Case Study: Giora System

Increased Visibility

Location: Bene Zion, Israel
System Size: 16,215 Watts
Modules: 69 ET- Solar 235W
Inverter: SMA TL15000
Monitoring: Tigo Energy
Completed: April 2012

Summary

To address a challenging residential rooftop solar installation in Bene Zion, Israel, installer Mikadu Tech G.A Ltd had to find an inventive solution that was both cost effective, and harnessed the most energy possible from a site plagued with shading issues.

The Challenge

The homeowner was a proponent of solar energy and very excited to install an array on his home. He was reluctant however, to damage the trees that surrounded his home. These trees, while beautiful, caused many shading issues that could reduce profitability by degrading the energy harvest on a traditional solar array. The system owner wished to maintain the natural beauty of the property and not prune the trees extensively, but also harness the full benefits of solar energy.

The Solution

The installer used Tigo Energy optimizers to ensure that the system would harvest optimum energy without having to remove any of the trees from the site. Using Tigo Energy optimizers allowed the system to handle shading issues without compromising the performance of other modules in the string by implementing patented Impedance Matching technology and module-level MPPT. The installer was also able to fit more modules on the roof by placing uneven strings, which would not have been possible without optimizers.

The Results

The homeowner was able to install a 69 panel (rated at 235 watts each), 16,215-watt system on his rooftop without harming any of the trees on his property. The system can harvest over 90 kilowatt-hours during high performance times of year. In addition, Tigo Energy optimizers supplied module-level monitoring data so that the owner could track the performance of each individual solar module.