

Press Release

TVP Panels Demonstrate No Need For Cleaning In Year-Long Desert Environment Test

Bahrain, 07 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_{th}/m²/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.

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About TVP Solar:

TVP Solar SA is a Swiss company which designs, develops, manufactures and markets innovative high-vacuum flat solar thermal panels based on patented technology.

TVP Solar is a game-changer in the solar thermal industry, effectively competing with electricity and fossil fuels in the cooling, desalination and industrial process heat markets.

For more information please visit: www.tvpsolar.com

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