

Utility Scale Solar, Inc.
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Customer Success Story

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We've been using Autodesk Inventor to great effect. The software has significantly streamlined what we are doing and made it much easier to visualize and communicate our designs.

—Jonathan Blitz
Chief Technical Officer
Utility Scale Solar, Inc.

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Chasing golden fire.

Utility Scale Solar uses Autodesk® Inventor® software to gather the energy of the sun.



Image courtesy of Utility Scale Solar, Inc.

Shakespeare put it nicely when he described the sky as a “majestic roof fretted with golden fire.” Utility Scale Solar, Inc. (USS) may not be quite so poetic, but the Palo Alto, California-based company is poised to put that golden fire to the best possible use. The company's Megahelion™ MH144 product is a heliostat, a device that precisely follows the sun as it moves across the sky while pointing a photovoltaic (PV) array, concentrating solar power mirror, or other solar-reflecting, electricity-generating surface at the sun.

“Simply put, the Megahelion drive accurately positions any type of solar application, whether PV, thin film, or mirror reflectors, for optimal solar power harvesting at lower cost and with better performance,” says Jonathan Blitz, chief technical officer at USS, who also co-founded the company with CEO Peter Childers in 2008. “USS technology represents a revolutionary method for smoothly and accurately moving these large, heavy objects to track the sun, even in extreme conditions. We're making something radically different from what is currently out there, and it's all about lowering the cost of these plants.”

While tracking the earth's original energy source may seem as easy as slowly moving your head from east to west, reliable and accurate solar collection actually requires the precision of a fine watch. The best locations to collect solar energy, such as deserts, tend to be subject to all manner of weather extremes. High winds and superfine sand are just two elements likely to disrupt

traditional solar tracking machinery. USS heliostats and drives, however, are designed to be virtually invulnerable to such obstacles. While conventional drives rely on complex, and often fragile, components, the Megahelion uses far fewer moving parts, distributing forces over a much larger surface area inside the drive, resulting in the same fluid motion with fewer breakdowns and at much lower cost to own and operate.

To help design and develop its system, USS relied on Autodesk® Inventor® software for Digital Prototyping, as well as Autodesk® Vault Manufacturing data management software to securely control and distribute information among its workforce.

“We've been using Autodesk Inventor to great effect,” says Blitz. “The software has significantly streamlined what we are doing and made it much easier to visualize and communicate our designs. The ability to then subject these designs to realistic forces and loads has given us the confidence to remove mass and streamline the components without sacrificing structural integrity. Because stress analysis is integrated into the software, there has been much more rapid evolution of our designs since we moved them all to Inventor.”

USS also uses Autodesk® Showcase® software for product and marketing images. Says Blitz: “Explaining solar energy collection can be a complex process, but it is much easier with detailed, realistic digital images.”

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