

31.92 kW Roof-Mounted Solar PV System



Phase 2 of 2 - Solar for Large Building

Designed for

Cayuga Heights Sewage Treatment Plant
951 East Shore Drive
Ithaca, NY 14850

Key System Specifications

Modules:	Pure Alpha 2.0 420 watt, by REC, qty 76
Inverter(s):	SBSE7.7-US-50, by SMA, qty 4
% electric usage covered:	72%
System price:	\$74,723
After incentives & credits:	\$30,055
Cost per watt:	\$2.34



Approximate Array Placement

Dave Tedeyan
Founder & Technical Lead
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5/21/2024

Nicole Tedeyan
Business Manager
(607) 279 - 9079
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Quality Products

We only offer products we would install for our own home. We recommend these products for your system:

Modules: REC Pure Alpha 2.0, by REC

- Features:
- ☀️ Founded in Norway, currently headquartered and manufactures in Singapore
 - ☀️ **Industry-leading quality.** Warranty claim rate an order of magnitude below average (60 claims/million modules versus industry average of 6,000 claims/million modules)
 - ☀️ **Heterojunction cell technology** = more durable than mono-perc cells + better performance on hot days
 - ☀️ **Twin junction box design** = more power when module is partially shaded
 - ☀️ **More contact points improve electron flow** - NO LEAD SOLDER and more than 6x the contact points per cell with 16 thin round wires instead of 5 wide busbars
- Warranty: ProTrust Warranty - 25 year module product warranty w/ labor reimbursement & production warranty to 92% after 25 years



Inverter(s):

Features:

SBSE7.7-US-50 Smart Energy Inverter, by SMA, or Equivalent

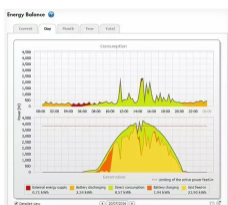
- ☀️ Headquartered in **Germany**. SMA's **Denver-based production facility** is Western Hemisphere's largest PV inverter assembly line.
 - ☀️ **Hybrid inverter** - can operate in grid-tied or off-grid modes, ideal for battery/storage projects.
 - ☀️ **ShadeFix technology** optimizes PV system energy production in challenging situations, e.g. complex array designs, shaded solar panels.
- NOTE: SMA is seeking UL1741-SB certification, as required by NYS utilities, for this product. Listing is anticipated before interconnection application for this project.

Warranty:

10 year inverter warranty, extendable to 25 years

Racking: XR Flush Mount Rails w/ Flashvue Flashings, by IronRidge

- Features:
- ☀️ Headquartered in California, manufacturing within & outside the USA
 - ☀️ Designed for extreme weather environments (rain, snow, & wind), listed to UL 2703, & certified to maintain fire resistance rating of existing roof.
 - ☀️ Rails are made of 6000-series aluminum alloy, then anodized for protection from surface & structural corrosion.
 - ☀️ Friction-fit GripCap flashings stay in place on pitched roofs, allowing for faster installation. Large viewport enables easy alignment with pilot hole, avoiding extra penetrations.
- Warranty: 25 year product warranty



Monitoring:

Sunny Portal, by SMA

Features:

- ☀️ All your data at a glance: yield monitoring, current energy flow, inverter performance, etc.
- ☀️ Quantify your grid imports & exports via tables, graphs, & reports on a daily, monthly, or annual basis.
- ☀️ Forget to check the portal? Receive your performance reports via e-mail instead.
- ☀️ Over 330,000 systems representing >20 GW in >160 countries use Sunny Portal.

Platform(s):

Website



The Sungineer Difference

Why Choose Sungineer Solar for Your Solar or Battery Installation

Continuity

- ☀ Work with the owners throughout the project - from sales to design, installation to service - so details don't get lost.

Experience

- ☀ A field crew with combined 30 years of solar-specific experience, some crew members working together >10 years.

Personable

- ☀ Feel comfortable calling us with questions and safe having the Sungineer crew in your home.

Value

- ☀ Low overhead means we can pass savings on to clients, without compromising quality.

Proven Process

- ☀ On time, on budget, every time.

Committment

- ☀ We'd want do this work, even if it didn't pay the bills. ♥




Client testimonials & references happily provided upon request.

Summary & Next Steps

System Specifications	System Pricing	Homeowner												
<ul style="list-style-type: none"> ☀ 76 REC Pure Alpha 2.0 420 Watt Solar Modules ☀ 4 SBSE7.7-US-50 SunnyBoy Inverters ☀ Ironridge XR Flush Mount Racking ☀ Web-based Production Monitoring 	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">System cost</td> <td style="text-align: right;">\$74,723</td> </tr> <tr> <td style="padding-left: 20px;">- NYSERDA incentive</td> <td style="text-align: right;">\$7,980</td> </tr> <tr> <td>Out-of-pocket cost</td> <td style="text-align: right;">\$66,743</td> </tr> <tr> <td style="padding-left: 20px;">- Federal tax credit</td> <td style="text-align: right;">\$20,023</td> </tr> <tr> <td style="padding-left: 20px;">- MACRS depreciation</td> <td style="text-align: right;">\$16,665</td> </tr> <tr> <td>Final system cost</td> <td style="text-align: right;">\$30,055</td> </tr> </table>	System cost	\$74,723	- NYSERDA incentive	\$7,980	Out-of-pocket cost	\$66,743	- Federal tax credit	\$20,023	- MACRS depreciation	\$16,665	Final system cost	\$30,055	<p>Cayuga Heights Sewage Treatment Plant 951 East Shore Drive Ithaca, NY 14850</p>
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Warranty Summary		Performance												
<ul style="list-style-type: none"> ☀ 25 year module product warranty w/ labor reimburse. ☀ 25 year module production warranty at 92% ☀ 10 year inverter warranty ☀ 10 year labor warranty 	<ul style="list-style-type: none"> ☀ Cost per watt: \$2.34 ☀ First year savings: \$3,263 ☀ # years to pay back: 9 ☀ Total 30-year savings: \$108,369 	<ul style="list-style-type: none"> ☀ First year estimated output: 35,316 ☀ 25 year average output: 33,591 												

Our Project Process

- ☀ Sales ☀
 - Initial inquiry
 - Estimate review
 - Site visit
 - Final proposal review 
 - Contract signing w/ deposit
- ☀ Preparation ☀
 - Technical design w/ structural review (if applicable)
 - Application submissions (NYSERDA, utility, building permit, etc)
 - Invoice #2 (~80% of cost)
 - Logistics, scheduling, & installation coordination
- ☀ Installation ☀
 - System installation!
 - Commissioning & inspection
 - Utility approval
 - System go-live
- ☀ Close-out ☀
 - Walkthrough/ orientation session
 - Invoice #3 (balance of cost)

Thanks again for your interest in going solar with Sungineer Solar!

We hope this proposal meets your needs and you'd like to proceed with a Sungineer project. If so, Nicole will put together a contract document package and send it for your review and approval.

Let us know if you have any questions or concerns. Looking forward to working with you!

Nicole & Dave

