

FIMER

FIMER PROVIDES THE PERFECT SOLUTION FOR ESSI - COPOWER AND LÁCTEOS LA ESMERALDA



FIMER's solar inverters help to achieve major energy savings at dairy plant.

ESSI - COPOWER are two companies based in the city of Bucaramanga, Colombia and are known for their ongoing innovation in the energy and industrial sectors. With 20 years' experience - including energy generation, EPC projects, and the maintenance and manufacture of equipment for the food sector - together they have more than 1,430 Kw of solar power installed, demonstrating their commitment to their customers and the environment.

This extensive experience of ESSI - Copower enabled it to carry out one of its most prestigious projects for Lácteos la Esmeralda, a company which mass produces dairy products and is located in Madrid, Cundinamarca in Colombia.

Lácteos la Esmeralda's production plant had an average energy consumption ranging from 220–260 thousand kW hour per month – a significant expense for the factory. Therefore, the installation of a photovoltaic system was to both reduce the fixed energy costs as well as enable it to increase its self-consumption capabilities.

In order to meet the customer's needs, ESSI - Copower installed a 669kWp ground-mounted solar park. Since its installation in December 2020, Lácteos la Esmeralda has reduced its energy consumption by approximately 90 thousand kW hour per month, representing up to a 36% saving on its electricity bill.

Consumption graph from September 2020 to February 2021:



Promedio Act: 206026.78 React: 111666.98 React P.: 17398.57

However, while successful, the project was not without its challenges. For example, due to the terrain having a high groundwater level, the thrust profiles had to be adapted to a micropile system.

In FIMER, ESSI – Copower found the perfect partner, as its inverters provided a robust solution to meet the specifications of the installation, as they offer superior functionality suited to the high-powered panels. It could also support the project with a fewer number of inverters without compromising on the overall performance of the plant. This resulted in a reduction in investment costs for the client in terms of equipment, wiring, structure, and a smaller construction area.



The following components were used for the solar plant:

- 1,440 solar panels
- 5 x FIMER PVS-120-TL inverters
- 1x smart meter 4M 20 MODBUS

The PVS-120-TL three-phase solar inverter is specifically designed to maximize return on investment in decentralized floor-mounted applications. Equipped with six MPPTs, it improves power capture even in low light conditions. Additionally, it can be easily integrated with the Aurora Vision system and Energy Viewer to enable users to monitor the consumption and generation of the panels. This was a vital requirement for Lácteos la Esmeralda.



During the installation, ESSI - Copower also had access to FIMER’s Technical Service experts during the installation, which accompanied the client throughout the process with virtual and face-to-face advice at the plant.



"FIMER was an ideal partner during the project, providing the solutions that were perfectly suited to the requirements of the plant. The service provided by the Technical Engineers before, during and after the installation was what really made the difference and our client, Lácteos la Esmeralda, is really satisfied with the results."

Alexander Pinzón Avila - Renewable Energy Professional

Thinking about your next installation project?

With our huge portfolio of solar solutions, integrated digital services and a reliable support network, you can count on us. To find out how FIMER can help you achieve even more with your facility, visit www.fimer.com to find your local sales representative.

