



## AUTOMATED CLEANING SYSTEMS



TRANSFORM ENERGY  
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SUMMARY





## COMPANY PROFILE

Transform Energy (Transform) specializes in automated solar panel cleaning systems for commercial, industrial, agricultural, and utility scale projects. Our systems preserve panel warranties and increase solar production. We do this by cleaning at night with low-pressure soft water using advanced water engineering.

**We provide the first economical solution to eliminating soiling losses.**

Automated Cleaning Systems have been installed since 2011 and today, there are over 4,000 systems installed worldwide on a total of over 1.5 GW of panels with systems ranging in size from large utility projects to cleaning systems for residential solar arrays. On average, we clean over 1,000,000 panels every day.

Automated Cleaning Systems also decrease secondary costs such as roof damage from personnel walking on the roof while washing the panels.

Our goal is to optimize your solar production through constant cleaning, and regular proactive maintenance.

# 4,000

Projects installed (on over 1.5 GW of panels)

# 6

worldwide locations



## TRANSFORM ENERGY SOLUTIONS

Transform is a unique proprietary automated solar panel cleaning technology using advanced water engineering. The Transform purification technology treats the water down to negligible and safe levels of lime scale before the automated system washes the modules. It is the most cost-efficient solution to panel soiling on the market.

### Cleans Every Day

The Transform system cleans regularly, keeping the panels clean at all times which prevents the dirt from accumulating on the panels – and thus increasing energy production by up to 30%.

### Warranty Compliant

The Transform system cleans the panels at night to avoid thermal stress to the module glass. Our hardware is connected through a series of patented clips – eliminating any need for drilling or glue.

### Safe and Efficient

The Transform system distributes water through an automated system – reducing labor safety hazards and damage to rooftops. No chemicals or abrasive brushes and even the filter cleans itself.

## CASES IN CALIFORNIA



### CALIFORINA ALMOND PACKERS CORNING, CA

California Almond Packers was looking for a way to improve solar panel production. They experienced a noteworthy increase in panel production after cleanings, but with their current manual cleaning methods, the production quickly reverted to pre-cleaned conditions. It was decided to install the Automated Cleaning Solution on all but one of the solar sections on the roof. By comparing weekly production before and after installation, Transform Energy was able to measure a significant increase in panel production on the system with the Automated Cleaning solution of **20.2%** **This number is still climbing as the peak soiling and production season is still yet to come. We anticipate seeing over a 30% increase in production by year end.**

Below is a selection of companies we have worked with. We will provide references upon request.





## SUMMARY

When modeling future solar performance, solar professionals account for several losses – the most severe being soiling losses (when dirt accumulates on the panels and lowers production). Designers often accept soiling losses as inevitable, and up until now, there hasn't been an economical solution to the soiling problem.

This is the first cost-efficient, automated cleaning system on the market. It is fully automated and requires virtually no maintenance – the system runs off of water pressure and has almost no moving parts. Every system is custom-made to fit the solar panels' position and accommodate the changing seasons as well as the requirements of the owner. Since the system is automatic, there is no need for manual cleaners or people on your property, thus reducing your liability and the need for scheduling appointments. It cleans every week, keeping dirt from accumulating on the panels, and thus increasing energy production up to 30%.

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