



Something Very Important Was Missed

Solar tracker, racking and mounting failures can be catastrophic for solar project time lines and budgets.

A utility-scale solar installation is underway in the U.S. Piles are driven, rails are bolted in place, and the modules are being installed. In the next few weeks, as the solar installation work continues, the crew begin to notice significant sagging in the arrays. Work is halted to assess the issue and to determine appropriate next steps for resolution. Costs add up as the engineering team calculates corrective options. Potential for legal liabilities loom as parties discuss resolutions, warranties and financial responsibilities.

Several different factors, from improper installation to inferior product design, could be impacting the array to create this mounting failure, but in this case – it was an error in the system’s structural design. The members selected did not account for the accurate dead loads of the modules causing P-Delta effects to increase. Compounded across the entire system, this unaccounted weight caused multiple failures. One of those was racking tables moving out of alignment. This example highlights why proper structural analysis is essential to a site foundation design and directly impacts the project’s bottom line. Reliable foundation design requires accurate data and just as importantly, it requires educated and field-experienced specialists to ensure your project’s success.

Obviously, starting out with the right detailed solar design plan is critical. No one wants to work backwards to solve this kind of issue. While solar trackers or racking may only represent 8-12% of your solar installation costs, it is the foundation of the system. When installed correctly, the rack sets the entire project up for either a smooth installation or a troubled road through construction.

While the image depicted above is not the solar project referenced in this article, it is an example of geotechnical analysis miscalculations that lead to structural failure. In this case, pile foundation tests to assess soil conditions, calculations for accurate pile sizes and embedment depths were inaccurately projected. Geotechnical testing today has become more sophisticated, staff analyzing that data are more educated and bring new knowledge that reduces your risks and your project installation costs.

ENSURING A PROJECT'S SUCCESSFUL INSTALLATION & LONG-TERM PERFORMANCE

How Solar FlexRack Can Help You Avoid Project Pitfalls

Forerunner in Engineering

We invest heavily in human resources to ensure that your projects are trouble-free and successful. Our engineering team includes geotechnical, structural, civil and mechanical specialists. They possess extensive solar experience and many are registered. They've cut their teeth designing solar foundations in climates from Alaska to the Caribbean and have special training in conditions where frost is a critical factor. We use sophisticated testing systems providing much more accurate data and meticulously analyze that data to deliver precise numbers. The Solar FlexRack engineering team is not guessing or estimating what you need. We know exactly what you need. That translates into confidence in the integrity of your solar system and the most cost-efficient foundation and racking solution.

Thorough Support Services

We provide project support services that far exceed our competitors. It's that simple. Our highly-skilled engineering team of specialists have built a reputation customers can rely on. We bring our knowledge and experience to bear to provide you with the most effective mounting or solar tracker solution per project. Here are the support services we offer:

- Sizing and layouts
- Geotechnical engineering
- Pull testing
- Structural engineering
- Project management
- Post driving, tracker installation and panel mounting
- Commissioning
- Full-service support

“Solar FlexRack’s service was, by far, the best we have ever experienced.”

-Ask about our references

Tested and Proven Solar Products

To ensure the strength and integrity of every delivered Solar FlexRack mounting solution, each member of our racking system undergoes extensive testing including:

- Wind tunnel
- Dynamic load analysis
- Full structural analysis

World-Class Customer Support

Solar FlexRack is a solar leader committed to customer satisfaction. We take pride in the superior capabilities of their team. We dig deep to deliver the best products and services possible for our customers. The scope of technical expertise and level of customer support offered by Solar FlexRack is world-class.



HOW PRODUCT DESIGN TRANSLATES TO SOLAR SYSTEM COST REDUCTIONS & SAFEGUARDS YOUR SOLAR SYSTEM

When you select Solar FlexRack as your racking and services partner, you're safeguarding the investment in your solar project and the installation itself. Solar FlexRack is an industry-leading solar tracker, racking and project services company delivering best-in-class engineered solutions. Our proprietary racking design features attributes that automatically square the solar racking system, allowing modules to easily slide into alignment during installation without prying or applying pressure that could lead to module damage such as frame breakage, microcracking or disconnection of cell string ribbons.

Solar FlexRack's racking solutions are designed with generous construction tolerances to offer a highly adjustable solar ground-mount solution that delivers robust terrain adaptability and, because modules slide into the racks with ease, a faster installation. The unique design also ensures that all loads flow from the modules down through the racking system and into the ground - without placing secondary stresses into the modules or depending on the modules to brace the system,

Safeguard your solar system with Solar FlexRack's superior mounting and solar tracker technology and protect your project budget and long-term performance.

Solar FlexRack, the Most Trusted Name in Solar Tracker, Mounting and Project Services.

We've got your back.



Solar FlexRack is an integrated solar company that offers best-in-class custom-designed, ground mount and solar tracker systems in the commercial and utility-scale solar mounting industry. Solar FlexRack also provides a full scope of services from design to delivery and installation, including engineering, geotechnical, pullout testing, field, layout, and installation services to address the actual site conditions of an installation. Solar FlexRack has completed more than 1.5 GW of solar racking installations in 32 states across America and five countries globally. More information on Solar FlexRack can be found at www.solarflexrack.com

Contact a Solar FlexRack Sales Manager to learn more at Info@solarflexrack.com or call 1-888-380-8138.

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