



APPLICATION SPOTLIGHT – Utilities



Improve
Productivity



Improve
Safety



Improve
Efficiency

AERIAL SOLAR PANEL INSPECTION AND DIAGNOSTICS

MANAGE SOLAR POWER GENERATION EFFICIENCY

THE CUSTOMER'S CHALLENGE

Solar farm management costs the industry an estimated \$1 billion per year in labor costs. Routine inspections are a critical part of operational efficiency, which can be both hazardous and tedious. An end-to-end solar farm inspection is so labor-intensive that it could take weeks to perform with solely handheld electrical test equipment. At a large utility site, testing string-by-string to confirm performance ratios is an endless task. Smaller commercial and rooftop systems may take days to inspect.

A SOLUTION

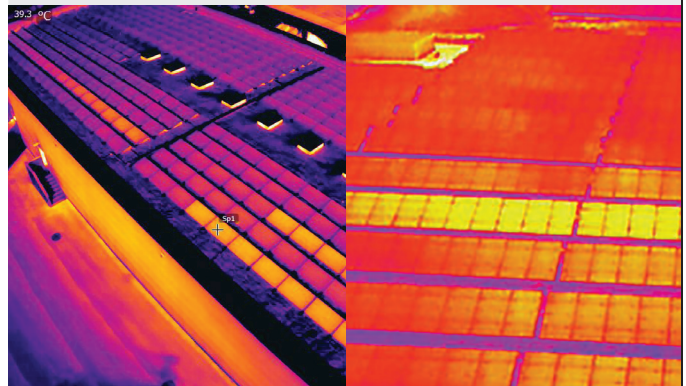
Regardless of the solar installation, it is critical to find and mitigate issues through routine inspections, prevent larger breakdowns, manage warranty claims with equipment suppliers, and operate within contracted performance and yield guarantees. Panels not operating at peak performance due to issues with inverters, combiners, string failures, module problems, trackers out of alignment, or even shading, become visible in seconds with infrared (IR). Solar panels that are not operating efficiently tend to have a different temperature signature than panels operating properly. A UAS solution with onboard FLIR thermal imaging, such as the FLIR M210 XT2 640-13 mm, makes it easy to quickly inspect a large target area and pinpoint solar panel problems from the air. Once the problem is identified with IR, a digital multimeter or clamp meter, such as the Extech MA445, can help you diagnose electrical issues at the point of failure and determine the proper course of action.

THE RESULTS

Incorporating thermal inspections into your routine maintenance plan will reduce your inspection times from weeks to hours when using a UAS solution, and hours to minutes when using a handheld thermal imaging solution. You'll work more safely during inspections by reducing your exposure to the elements, and it will help improve your overall efficiency.



Routine inspections are a critical part of operational efficiency



Common issues become visible in seconds with infrared



FLIR M210 XT2 R

EXTECH MA445

