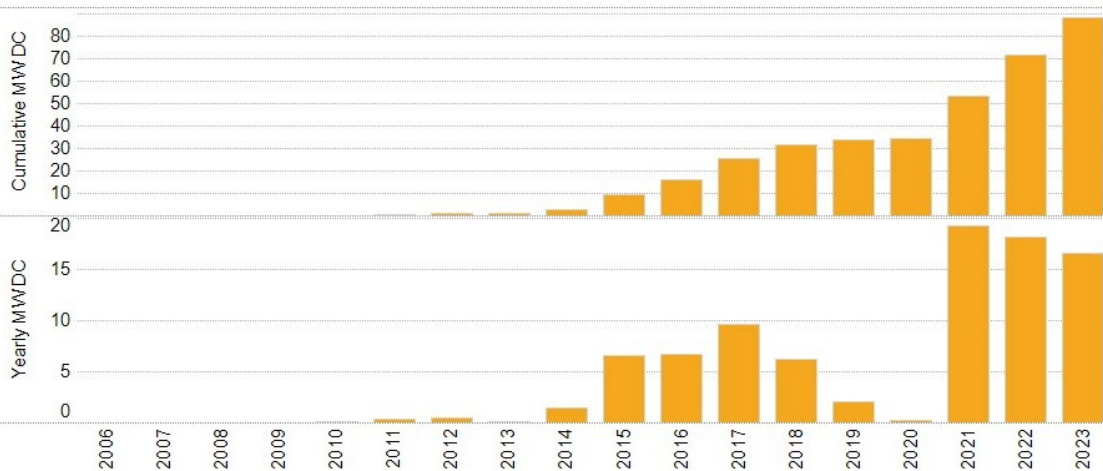
88.18 MW

Number of Projects

876

Data Sources: NYS DPS, NYISO. [Click icon for more info](#)

Annual Trends (Completed Projects Only) Total Capacity



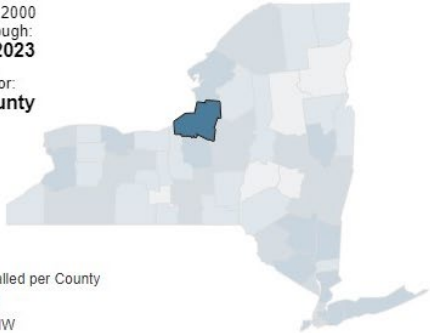
[View All Data](#)

THE BUILDOUT SO FAR

Oswego County

Data beginning 2000 and current through: **August 31, 2023**

Showing Data for: **Oswego County**



Megawatts installed per County

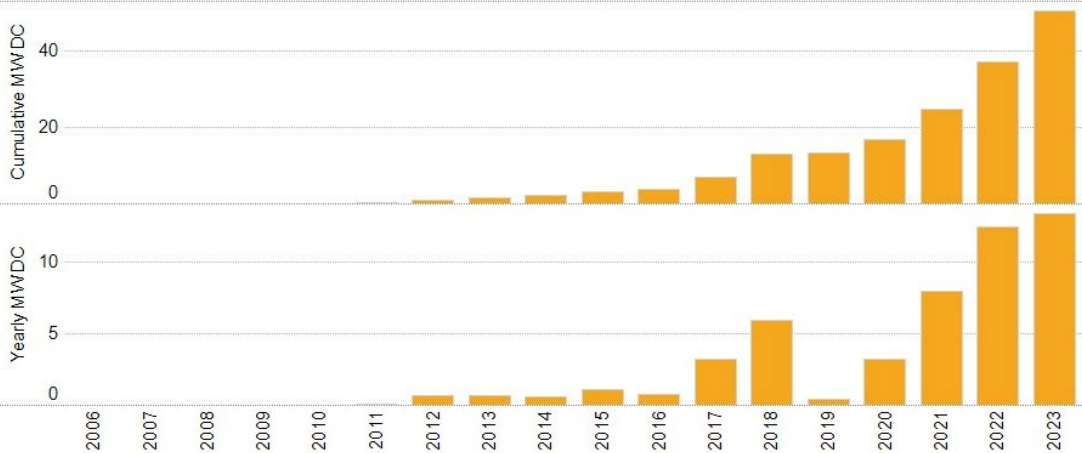
- 0 to 10 MW
- >10 to 50 MW
- >50 to 100 MW
- >100 MW

Total Capacity (MW DC)
50.39 MW

Number of Projects
546

Data Sources: NYS DPS, NYISO. [Click icon for more info](#)

Annual Trends (Completed Projects Only) Total Capacity



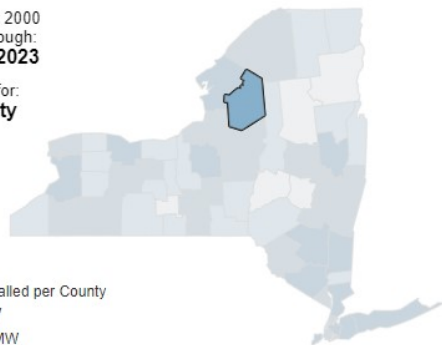
[View All Data](#)

