

**PROJECT TYPE:**  
Agricultural

**SYSTEM TYPE:**  
Ground Mount Fixed  
Tilt @ 25°

**LOCATION:**  
Tulare, CA



**35.1 % increase in production**

## CASE STUDY

**Friesian Dairy Farm used RST CleanTech to make their solar project more profitable – with little hassle.**

Friesian Farm is a dairy farm owned by the Leyendekker Family. It is located in Tulare, CA and has a fixed tilt ground mount 1.107 MWdc solar array.

Every dairy farmer knows that their operation kicks up a lot of dust in the air. If you have solar panels nearby, that means panels get dirty quick and production drops. But it's a hassle to wash the panels every month in the dry season. There has to be a better way.

It was decided to install the RST Cleantech Solution on one of the solar array's 37 inverters. By comparing the inverter that had RST on it's panels to the non-RST inverters, it was possible to measure real time the difference in production.



# Results



**35.1% Increased Production**



**\$25,595 in additional production first year. \$872,579 over 25 years.**

\*15% production increase, \$0.10/kWh, 1107 kW system



**<1% soiling losses.**

At this site, the panels would lose up to 0.66% production every day. Over 10 days, that is a 6.6% loss. RST stayed ahead of the soiling and kept panels clean.



**3-5% production increase from rain.**

Rain only helps a little bit when it comes to taking off caked-on dirt.



**Total Water Usage:**

\$3.37 - cost of water for 37 washings (878 gallons)



**Hassle Free:**

Not once did the owner need to do anything with the RST system or the panels with RST technology. The system can be controlled by phone so increasing the number of cleanings during the dry season only took a few seconds.



**Warranty Compliant:**

Due to RST CleanTech's gentle rinsing with filtered water. No detergents, high pressure or abrasive material were used.



# The Site & Installation

On March 11, 2020, The RST CleanTech solution was installed on one of Friesian Farm's inverters – 1.107 MWdc Canadian Solar 315W Panels, and compared against the other inverters at the site.

The Leyendekkers set up a 1" female valve and a 120V outlet next to the PILOT location and the RST system was installed in one day.



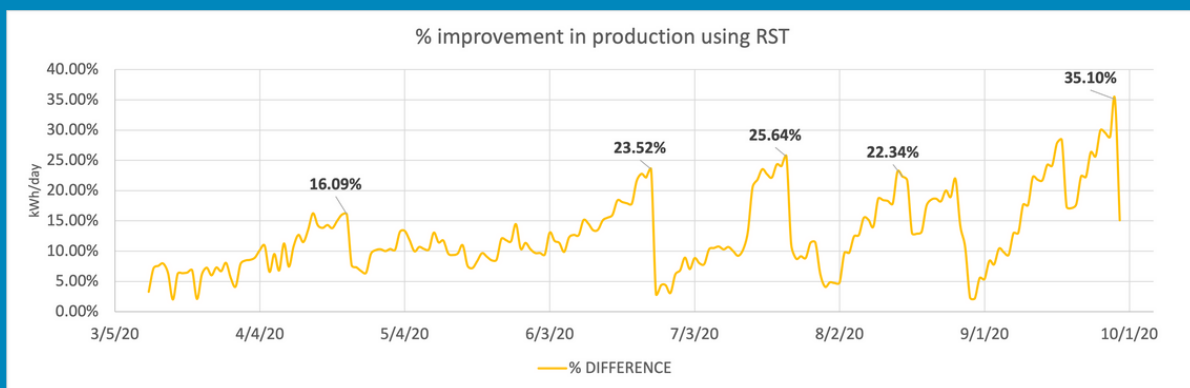
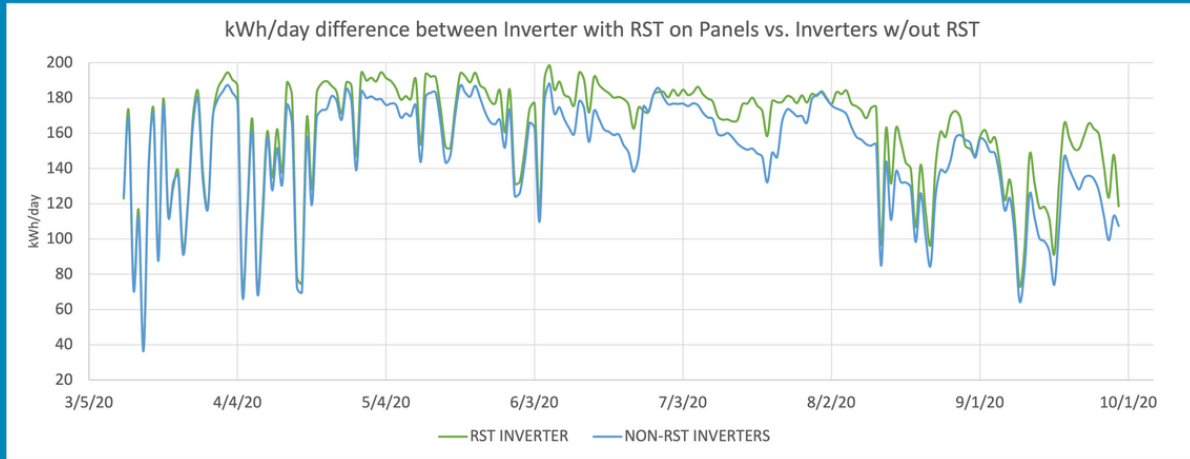
The RST control system and electrolysis system hooked up to the 1" valve and 120V outlet provided by the Leyendekkers.



The RST system was installed on 1.5 rows of panels on the bottom right.

# Data

Friesian Farms had the RST CleanTech solution installed on panels on one of their 32 inverters. Average increase in production was 12.53% even after 3 brush cleanings and uncounted water truck.



**Not even bird droppings stay on with RST.**