

## Success story #144:

Latest research shows Selective Deployment improves energy production by 10%.

Offering Flex MLPE for less than \$0.02/watt!

<u>Location:</u>	Los Gatos, California
<u>System Size:</u>	Roof top mounted 2.3 kW
<u>Modules:</u>	10 Upsolar 230W Poly 60 cells 9 or 10 Tigo TS4-M (Monitoring) <u>Only 1 Tigo TS4-O (Optimization)</u>



10 testing panels, including the shaded A10 panel with a screen mesh.

### Problem

A single shaded panel impacts overall string production if not optimized, but optimizing every panel in the string drives up cost. Tigo Flex MLPE TS4 solution allows for selective optimization of the single shaded panel to recover lost energy and save on cost.

### Solution

The testing lab installed 10 TS4-M covers on 10 X 230W panels, and covered 2 rows of cells on panel A10 (see pictures) to simulate shaded conditions. (See shading impact on monitoring page below)

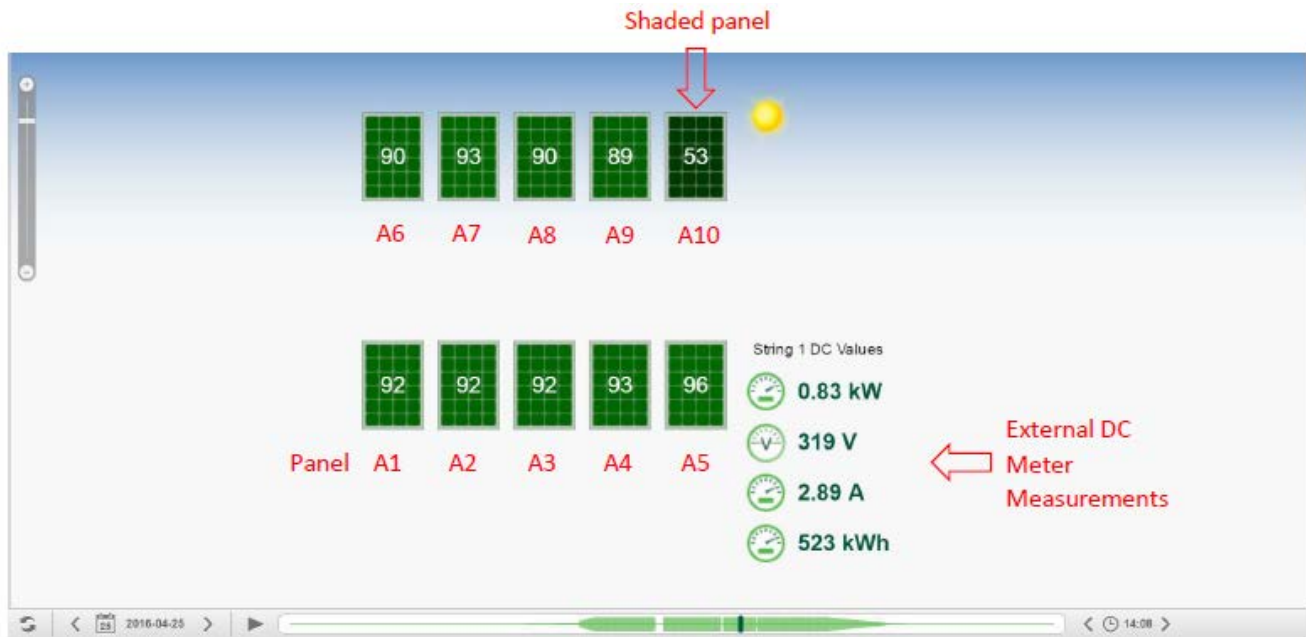
The TS4-O (optimization) unit is swapped throughout the day with the TS4-M (monitoring) unit on panel A10. The TS4-O will not only keep monitoring like the TS4-M, but also optimize the panel to bypass shading.

DC Power curve measured by external DC meter shows that selective deployment of the TS4-O cover on the shaded panel increased overall production. Peak recovery at 10%.

Thanks to a single TS4-O, the shaded panel did not impact the rest of the string's production. Shade bypass allows the entire installation to generate 10% more energy than a traditional solar system. The test shows that Tigo® was able to gain maximum energy, and was able to save money on the O&M service by using only one (1) optimization cover out of 10.



Close-up of the shaded A10 panel with a screen mesh covering 2 rows of cells.



Above: A10 panel appears shaded on the monitoring page.

Below: DC Power curve measured by external DC meter shows that selective deployment of the TS4-O cover on the shaded panel increased overall production.

