PV STRING FAULT DETECTION

CLEAN TECHNOLOGY
Method for the detection of ground faults in PV strings using spread spectrum time domain reflectometry.

TECHNOLOGY SUMMARY
Ground faults and other wiring issues that compromise optimal panel performance are common, but often remain undetected posing safety and fire risks. Most methods for detecting ground faults require time-consuming voltage and current measurements, as well as visual assessment of solar panel integrity.

U of U researchers have developed a novel spread spectrum time domain reflectometry (SSTDR) method for the detection of photovoltaic (PV) string faults. This SSTDR method compares autocorrelation differences generated by the PV string before and after detection of the fault. It does not require current or voltage measurements, saves time, and prevents malfunctions caused by undetected string faults.

FEATURES AND BENEFITS
- Locates ground faults in any size PV string.
- Operates successfully in or out of sunlight.
- Eliminates need for current or voltage measurement.
- Decreases maintenance time and cost.

RECENT PUBLICATIONS

INVENTOR PROFILE
Faisal Habib Khan, Ph.D., Assistant Professor – Electrical & Computer Engineering
Mohammed K. Alam, Ph.D. Student

Technology & Venture Commercialization | University of Utah | tvc.utah.edu
615 Arapeen Drive | Suite 310 | Salt Lake City, Utah 84108