

Israel: Telecom Installation



“Morningstar’s TS-MPPT-60 Controllers = Increased Energy Harvest, Long Operating Life & High Reliability.”



The Challenge:

- To provide remote & autonomous to a regional Wireless Broadband Installation in the Israeli village of Klil.
- Klil’s Mediterranean climate characterized by long, hot, dry summers and short, cool, rainy winters.
 - Temperatures range from 5°C to 38°C annually
 - The average mean relative humidity is recorded as 56.3% (ranging between 43% to 65% annually).
 - There is 9.5 hrs of sunlight/day and 3,468 hrs of sunlight/day .
- Traditionally deployment of these type of installations relied on the use of fossil fuel-based diesel generators—which tend to be expensive to operate, harmful to the environment and limited by geography, transportation costs and supply. Further, rising fuel costs, fuel thefts and required regular maintenance increases the overall operational costs of any remote-based communications’ base station.
- Furthermore, the village inhabitants are environmentally focused and prefer to use clean, sustainable energy to meet their living and technological needs.

The System:

- 1.8kW off-grid solar-power system powering a regional wireless broadband installation with a 540AH 48 VDC battery bank system. **“We selected the TS-MPPT-60 Controllers due to their high reliability and excellent connectivity.”**

The Solution:

- A **100% Stand-alone Photovoltaic Installation** using **Morningstar’s TriStar MPPT™ 60A Charge Controllers**
- The TS-MPPT-60’s are **environmentally optimized and offer extensive weather protections**. Rated for an ambient operating temperature range of -40°C to +45°C, they are the **perfect choice for Klil’s Mediterranean climate**.
- Their **low self-consumption** means more autonomous power to power the base-station’s primary communication functions.
- TS-MPPT-60’s keep the batteries at a **higher State of Charge (SoC)** for the same PV array. Higher SoC means **better battery health & longer battery bank life**. It also means more time before a Low Voltage Disconnect, which equates to **better autonomy for the system**.

Photos Courtesy of Interdan Ltd.