

Supermarket Chooses SolarEdge Rooftop System to Reduce Electricity Cost

Solar energy systems are becoming more and more accessible for small businesses, proving to be an efficient solution for reducing electricity expenses and encouraging energy sustainability.

One such business, Supermercado Cristal, a supermarket in Goiânia, Brazil, decided to go solar with the installation of a commercial rooftop PV system. The supermarket originally started operating as a butcher shop and gradually grew into a fully stocked supermarket. As its product offerings and space grew, so did its electricity bill. So in an effort to reduce their monthly electricity costs, Supermercado Cristal installed a SolarEdge commercial rooftop system consisting of P730 power optimizers and SE27.6K inverters.

"Our roof needed a solution that would make it possible to install the largest amount of solar modules, with the least amount of energy loss due to shading. Mithraz Energia Solar presented us with the SolarEdge solution, which in addition to generating more power for Supermercado Cristal, also offers a better product guarantee compared to competitive solutions." **Geraldino Neto, Supermarket Manager, Supermercado Cristal**



Installation Details

- System Type: Commercial rooftop
- Location: Goiânia, Brazil
- System Owner: Supermercado Cristal
- Capacity: 72 kWp
- Power Optimizers: 100 x P730 units
- Inverters: 2 x SE27.6K inverters
- Solar Modules: 200 x Canadian Solar 360W modules



Flexible Design Boosts Energy Production

As the butcher shop grew into a supermarket, its owners needed a larger space to store their items. In order to expand the building, multiple walls were added to the original structure; this created numerous layout inclinations and shaded areas. SolarEdge's DC optimized technology was chosen as the ideal solution to manage this complex roof layout and new shaded areas.

Typically, due to module mismatch, this challenging installation area would prevent a traditional PV system from performing at its maximum output. Factors such as roof orientation, trees, clouds and additional obstacles combine to reduce the energy production of individual modules and therefore of the entire system.

In addition, with a traditional inverter system, the supermarket would be limited to only 20 modules per string. With SolarEdge, they were able to place **36 modules in one string**. This design flexibility allowed the owners to make efficient use of two rooftops. Ultimately, SolarEdge allowed a 20% increase of modules on the roof resulting in greater energy production.

Track Each Module for Efficient System Maintenance

SolarEdge power optimizers enable system monitoring at the module level, giving Supermercado Cristal the ability to use the monitoring platform as an effective maintenance tool. Maintenance personnel can easily pinpoint problematic modules for fast and accurate troubleshooting and increased system uptime.

Why SolarEdge?

System installer Mithraz Energia confirmed that SolarEdge was the right solution because of its superior design flexibility. SolarEdge's system topology made it possible to install modules on the entire rooftop area, helping Supermercado Cristal to maximize their energy potential and lower electricity costs.

