

**SOLAR FLARES  
 NEWSLETTER**

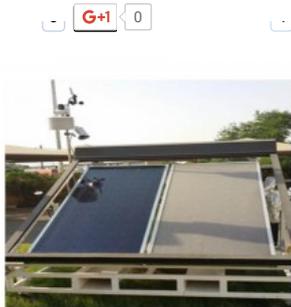
Click Here

Installations

Home » Installations » News

# TVP Panels Demonstrate No Need For Cleaning

Published on 7 December 2015



Today [TVP Solar](#) has revealed the result of one year's testing in Kuwait, demonstrating a unique feature of their MT-Power high-vacuum solar thermal panel: high efficiency operation despite dust accumulation, even in harsh desert environments with no cleaning.

During the test period, July 2014 through July 2015, the never-cleaned MT-Power panel showed average efficiency reduction of just 11%, only taking advantage of five sporadic rainfalls. Tested in parallel, the trimester-cleaned MT-Power panel showed average efficiency reduction of just 4%. Rainfall and non-precision, "dry" brush-based cleaning demonstrated to return MT-Power to nominal efficiency.

These results prove that no cleaning is required for MT-Power panels, even in harsh desert environments. The end-user has the options to either resort to quarterly dry cleaning without any waste-water to optimize performance, or slightly over-size the solar field relative to peak demand to ignore the dust accumulation effect.

The test was conducted in Sulaibiya (Kuwait) at the headquarters of Agility Logistics, via a dedicated measurement platform. MT-Power panels operated continuously and unattended at 100°C during the testing period, with the never-cleaned panel showing an average energy production of 3.5 kWh/m<sup>2</sup>/day, with an average efficiency of 64.5%. Throughout the year, efficiency levels never dropped below 19% relative to nominal/cleaned.

Piero Abbate, CEO of TVP Solar, stated that: "TVP panels are truly suited to perform in the harsh environments of the Middle East and Gulf regions, where all other solar collectors fail due to dust and sand. It is crazy to use water to clean solar collectors in these areas where it is such a scarce and expensive resource!"

Dr. Vittorio Palmieri, CTO of TVP Solar, continued with: "Thanks to high-vacuum insulated planar layout, TVP panels are the best at capturing and transforming diffuse light to thermal energy among solar collectors; this is just physics. Dust and dirt accumulation significantly increases the incoming diffuse light component, and only our panels can cope without cleaning."

Targeting applications requiring temperatures between 80°C and 180°C, MT-Power panels are an ideal thermal energy supply for critical local applications such as industrial heat and steam, desalination, enhanced oil recovery, and even air cooling.

Labels: [TVP solar thermal](#), [thermal](#), [cleaning](#), [desert](#)

## Solar Novus Blog

- If Solar Advocates Had a Crystal Ball
- Taking the Pulse of the Global Solar Industry
- Vice President Biden Addresses Solar Power International 2015
- SPI 2015: New solar innovations in Start-Up Alley
- Apple, Tesla and Why We Need to Take Solar Seriously

NEXT

## Case Studies and Solutions

- Kosovo Launches its First Solar Power Plant
- Solar Decathlon 2015: Sustainable home competition
- 2.4MW Solar Installation on the Anaheim Convention Center
- Integrating Solar Monitoring with Renewable Energy Education

NEXT

## Solar Research

- Tandem Solar Cells With Perovskite Could Reach 30+% Efficiency
- EU Pilot Project: Steel-based BIPV solar roof
- Intermediate-Band Solar Cells for Better Use of Solar Spectrum
- More Realistic Modeling for More Efficient Solar Farms
- Integrating Graphene Oxide in Solar Cells

NEXT