

## FLATWORLD PROVIDED FEA SERVICES FOR SOLAR ENERGY SOLUTIONS FOR US RENEWABLE ENERGY GIANT



### Client Profile - Regional Solar Energy Leader

The client is based in the United States (South Dakota) and has focused on renewable energy services and products for 15 years. Their client service sectors include energy efficiency, solar power and fluid delivery such as solar water pumping and filtration.

### Client Requirements and Challenges - Structural and Thermal Analysis

The client needed FEA (finite element analysis) support to analyze solar panel pole mount systems. The primary requirement involved thermal and structural analysis to evaluate the capabilities of the pole mount system (prefabricated steel structures) to withstand temperature fluctuations and varying wind forces in different geographical locations within the client's market area.

The project involved this primary challenge -

- + Assessing different temperature and wind levels.

### The Solution - By Flatworld Solutions

The Flatworld Solutions (FWS) structural and thermal engineering specialists developed this solution -

- + The team included an account manager, three mechanical engineers and a quality analyst. The engineering specialists were experienced in fatigue, dynamic, thermal, structural and vibration analysis.
- + The FWS team used finite element and structural analysis software that included HyperMesh and OptiStruct.
- + Team specialists carried out multiple FEA evaluations involving 10 wind level and temperature variations and six product groups.
- + The thermal and structural analysis was completed and delivered to the client in 30 days.

### Final Results - A Satisfied Client and FEA Study Completed in 30 Days

This project illustrates the benefits of using an experienced outsourcing provider to provide specialized services for thermal, structural and coupled field analysis. This allows clients such as the one in this case to expedite high-quality analyses required in FEA studies, save money due to cost-effective outsourcing rates and avoid the need to hire new employees.

FWS employs a customer-centric outsourcing approach that is customized to meet the specific requirements, scheduling needs and budgets of each client. Our client list for engineering services includes Fortune 1000 companies as well as private enterprises of all sizes. To ensure privacy and security, our engineering team employs secure web servers and FTP uploads, virtual private networks (VPN) and confidentiality/non-disclosure agreements.

Flatworld Solutions is an ISO certified international provider of outsourcing services with two decades of experience. Our team operates on a 24/6 basis that facilitates fast turnarounds without sacrificing high-quality results. [Contact us](#) today for a no-cost assessment and quote.