Solar Siting Optimization Supports Climate Resiliency

Solar energy developers use strategic siting and comprehensive planning, guided by the NYSERDA Smart Solar Siting Scorecard, to optimize project viability while balancing environmental, regulatory, and land use considerations. By integrating environmental permitting processes, land use selection, resilient infrastructure, and agricultural co-utilization, developers support New York's renewable energy goals and enhance grid stability



Natural Hazards Overview



Part 1 – Agriculture Avoidance Flow Chart

Avoid locating the solar project Facility Area on agricultural land to prevent impacts to resources or activities of concern.



	• Very Low.	10070	
Ca Tsunami	Very Low:	100%	
Tropical Cyclone	Very Low:	100%	
⇒ Extratropical Storm	Low:	100%	
<u>///</u> Hail	Low:	100%	
F Tornado	Low:	100%	
↔ Lightning	Very Low:	100%	
River Flood	Very Low:	91%	
≋ Flash Flood	Low:	100%	
C Storm Surge	Very Low:	100%	
₩ildfire	Very Low:	100%	

Supplementary Hazards	Highest cover		0%	50%	100%
Soil & Shaking	Medium:	100%		1	



- Resilient site selection avoids floodplains, wetlands, erosion-prone areas, and other areas that can be impacted by natural hazards
- The NYSERDA Smart Solar Siting Scorecard helps evaluate project sites based on environmental impact, land use considerations, and climate resilience to support responsible solar development.
- Agricultural co-utilization plans integrate solar projects with active farming to maintain agricultural productivity and enhance land use efficiency.
- Storm hardening & temperature resilience use climate-adapted equipment rated for high winds and fluctuations per NYISO findings.
- Ecological and permitting considerations ensure impact assessments protect sensitive ecosystems and streamline approvals.

- Using the NYSERDA Smart Solar Siting Scorecard helps identify sites that optimize solar potential, reduce environmental impact, and enhance climate resilience for long-term projects.
- Optimized renewable integration with thoughtful siting that prevents curtailment and transmission congestion.
- Enhanced grid reliability through strategically placed projects that improve stability and reduce strain on infrastructure.
- Sustainable development by avoiding ecologically sensitive areas and ensuring long-term environmental compatibility.

- Exploring agricultural coutilization opportunities integrates active farming, and sheep grazing
- Adaptation to climate risks through resilient siting.
- Regulatory and market benefits from NYSERDA's
 Scorecard, expediting permits and state
 incentives.
- Future considerations include continued research on climate projections and adaptive infrastructure.



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