

## **Alion Energy Lowers Cost of Solar with Robotic Installation and Cleaning Technology**

### *Robotic Solution Installs Twice as Fast and with Less than Half the Labor*

June 17, 2013. Richmond, CA— Alion Energy, an innovative installation and maintenance service company that uses automated technologies to optimize utility scale solar plants, today unveils ROVER and SPOT, a pair of patented robotic installation and cleaning technologies. Together, they enable the fastest construction and lowest EPC costs for utility scale solar while producing more energy than standard fixed-tilt projects.

ROVER, Alion Energy's automated installation vehicle, and SPOT, their robotic cleaning solution, are part of Alion Energy's groundbreaking service to build utility scale plants 2x faster than the conventional installation with 50% less labor required.

"Alion Energy has brought the speed, precision and efficiency of robotics to solar," said Mark Kingsley, CEO of Alion Energy. "Through using robotic installation and cleaning technologies, we've eliminated flaws that plague the installation process. Now, we can build plants that are not only the most cost-effective solution within the solar mix, but have a roadmap to deliver solar electricity at costs that can compete with any generation source."

Rather than continue the solar industry approach to incrementally fix installation inefficiencies that perpetuate long construction schedules, tied-up capital and power loss, the company incorporates established construction industry practices to redesign the entire balance of system, enabling new levels of automation and cost improvement for utility scale solar.

Alion Energy uses extruded concrete rails to replace metal posts, racks and cable trenches. Powerful adhesives replace all bolts and clips. ROVER, Alion Energy's robotic installation vehicle, then works with the concrete rail system to carry and mount panels, using a fraction of the labor while increasing speed and installation quality.

This new installation process eliminates low-skilled tasks including bolt-tightening, ditch-digging and hauling heavy glass over uneven ground. High-skill tasks including electrical work, concrete production, machine and robotics operations are maintained or newly created. Local concrete suppliers are used instead of shipping metal poles and racks from remote sources. Overall, Alion Energy's construction process elevates the nature of local, solar installation work.

Once installed, SPOT, Alion Energy's robotic cleaning technology, offers simple and automated cleaning solutions to prevent double digit performance loss due to soiling. SPOT is programmable to wash panels at any interval and can be activated from a computer, tablet or smart phone. SPOT can also manage overgrown vegetation by equipping SPOT with customized shears.

Alion Energy' robotic technologies and construction practices can work with most photovoltaic and thin film panels to improve LCOE for utility scale projects. The non-penetrating, concrete rail system and powerful adhesives are ideal for brownfields and landfills where soil can't be penetrated, damp environments that can corrode metal and high-wind environments.

To learn how utilities can cost-effectively diversify their generation portfolio, how independent power producers can offer projects with lower LCOEs and how developers can increase margins with reduced labor costs, visit [www.alionenergy.com](http://www.alionenergy.com).

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**About Alion Energy**

Founded in 2008, Alion Energy is fundamentally redesigning the way we build and maintain utility scale solar. As an innovative EPC and O&M solutions provider, Alion Energy combines robotic installation technology with established construction practices to build local, utility scale projects faster and for lower cost less while producing more energy than standard fixed-tilt projects. At Alion Energy, we look beyond simply building the most cost-effective utility scale solar systems; we build solar plants with LCOEs that can compete with any generation source. To learn more, visit [www.alionenergy.com](http://www.alionenergy.com).

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