NUMBER 3
MARCH 2018

BUSINESS CASE #3

# COOPERATIVA DEL CAMPO SAN SEBASTIÁN

## AGRICULTURE IN THE CANARY ISLANDS AIMS AT SELF-CONSUMPTION


## Case

The San Sebastián Cooperative, made up of 40 agricultural members and located in the industrial hub Los Olivos (Adeje), in southern Tenerife, is mostly dedicated to the packaging of bananas. In order to achieve its objectives of **environmental sustainability**, it wanted to replace its energy consumption with a **cleaner and renewable** source and, at the same time, make its production plant more efficient. Its current consumption is approximately **400 MWh**.

## Goals

- Energy self-sufficiency
- Cost reduction
- Environmental sustainability

## Solution

After a technical-economic analysis of the site, their consumption profile and current electricity bills, done by the Spanish company **Endesa**, an ad hoc solution was proposed for the installation of a **photovoltaic plant for self-consumption** that respects the needs of the cooperative. The solar power plant, with 400 polycrystalline module panels, was installed on the rooftop following a careful study based on position, surface, orientation and slope of the building, in order to maximize the energy generation, with an installed **capacity of 98 kW**.

**The self-generation plant** has been designed to function in three different situations:

- The customer covers its demand from the electrical grid when the solar resource is not available, for example, during the night.
- The photovoltaic plant generates electricity for self-consumption, but it's not enough to cover the entire demand, so the installation uses part of the electrical grid to cover the remaining energy demand.
- If the panels produce more than the demand, the customer consumes the energy generated and the excess is injected into the grid.

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## Benefits

- 3,000 tons of $CO_2$ removed from the atmosphere over the 25 years of project lifetime.
- The installation covers approximately 37% of the client´s energy demand
- On the self-consumed energy, the client benefits from a discount compared to the grid electricity price over the 15-year contract.
- The initial investment not made by the client and the corresponding savings on the electricity bill can be dedicated to optimizing their production facilities

## Economic advantages

The solution provided allows the company to save around EUR 12,000 each year, more than **EUR 300,000** over the plant's 25 years of service life. The San Sebastián Cooperative begun to save from the very first day as we took care of all costs, without asking the customer for any initial investment. Throughout the contract period, **the maintenance and operational and administrative management of the plant will be guaranteed**.

## Highlights

- A solar photovoltaic plant with **400 panels and 98 kW of installed capacity**
- Winner of the 2017 **Sustainability and Energy Efficiency Award**
- **Solution at zero cost** to the customer, benefiting from a discount compared to their grid electricity price over the 15-year contract.

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