THE BUILDOUT SO FAR

Lewis County

Data beginning 2000 and current through: **August 31, 2023**

Showing Data for: **Lewis County**



Megawatts installed per County

- 0 to 10 MW
- >10 to 50 MW
- >50 to 100 MW
- >100 MW

Total Capacity (MW DC)

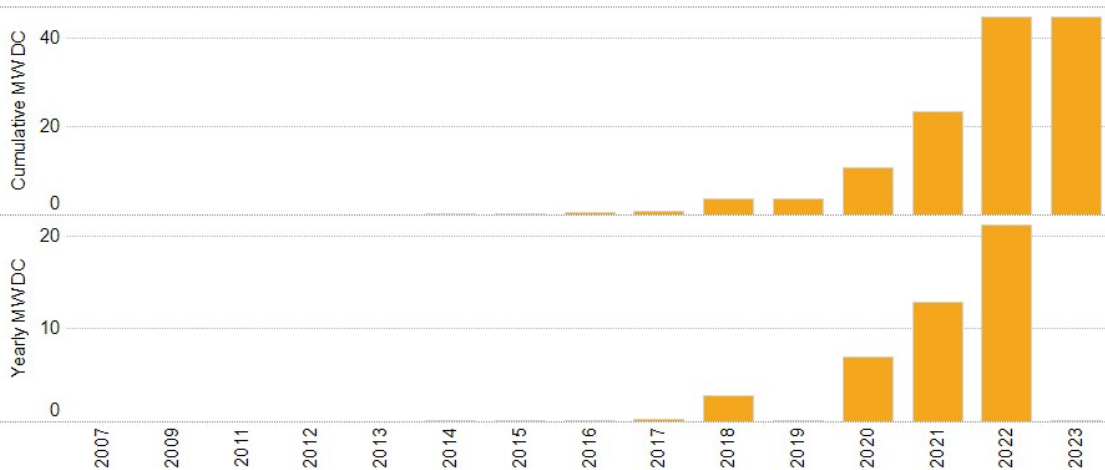
44.81 MW

Number of Projects

95

Data Sources: NYS DPS, NYISO. [Click icon for more info](#)

Annual Trends (Completed Projects Only) Total Capacity



[View All Data](#)

2019 Resident and Landowner Survey

| <i>Energy Development</i> | Increase | Keep, but do not increase | Decrease | Not sure |
|----------------------------------|-----------------|--|-----------------|-----------------|
| Solar energy development | 70.3% | 22.3% | 4.4% | 3.0% |
| Wind energy development | 53.0% | 34.4% | 8.5% | 4.1% |
| Biomass energy crops | 42.0% | 37.1% | 6.2% | 14.7% |
| Power line construction | 23.2% | 56.3% | 14.5% | 6.0% |
| Nuclear power development | 14.2% | 34.6% | 42.0% | 9.2% |

More recent community survey results

Vienna – 2019 Pro: 59% Con: 41%

Lowville – 2021 Pro: 71% Not Sure: 16% Con: 13%

Camden – 2023 Negative comments received

Property Taxes and Renewable Energy

- **Real Property Tax Law Section 487** exempts qualifying solar projects from municipal and school taxes for 15 years, and allows taxing jurisdictions to require a payment in lieu of tax agreement (PILOT)
- It also allows taxing jurisdictions to opt out and not grant any exemption or PILOT, making the project fully taxable
- Since there are many opt outs, many larger projects approach the county Industrial Development Agency (IDA) for a PILOT
- In Jefferson and Lewis Counties, their Uniform Tax Exempt Policies (UTEP) have been crafted to encourage solar development on more marginal farmland

- **Real Property Tax Law Section 575-b** requires assessors to use a discounted cash flow approach to value solar projects, rather than the income or sales approach
- This has generally created lower values for projects, causing some concern on impact of existing PILOTs

WHAT CAN MUNICIPALITIES DO TO MITIGATE

(from a land use perspective?)

