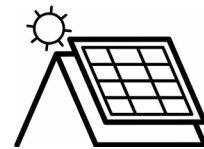




Case Study – COTA LTDA Citrus Cooperative Argentina

PVKIT® | CorruBracket™ 500T PV



At-A-Glance

Location:

Tafí Viejo, Tucumán, Argentina

Solar Installer:

Zafra Energy

Module Manufacturer:

GCL System Integration

— 353 panels, 615 W each

Inverter Manufacturer:

Solplanet

— two 100 kW inverters

End Customer:

COTA LTDA

Industry:

Commercial

The Situation:

COTA needed a rooftop solar mounting solution that could protect the integrity of its curved metal roof, minimize penetrations and added weight, and support installation under demanding seasonal weather conditions.

The Result:

S-5!’s rail-less PVKIT® solution with CorruBracket™ 500T PV reduced rooftop components, streamlined installation and helped crews respond quickly to severe weather—while the completed system remained secure, with no reported leaks, module movement or facility damage.

Project Stats

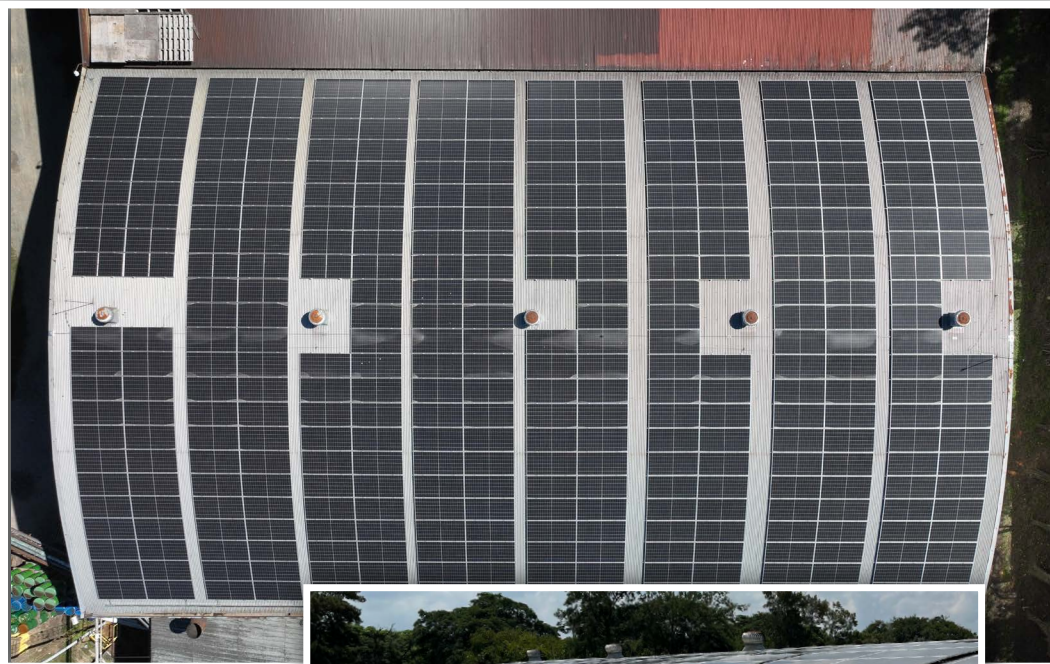
Roof Measures: 27 m x 45 m

Roof Profile: 22 gauge, curved corrugated profile, parabolic metal roof

Project size: 217,250 W

S-5! Products Supplied:

- PVKIT® (750)
- CorruBracket™ 500T PV (750)



The Project

COTA LTDA is one of Argentina’s most important citrus cooperatives. Based in Tafí Viejo, Tucumán, its members collectively supply fruit from approximately 2,500

hectares of orchards, while more than 65,000 tons of lemons are used each year to produce juices, essential oils, dehydrated peels and other derivatives for international markets.

