groSolar®

What the World Needs. NOW®

SAS Institute Doubles its Solar Electricity Output and Reaffirms its Sustainability Commitment

A new groSolar installation with RayTracker technology advances the sustainability agenda, enhances its headquarters, and captures 1.2 MW of clean, renewable energy for its community.

Savings and Specifications

- Location: Cary, NC
- System Size: 1,204 kW DC
- Energy Output: 1.9 million kWh/year
- Results: CO2 emissions reduced by 3,500 tons/year (equivalent to 367,000 gallons of gasoline)
- Module Type: 5,236 Canadian Solar CS6P-230W
- Tracking Technology: 187 RayTracker GC Units - Single-Axis Tracking with Distributed Actuation Architecture for increased system dependability and bankability.
- Financing: by SAS
- Data Monitoring: Trimark Monitoring System

Robust and reliable single-axis trackers from RayTracker track the sun 365 days a year

SAS Institute, Inc., the world leader in business analytics software and services, is the largest vendor in the business intelligence market. A perennial Fortune 500 “Top Place to Work”, SAS is also a pioneer in making sustainability part of its global working culture, and sound green practices are an SAS way of life. “Our environmental sustainability program is simply part of the way we do business,” says Jerry Williams, SAS Environmental Sustainability Program Manager. “It’s the right thing to do, and it makes measureable business sense."

With a full megawatt of solar electricity already being generated at SAS headquarters in Cary, North Carolina, the company reaffirmed its commitment to sustainability by building an additional 1.2 megawatt solar installation. Designed and constructed by groSolar, the seven-acre SAS Solar Farm 2 will generate an estimated 1.9 million kilowatt-hours (kWh) annually, enough to power more than 200 homes, making a dramatic statement of SAS’ ongoing commitment to sensible sustainable practices.

A Practical and Aesthetic Asset for SAS

SAS’ ambitious sustainability agenda includes solar thermal hot water systems, regenerative drive elevators, LEED-certified new construction, and campus-wide employee commitment. Solar Farm 2 was designed to leverage the success of its first array, which opened in 2008. The second array offered some challenges and opportunities that the first did not, and these were addressed by groSolar and its partners.

groSolar: Meeting the Challenges

Frank Griffin, groSolar Vice President for Commercial Business, cited dual primary goals. “SAS is a sophisticated gatherer and interpreter of data,” he explained. “They wanted measurable, maximized energy production from Solar Farm 2 regardless of the challenges presented by the rolling topography, and they wanted it as quickly as possible.” Founded in 1998, groSolar is the largest 100 percent U.S.-owned distributor in the solar industry, and is the fourth-largest installation company in North America. With its nationwide network of partnerships, its project design and construction expertise, and its exceptionally high quality standards, groSolar was uniquely qualified to deliver the expertise and flexibility it took to execute everything SAS needed.

groSolar project and construction expertise and exceptionally high quality standards

“SAS specified a single-axis tracking system that would offer reliability, the best possible output, a high standard for appearance, and that could be installed rapidly,” Frank Griffin continued, “and we found just one technology that met those standards. We used RayTracker GC, a horizontal single-axis tracking system, to increase the energy yield of the array every day and over the system lifetime.”

groSolar matches the natural environment with a terraced site design and RayTracker GC

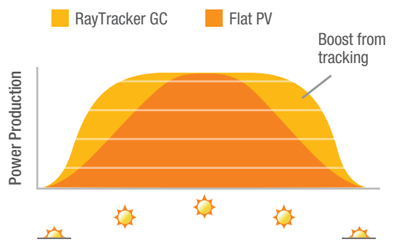
“The site for Solar Farm 2 was more complicated than the first site,” said Scott Starr, groSolar Director of Utility/Commercial Solar. “We found grades in excess of five degrees in some places. Using the flexibility afforded by the RayTracker single axis trackers, groSolar designed and implemented a terracing technique to minimize the excavation and grading. SAS has a magnificent campus and they set a very high standard for the appearance of the array, so groSolar drove nearly 1,000 support posts and cut them at different heights to follow the contours of the terrain with minimal grading, and fully leveraging the benefits of RayTracker’s innovative design. The groSolar team ensured a remarkably crisp uniformity in sight lines among all the panels and post alignments throughout the installation and the RayTracker systems we installed conform to the surrounding environment beautifully.” Gaelan Brown, groSolar Vice President of Marketing said, “groSolar’s breadth of capabilities, our supply chain skills, and our engineering and site management expertise set us apart on the national level. We’re experienced and proven in every aspect of solar project ground and roof construction and solar engineering. With SAS, the site management expertise was the key. It’s a challenging site, and we had to make it work in all the practical and visual ways that SAS needed.”

