



The new system uses a drone to automate the process of cleaning solar panels | Photo source [Airobotics](#)

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A DRONE SYSTEM FOR CLEANING SOLAR PANELS

 AGRICULTURE & ENERGY

The fully automated system includes a drone docking station that automatically replaces batteries and replenishes cleaning fluid

Spotted: A partnership between Israeli drone manufacturer Airobotics and solar farm services company Solar Drone has developed a unique system for cleaning solar panels.

Solar panels may seem like maintenance-free systems – but they do require cleaning to ensure full functionality. Dirt, bird droppings, and other contaminants significantly reduce their efficiency and energy output. Yet periodic cleaning is costly and can be time-consuming if the panels are difficult to access.

The new system uses a drone to fully automate the process. The drone is kept inside a weatherproof dock nearby the solar panels, from which it is periodically released to perform cleaning. With LiDAR sensors and mapping cameras for optimal positioning, the drone sprays each solar panel with cleaning fluid.

The drone is able to automatically replace discharged batteries and replenish cleaning fluid. This allows it to stay in continuous operation.

“Today’s solutions are unwieldy, uneconomical, and unable to cope with modern solar farms,” explains Solar Drone founder Shmuel Yanai. “We believe the entry of Airobotics’ drone technology into the market is a game-changer, with significant economic potential.”

Other recent innovations featuring drones include [robot forest rangers](#) and a drone-enabled [water sampling service](#).

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Takeaway:

According to [Energy Post](#), solar 'soiling'—defined as the energy lost from dust on panels—can reduce energy output by between 7 and 50 per cent. Such cuts in energy can cause significant problems for investors and those depending on solar generation. Solar Drone comes at a crucial time when more engineering solutions are needed to keep up with the rapid take off of solar power.