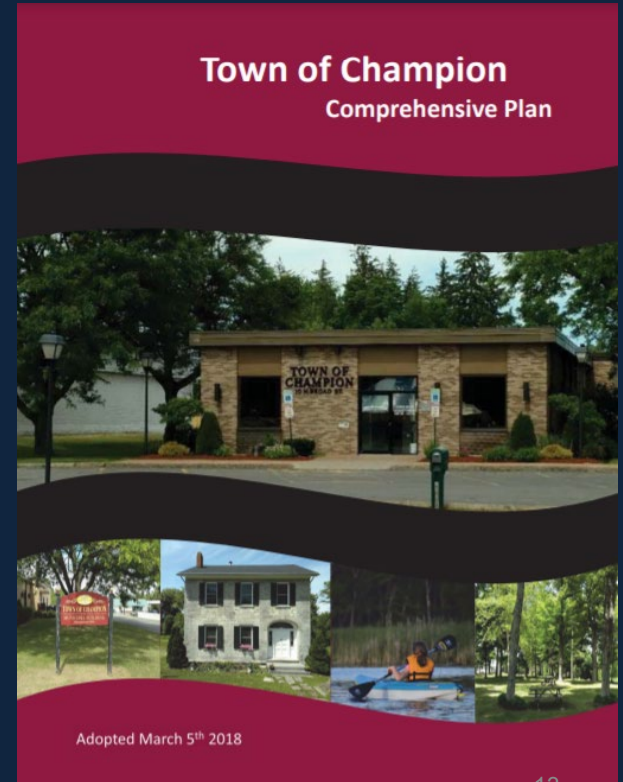
- **MORATORIA**
- **COMPREHENSIVE PLANS**
- **ZONING**
 - **Site plan review**
 - **Special use permit review**

MORATORIA

- **Adopted as local law**
- **Prohibits development of certain defined land use projects for a set period of time**
- **Six months is common**

COMPREHENSIVE PLANS

- The materials, written and/or graphic, including but not limited to maps, charts, studies, resolutions, reports and other descriptive material that identify the *goals, objectives, principles, guidelines, policies, standards, devices and instruments* for the immediate and long-range protection, enhancement, growth and development of the municipality.

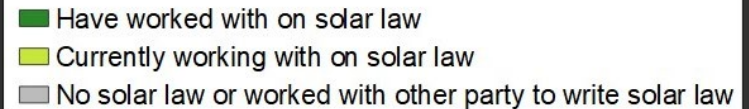
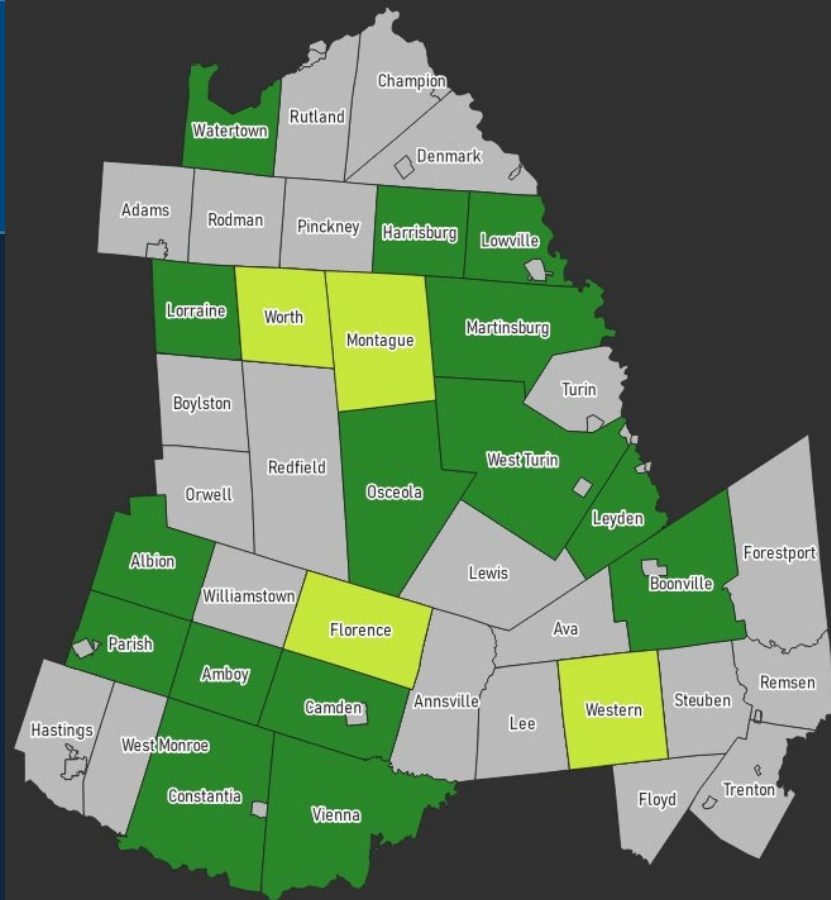