As part of its commitment to reducing environmental impact and using natural resources responsibly, COTA commissioned a 217.25 kW rooftop solar array at its storage facility. The system consists of 353 GCL System Integration modules rated at 615 W each and two 100 kW Solplanet inverters, mounted on a curved, corrugated parabolic metal roof.

The project utilized S-5!’s rail-less **PVKIT®** solar mounting solution together with **CorruBracket™ 500T PV** attachments, providing a streamlined, lightweight approach suited for the existing roof.

The Challenge

COTA’s goal was to reduce grid electricity consumption by approximately 8% through on-site solar generation, equivalent to about 12% of its daytime energy use, with a targeted four-year payback period. Because the facility operates seasonally for five to six months each year and is not currently authorized to export surplus electricity to the grid, the system was sized to serve the year-round base load.

COTA’s primary concern was protecting the integrity of the metal roof and minimizing the risk of leaks from penetrations, since the facility stores products that are highly sensitive to moisture. A lightweight mounting solution was also important to minimize additional weight on the existing roof.

The solar array was installed on a 15-year-old, structurally supported metal roof with a curved, parabolic profile reaching a maximum pitch of approximately 20 degrees. That geometry required portions of the array to be installed in an inverted sequence, fastening the upper components first and then the lower ones.

The timing of the installation also coincided with Tucumán's rainy season and a severe storm event. Between 150 and 170 millimeters of rain fell in a single day, with totals reaching up to 250 millimeters over 48 hours in the hardest-hit areas—nearly an entire month's average rainfall compressed into just one or two days.

Argentina's National Meteorological Service also issued severe storm alerts, with wind gusts of 65 to 80 km/h in flat and urban areas and more than 90 km/h in foothill and mountain areas. Despite these disruptions, the project progressed from the start of installation through operational commissioning in approximately one month.

The Solution

S-5! distributor and partner in the region, Good Energy, recommended the PVKIT rail-less solution paired with CorruBracket 500T PV for a lightweight, efficient mounting system. Eliminating traditional rails drastically reduced the number of rooftop components, making materials easier to transport and handle while helping optimize labor hours and speed installation. The reduced weight also provided a commercial advantage and added confidence in the overall installation approach.

The rail-less system proved especially valuable during those severe weather events. With fewer components and tools on the roof, crews could quickly stop work and evacuate safely as conditions deteriorated. Despite the extreme conditions, not a single leak was reported, no solar panel moved out of place and the facility sustained no internal or external damage.

For the solar installer, Zafra Energy, the combination of PVKIT and CorruBracket 500T PV delivered the rail-less solution the project demanded while providing confidence in the long-term integrity of the roof and solar array.

How Did the S-5! Products Help?

- Reduced material costs, freight costs and storage requirements
- Enhanced project's commercial appeal with a clean, aesthetic installation
- Provided assurance with S-5! product certifications and testing — able to withstand high winds
- Reduced total system weight
- 25% better load distribution
- Reduced installation time by eliminating the need for racking and associated labor
- Easy to install and shortened project execution time
- Maintained roof warranty

Long-Term Outlook

The S-5! DirectAttach™ solar mounting solution is designed to help preserve roof integrity while securely supporting the solar array for years to come. With fewer rooftop components and no traditional rails, the system also helps simplify future maintenance and supports reliable long-term performance.

“At Zafra Energy, we are committed to excellence, and that is why we decided to work exclusively with S-5! The quality of the product is unquestionable: I knew perfectly well it was the best option, and I was not willing to use any other system. Choosing S-5! gave us complete confidence from the very beginning; their certifications and rigorous laboratory testing ensure the durability of the installation.

Thanks to the sequential installation process and the complete elimination of rails, we drastically reduced the number of components and the weight on the roof. This not only made it easier to transport and handle the components on the roof but also gave us additional peace of mind regarding the safety of our crew. We do it right the first time, and that is why we choose S-5!”

—Miguel Piñero, Manager, Zafra Energy



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