

Empowering Community Solar

TerraTrak 1P tracker optimizes time, money,
and resources for PureSky



PureSky's Tamarac site

Background

PureSky Energy is a leading solar developer, owner, and operator of U.S. community solar farms and energy storage projects. The company operates its solar projects for their entire lifetime, prioritizing collaboration with landowners, towns, and other local stakeholders to ensure long-term partnerships in the communities neighboring PureSky solar.

PureSky empowers energy customers across the U.S. with the ability to choose local, affordable clean energy. With over 9,000 customers signed up and more than \$5 million in savings, the company is helping Americans enhance their lives and create local, reliable energy.

- 1 **Roughly half of U.S. consumers and businesses** are unable to install solar panels on their roofs or property.
- 2 PureSky provides community solar subscriptions that enable residents to benefit from solar energy without onsite installation.
- 3 Residents are guaranteed 10% savings on their utility bills and are not locked into commitments.

PureSky selected Terrasmart as the racking and foundation supplier for four of its solar projects to advance its portfolio with a multi-site set of projects located in upstate New York. Although each site had its own unique conditions and variable terrain, PureSky’s entire portfolio benefited from the versatile **TerraTrak 1P tracker** combined with Terrasmart’s **ground screw** capabilities. The foundation-agnostic tracker has a highly adaptable design and is built to sustain the most challenging conditions, and the screw foundation ensures durability regardless of upstate New York’s frost, wind, and storms. What’s more, because TerraTrak 1P tracker has 30% fewer parts, 30-50% fewer foundations per MW, and simplified wire management, PureSky achieved faster installations and more nimble timelines.

Portfolio Overview

Project Site	Terrasmart Ground Screws	Terrasmart 1P TerraTrak SAT	Size (MW)	Estimated Annual Production
Clover Meadow	3,723 screws	319 trackers	7.2	10,280 MWh
Canandaigua	2,310 screws	319 trackers	4.62	6,626 MWh
Tamarac	3,483 screws	298 trackers	6.8	9,650 MWh
Green Dale	3,800 screws	286 trackers	7.5	10,340 MWh
Total			26.12	36,896 MWh

“ Together, PureSky and Terrasmart are helping community solar subscribers offset 24,722 metric tons of carbon emissions, roughly equivalent to the emissions from three million gallons of gasoline.



PureSky’s Green Dale site under construction

Challenges

A project portfolio always yields a variety of unique site-specific challenges. One site had a pond that required layout adjustments to avoid obstructions onsite and eight previously installed trackers in a foot of water, another required shorter trackers to accommodate the existing topography, and a third had significant subterranean issues, including rocky terrain.

Site Challenges

1

Pond obstructions

A truly unique challenge PureSky faced was a pond on a site property. A tracker layout had to accommodate height differences, obstructions, and previously installed trackers in standing water. The versatility of TerraTrak's 1P tracker made customized layouts and flexible heights possible.

2

Tricky topography

While other trackers would fall short with tricky topography, TerraTrak 1P tracker's height flexibility allowed for full adjustability and 30% faster installations.

3

Rocky terrain

Terrasmart's TerraTrak 1P tracker is designed to perform in rocky soil, clay, and > 60 inches of frost depth. Despite rugged terrain and subsurface challenges, the TerraTrak 1P tracker was installed with thousands of screws, which ensure reliability even in tough conditions.

Timing also posed a challenge - permitting issues initially delayed the process and impacted the timeline. What's more, a site survey conducted by Terrasmart yielded new information and exact data on site specifications. Because Terrasmart's surveys provide more accurate details than clients can typically uncover on their own, it's common that they import data in the process.






PureSky's Clover Meadow site

Solutions



Terrasmart has decades of experience managing tight project timelines and site challenges. Terrasmart covers all aspects of solar construction in-house to enable seamless execution, from concept to completion. Thanks to Terrasmart's specialization in drilling, screw, racking, and panel installation, PureSky received a turnkey experience supporting its community-solar goals. This portfolio's project scope covered a wide range of development needs, including:

1	System design
2	Engineering
3	Manufacturing
4	A full-scope mechanical install with panels and full network controls, including PeakYield™ monitoring software and weather stations
5	Training and education for end users

By utilizing ground screws and TerraTrak 1P trackers, Terrasmart delivered the following benefits to PureSky:

 <p>Assumed 100% of the refusal risk with its ground screw solution.</p>	 <p>Utilized 1P trackers which are lower to the ground, fitting the topography and terrain characteristics at PureSky's sites.</p>	 <p>Contributed subsurface expertise based on more than 11,000 pull tests and installations in every type of terrain to identify the unique nuances of each site.</p>
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Through meticulous project management and execution, Terrasmart solved the following production challenges:

 <p>To avoid inefficiencies in installation, the team used Terrasmart's rock-drilling machines to pre-drill all foundations.</p>
 <p>Terrasmart exceeded production with set procedures to install 75 screws per day - a rate that is 1.5x faster than current market alternatives.</p>

“We ultimately chose Terrasmart to build this portfolio for a few main reasons. One being the relationship and long history in working with their team from account manager to designers and installation team. We really like the reliability of their product; and the fact that their tracker, TerraTrak, is DC-powered is a big advantage for commissioning. Lastly, the stout and robust foundations and A-frames are very appealing for Northeast weather conditions.”

— Pat McGowin, Senior Project Manager, PureSky

Results



Time savings

PureSky benefited from Terrasmart’s ability to optimize timelines, balancing the schedule of one site that was ahead of schedule with others that faced delays, yielding time savings and increasing efficiency.



Cost effective

To accommodate the topo and change orders, Terrasmart was able to help the team save \$300,000 in civil work, more than \$100,000 in labor costs, and \$137,500 in materials - totalling more than a half million dollars.



Access

PureSky’s customers will benefit from more than 26 MW of new solar upon completion with lower cost electricity and electricity freedom, which is the ability to select how they power their homes and businesses.

By selecting Terrasmart, PureSky significantly streamlined development of the Green Dale, Tamarac, and Clover Meadow projects, which are part of New York’s **Expanded Solar For All Income-Eligible Program** managed by National Grid. PureSky’s Canandaigua project, which provides remote crediting in the Western New York region, also reaped the benefits.



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