ZONING

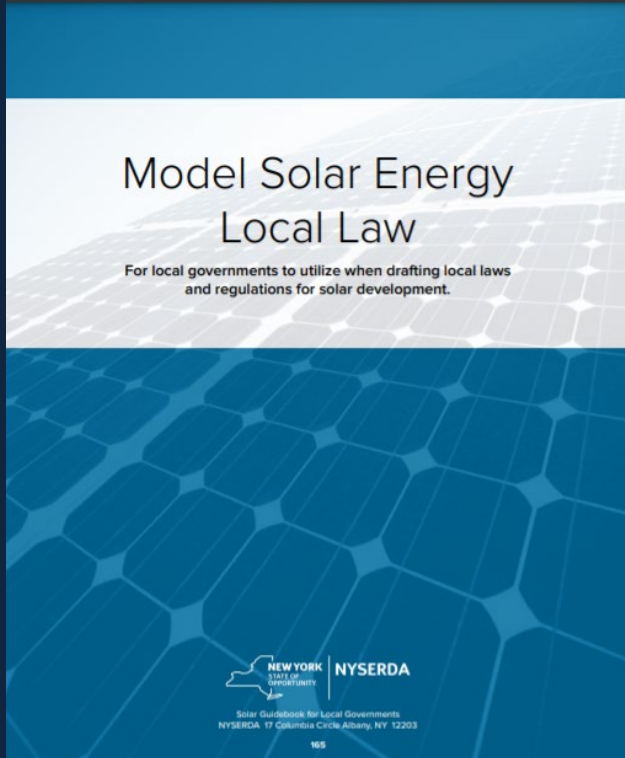
- **Protect public health, safety, and welfare**
- **Regulate use, density, placement of structures on lots**
- **In NYS, zoning is administered by local governments – towns, villages, and cities – **NO COUNTY ZONING****

COMMUNITIES WE HAVE ASSISTED ON SOLAR LAWS

- 15 towns completed so far (zoning regulations and/or stand-alone law)
- Working with several communities right now on solar laws
- Some communities that we have not worked with, still have solar laws that were done in house or by another party

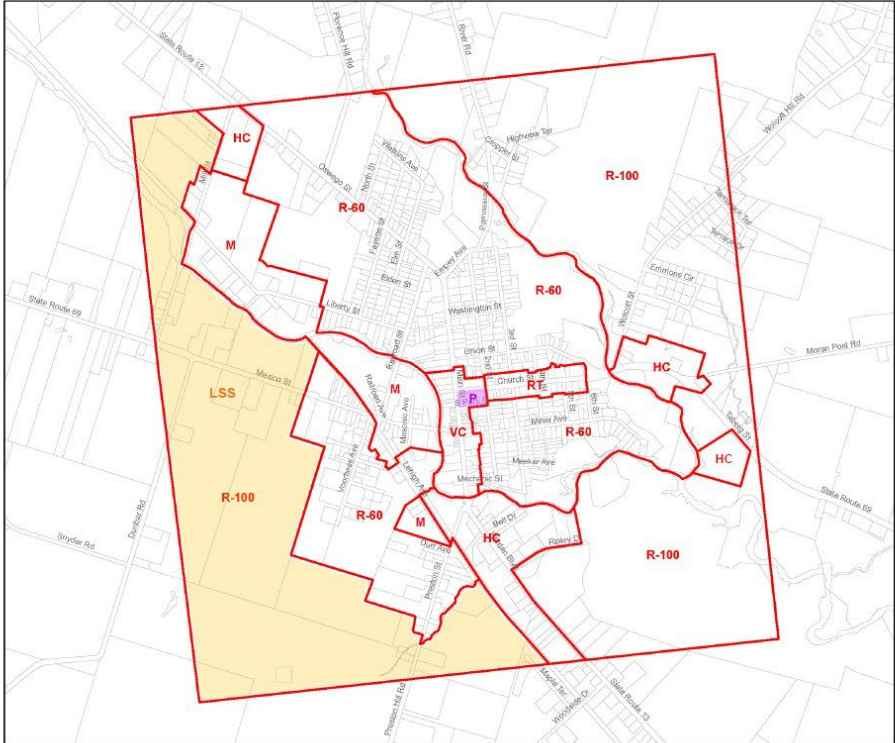


MODEL ZONING LANGUAGE



- **Many models available online**
- **Help available from county planning departments, regional planning agencies, private consultants**
- **We urge municipalities to ask for help incorporating!**

WHERE CAN THEY GO? – districts and overlays



Village of Camden ZONING MAP



0 250 500 1,000
Feet

- R-100 - Residential 100**
- R-60 - Residential 60**
- RT - Residential Transition**
- VC - Village Center**
- HC - Highway Commercial**
- M - Manufacturing**
- P - Park Overlay**
- LSS – Large Scale Solar Overlay**

I CERTIFY THAT THIS IS THE OFFICIALLY ADOPTED ZONING MAP OF THE VILLAGE OF CAMDEN

VILLAGE CLERK _____ DATE _____

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DIMENSIONAL STANDARDS

Maximum height of panels – 15/20 feet

Minimum setbacks:

| Zoning District | Front | Side | Rear | Non-Participating Occupied Residence |
|----------------------------|-------|------|------|--------------------------------------|
| Residential Low Density | 100' | 100' | 100' | 250' |
| Residential High Density | — | — | — | — |
| Commercial / Business | 50' | 50' | 50' | 250' |
| Light Industrial | 50' | 50' | 50' | 250' |
| Heavy Industrial | 50' | 50' | 50' | 250' |
| Agricultural / Residential | 50' | 50' | 50' | 250' |