RayTracker Makes the Difference

RayTracker GC improves energy yield by optimally positioning the solar panels throughout the day. RayTracker products feature its unique Distributed Actuation Architecture, in which each ~7kW building block unit is controlled by a single robust actuator. This architecture offers the straightforward, flexible and rapid site layout and installation needed for the SAS project. Frank Griffin explained, “By removing the complexity of row to row linkages, RayTracker Distributed Actuation Architecture offers increased system dependability, bankability and fundamentally stable system level output. It’s a simple, easy-to-install system that uses a GPS time reference and a precise astronomical algorithm to automatically and accurately point the panels at the sun. To complement this great performance, RayTracker has demonstrated their product is truly utility grade with a 0.9998 field track record for measured availability, and provided an incredibly comprehensive set of laboratory tests results that validate the lifetime reliability of their product. It was very important to us and our customers to select a technology that has been proven to perform for the life of the project.”

Simplicity and beauty meets performance and efficiency

Advanced tracking technology from RayTracker GC is used to maximize output



Sheep provide an ecological solution to grass maintenance

groSolar and RayTracker Give SAS an Accelerated Return

“SAS wanted to start harvesting solar energy as quickly as possible, so groSolar commissioned a full third of the installation early,” said Frank Griffin. “They wanted an integrator with national scope and ability, but also one that could further their agenda of good local corporate citizenship. Our groSolar team became experts in the local rules and regulations, and we utilized local labor, suppliers and construction people.”

“RayTracker really shined for groSolar at SAS,” he said. “With the simplicity of their technology and their responsible, flexible partnership with us in the field, RayTracker helped us meet that challenging schedule. And their technology complemented our efforts to meet SAS’ standards for aesthetics. This is groSolar’s second collaboration with RayTracker. We only partner with people who meet the highest standard of excellence.”

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Frank Griffin
groSolar Vice President for Commercial Business

The site challenges, grading changes and hardware configuration converged in this project to make a showpiece for a beautiful campus that’s already a recruiting tool and an asset for SAS’ green, sculpture-enhanced campus. SAS’ sustainable practices have won national and local recognition. The Solar Farms are favorites among local students, who can learn about sustainable business practices and renewable energy while they watch the sheep SAS uses to groom the grass under the arrays.

“This solar farm demonstrates SAS’ continued commitment to protecting our environmental resources. We hope other organizations will see this as an example of what is possible for them.”

Jerry Williams
SAS Environmental Sustainability Program Manager

Sustainably sourced energy from SAS’ Solar Farms will reduce carbon dioxide emissions by more than 3,500 tons annually from conventionally produced electricity – equivalent to the emissions from burning more than 367,000 gallons of gasoline. “This solar farm demonstrates SAS’ continued commitment to protecting our environmental resources,” said Jerry Williams, SAS Environmental Sustainability Program Manager. “We hope other organizations will see this as an example of what is possible for them.”

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groSolar is North America's premier distributor, installer and integrator of solar energy solutions for residential and commercial installations. Founded in 1998, groSolar is a nationwide installation and distribution company, leading the solar industry. The company has offices and warehouses across the US, installing and distributing solar electric and solar hot water systems from offices in VT, NJ, NY, CT, MA, MD, DE, PA, and CA. groSolar integrates components from leading solar manufacturers including Canadian Solar, RayTracker, Zep Solar, Motech, Heliodyne, SMA, Fronius, and UniRac into simple solar energy solutions for customers that generate clean, reliable energy for decades. groSolar is a mission-driven company dedicated to providing high-quality solar energy solutions and whole energy appreciation. groSolar's venture capital investors include NGP Energy Technology Partners, SJF Ventures and Calvert Social Investment Fund.

Learn more

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