



SunSweep™
Polywater SPW™ Demonstration
El Centro, California
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Report by:
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Abstract:

On March 4th, 2018 SunSweep, LLC demonstrated a manual application of Polywater SPW/water mixture with a wet brush/squeegee to clean photovoltaic solar panels. This demonstration was performed to exhibit the abilities of Polywater SPW to win a cleaning service contract in El Centro, California. Cleaning with Polywater SPW produced a 4.5% increase in power production from 5248.8W soiled to 5500W clean on the measured string of panels.

Test Conditions:

The test was conducted on 11 Canadian Solar CS6U model panels (1 string) at a tilted angle of about 10 degrees. The considered soiling was light, dried or caked on dirt, bird droppings, and moderate soil buildup in the lower corners of the modules. The test was held at around 10:30 AM. Weather conditions were moderate with cloudless skies and temperatures in the high sixties to low seventies. Power output from the selected string was measured directly before cleaning with Polywater SPW and directly after the cleaning took place.



Sample, Dirty Panel, El Centro CA

Polywater SPW™, Wet Brush, and Squeegee

Polywater SPW™ was used in a ratio of 3 parts per 25 in a one gallon “weed sprayer” type deployment device. The mixture was sprayed in an up and down motion at high pressure for ten seconds per panel in the string. A wet poly-type brush was used to help loosen any soiling and the remnants of the mixture/soiling was wiped off with a squeegee. The operators followed this method to the end of the string. Less than a 1/4 of the gallon of mixture was used for the string of 11 panels.



On site in El Centro, California



1-Gallon Weed Sprayer

String	Dirty	Polywater SPW mixture
I mp 14-12	753V	764V
Vmp 14-12	7.0A	7.2A
P [W] 14-12	5271 W	5500 W

The string's power production was measured at 5271W before the use of Polywater SPW. Immediately after Polywater SPW was used to clean the PV panels the power production was measured again and recorded at 5500W. Using Polywater SPW to clean the panels returned a 4.5% production increase on the string of panels cleaned at the time of measurement. The power production was not measured over a full day cycle.

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