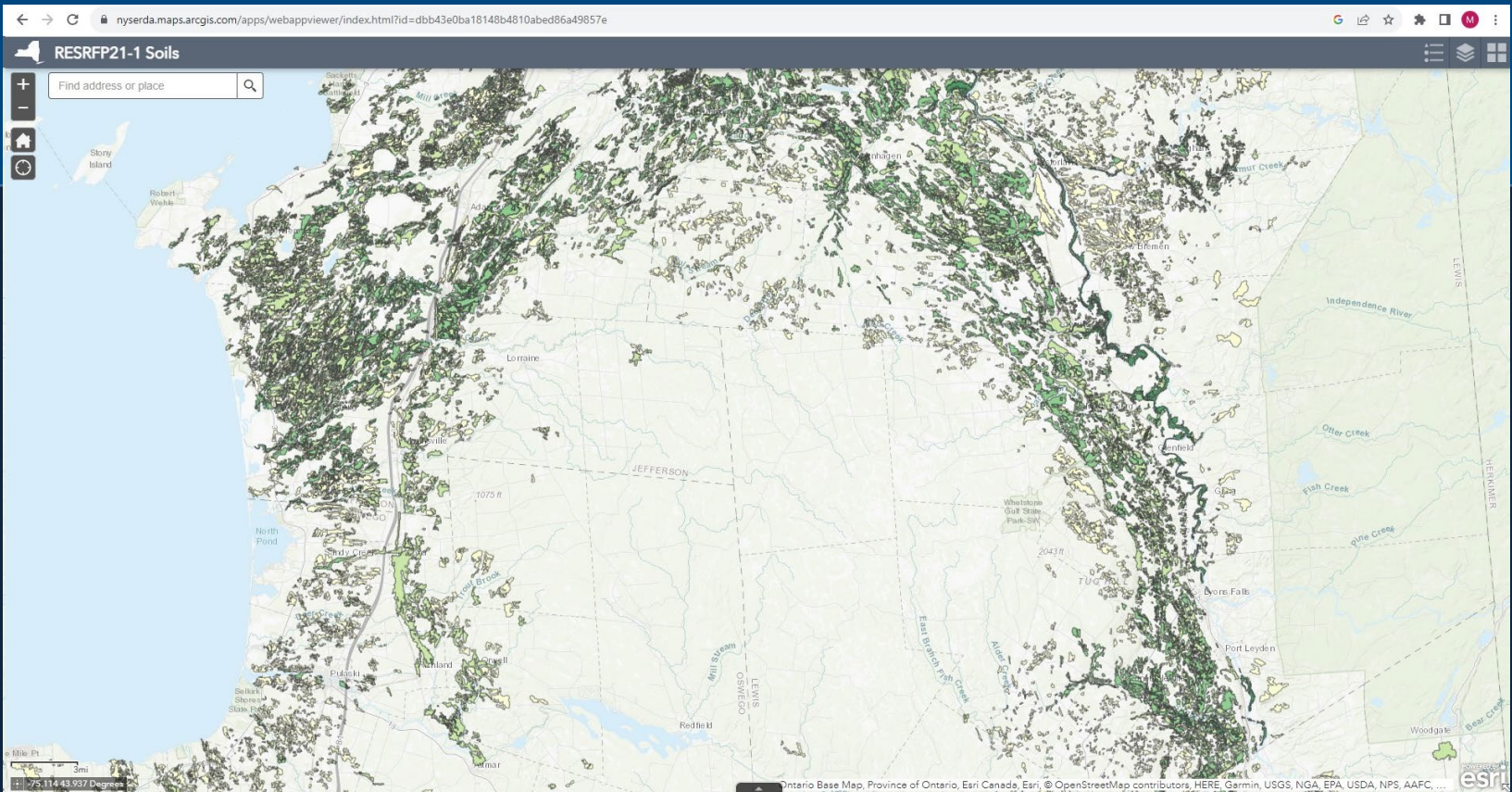
BUILD FLEXIBILITY INTO LAW TO PRESERVE AG/FARM LAND!

SITING/DESIGN STANDARDS

- All on-site utility lines shall be placed underground to the extent feasible
- Vehicular paths shall minimize the extent of impervious materials and soil compaction
- All Solar Panels shall have anti-reflective coating(s)
- Lighting shall be limited to that minimally required for safety and operational purposes and shall be shielded and downcast
- Removal of existing trees larger than [6] inches in diameter should be minimized
- 7-foot-high fence with locking gate
- **A minimum of [1] evergreen tree, at least [6] feet high at time of planting, plus [2] supplemental shrubs all planted within each [10] linear feet of the Solar Energy System.**

PROTECTIONS FOR AG RESOURCES

- Solar Energy Systems shall occupy no more than [50] % of the area of MSG 1-4 soils within the Facility Area
- Solar Energy Systems may exceed 50% of MSG 1-4 soils if land can still be used as Farm Operation
- To the maximum extent practicable, Solar Energy Systems located on MSG 1-4 soils shall be constructed in accordance with the construction requirements of the New York State Department of Agriculture and Markets Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands



Google: nys dept of agriculture and markets soil groups

Also see: <https://websoilsurvey.sc.egov.usda.gov/>

PRIME SOILS MAP AS A RESOURCE FOR OUR COMMUNITIES

www.tughill.giscloud.com

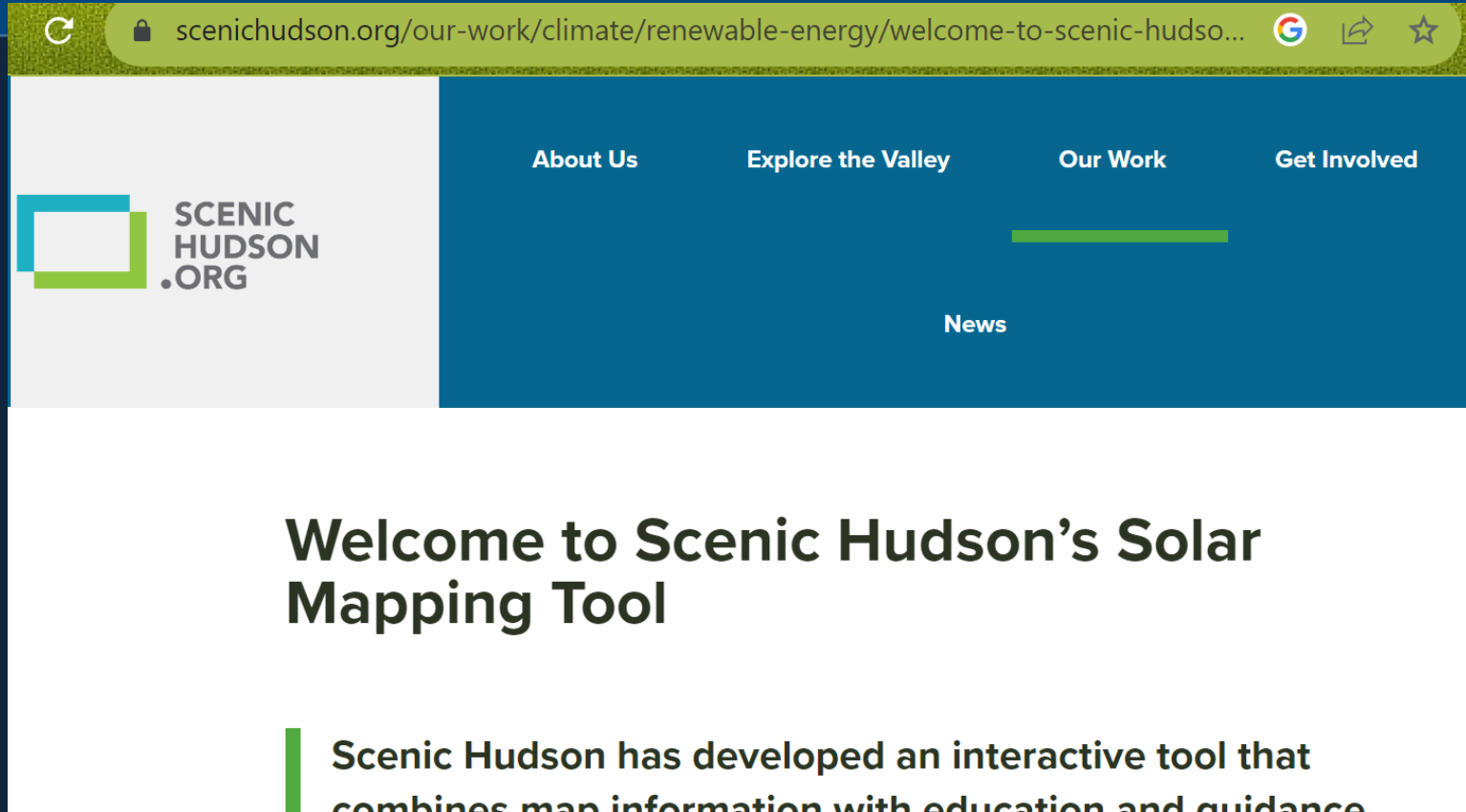
The screenshot displays the Tug Hill GIS Cloud interface. At the top, the browser address bar shows 'tughill.giscloud.com'. The navigation menu includes 'Export Map', 'Map Search', 'Municipal Bookmarks', 'Switch Map', 'Private Mapping Applications', 'County Map Viewers', 'Data Sites', 'Resources', 'QGIS Training', 'Tug Hill Region', and 'Sign In'. A search bar and a 'Layer List' are also present. The 'Regional Solar Siting Aid' layer list includes: County Boundaries, Tug Hill Region, Tax Parcels, Prime Soils (MSG 1-4), Roads, and Bing Maps Satellite. The main map area shows an aerial view with yellow-green shaded regions representing prime soils. A 'Disclaimer' pop-up window is open on the right, containing the following text:

Disclaimer

The NYS Tug Hill Commission makes no representation or warranty, to the completeness, timeliness, or accuracy of any information provided. Information shall include any mapping data. This information is intended to be used for planning purposes and is not a survey product. The NYS Tug Hill Commission shall not be held liable for any general, indirect, incidental, special, or consequential damages from the use or misuse of the information contained in this mapping portal. By proceeding to view information on this mapping portal, the user is acknowledging that they have read and understand this disclaimer.

At the bottom right of the map, there are navigation controls for 3D view, zoom in (+), zoom out (-), and a compass icon. The text 'Powered by GIS Cloud' is visible at the bottom right corner of the map area.

SCENIC HUDSON SOLAR MAPPING TOOL



The image is a screenshot of a web browser displaying the Scenic Hudson website. The browser's address bar shows the URL: scenichudson.org/our-work/climate/renewable-energy/welcome-to-scenic-hudson.... The website's header features the Scenic Hudson logo on the left, which consists of a stylized 'S' shape in blue and green, followed by the text 'SCENIC HUDSON .ORG'. To the right of the logo is a navigation menu with four items: 'About Us', 'Explore the Valley', 'Our Work', and 'Get Involved'. The 'Our Work' item is highlighted with a green underline. Below the navigation menu, the word 'News' is visible. The main content area of the page has a white background and features a large heading: 'Welcome to Scenic Hudson's Solar Mapping Tool'. Below this heading, there is a green vertical bar on the left side of a paragraph that begins with 'Scenic Hudson has developed an interactive tool that' and ends with 'combines map information with education and guidance'.

scenichudson.org/our-work/climate/renewable-energy/welcome-to-scenic-hudson...

SCENIC HUDSON .ORG

About Us Explore the Valley **Our Work** Get Involved

News

Welcome to Scenic Hudson's Solar Mapping Tool

Scenic Hudson has developed an interactive tool that combines map information with education and guidance

OTHER REQUIREMENTS

- **Visual assessment** required for projects larger than 10 acres.
- A **decommissioning plan** shall be submitted by the applicant, addressing the following: a. The cost of removing the Solar Energy System. b. The time required to decommission and remove the Solar Energy System any ancillary structures. c. The time required to repair any damage caused to the property by the installation and removal of the Solar Energy System.
- The deposit, executions, or filing with the municipality of **cash, bond, or other form of security** in an amount sufficient to provide for the removal and restorations of the site subsequent to removal. **The amount of the bond or security shall be [115] % of the cost of removal of the Solar Energy System and restoration of the property and shall be revisited every [5] years and updated as necessary.** The decommissioning amount shall be reduced by the amount of the estimated salvage value of the Solar Energy System.

SPECIAL USE PERMIT REVIEW – UNDER 25 MW

- An authorization of a particular land use which is permitted in a zoning ordinance or local law, subject to requirements imposed by such zoning ordinance or local law to assure that the proposed use is in harmony with such zoning ordinance or local law and **will not adversely affect the neighborhood** if such requirements are met.
- **Typically overseen by Planning Board**
- **PUBLIC HEARING REQUIRED**

OTHER LEVELS OF REVIEW

- County Planning Boards
- NYS Ag & Markets

COUNTY 239-m REVIEW

If the application involves property within 500 feet of the following geographic triggers, it is subject to county referral:

- A municipal boundary
- The boundary of a state or county park or recreation area
- The right-of-way of a state or county road
- The right-of-way of a county-owned stream or drainage channel
- A boundary of state or county land on which a public building is located
- A boundary of a farm operation that is located in a state agricultural district

COUNTY 239-m REVIEW

The planning board has jurisdiction to take final action when the earlier of the following occurs: it receives the recommendations of the County Planning Agency, OR thirty days have passed since the county's receipt of the full statement. The time period may be extended if agreed to by both the county and local planning bodies.

Planning Board can override with majority plus one vote.

AG & MARKETS REVIEW

Projects that will receive a subsidy from a New York State funding agency in an agricultural district trigger a consultation from the NYS Department of Agriculture and Markets.

EXECUTIVE LAW SECTION 94-C

OFFICE OF RENEWABLE ENERGY SITING

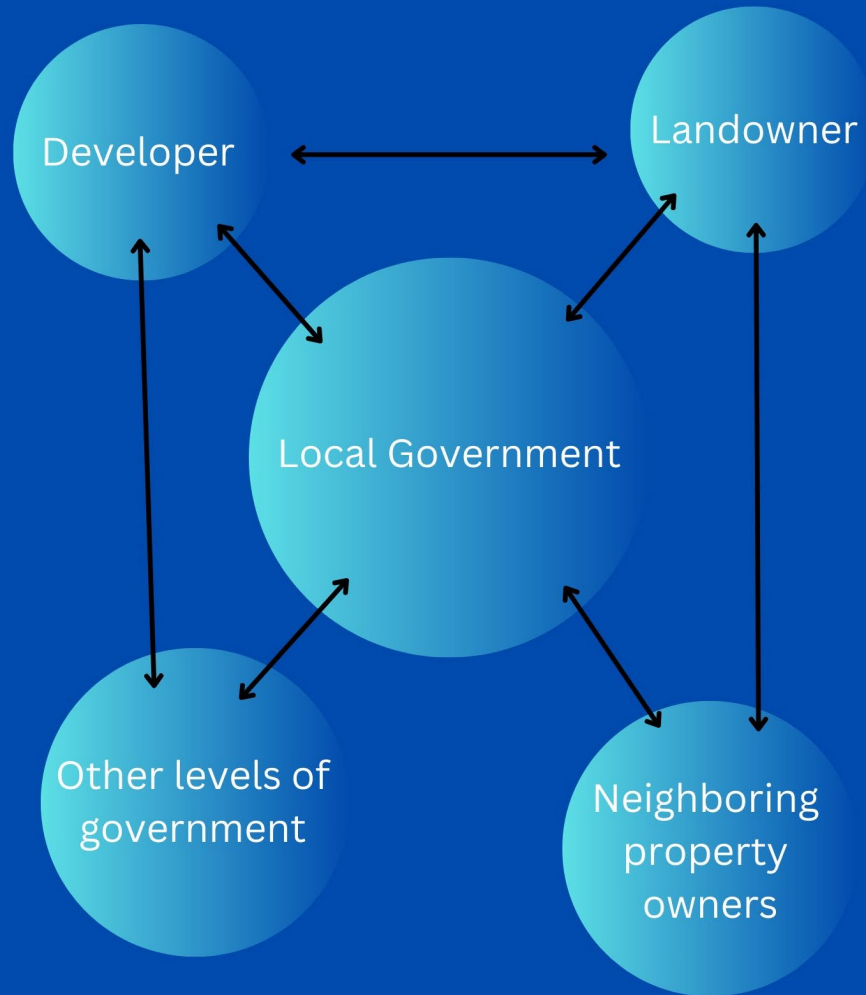
Projects 25 MW or larger go through a new process overseen by the Office of Renewable Energy Siting (ORES)

Projects 20 – 25 MW can opt in...

... the Office may elect to not apply local substantive requirements if it finds that, as applied to the facility, such requirements are unreasonably burdensome in view of the CLCPA targets and environmental benefits of the facility. For each local substantive requirement identified by the applicant, a statement justifying the request shall be provided. The statement of justification shall show with facts and analysis the degree of burden caused by the requirement, why the burden should not reasonably be borne by the applicant, that the request cannot reasonably be obviated by design changes to the facility, that the request is the minimum necessary, and that the adverse impacts of granting the request shall be mitigated to the maximum extent practicable consistent with applicable requirements set forth in this Part.

EXAMPLES OF ZONING WAIVERS GRANTED BY ORES

- Decommissioning bonds that have an annual inflation escalator built in
- Some noise limits
- Some requirements for permeable access roads (i.e. no pavement)
- Prohibition of siting on any amount of prime farmland
- Requirements that components below 4 feet be removed
- Large setbacks from wetlands
- 500-foot setbacks from property lines
- 40% maximum lot coverage
- 15% of lot maximum vegetation clearing



**COMMUNICATION
IS KEY!!!**

Concerns local governments have...

- **Questions about what is any town's 'fair share' of hosting/permitting solar projects**
- **Questions about zoning restricting projects on ag soils (what percentage should be allowed), what type of soils to protect (prime farmland, MSG 1- 4, or just active farmland)**
- **Lots of questions about decommissioning/rapid turnover of ownership of the projects**
- **Whether to subtract salvage value of equipment in decommissioning costs**

Concerns local governments have:

- **Concerns about emergency vehicles and access roads and emergencies in general**
- **Occasional questions about toxicity of equipment and runoff, etc.**
- **Clearing of wooded properties in anticipation of solar projects**

Concerns developers have with local review:

- **Excessive setback requirements from lot lines that do not have adjacent residences**
- **Screening requirements from project sides that do not have adjacent residences**
- **Required prime ag land conversion minimums (MSG 1-4 soils)**
- **Tree cutting restrictions**
- **Requirements to build berms**

What neighboring property owners want:

- **Something nicer than chain link fences**
- **Screening that is quickly mature/up to size**
- **Screening completed before other construction (or completed at all)**
- **Very large minimum setbacks**

Project in Town of Watertown



Project in Town of Hounsfield



BATTERY ENERGY STORAGE SYSTEM Fire in Chaumont, Summer of 2023



Photo: Watertown Daily Times

Questions?

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