RENEWABLE ENERGIES

Photovoltaic solar canopies

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INTRODUCTION

PVing Parks
Harness energy and take advantage of it where this was not previously possible

The decrease in the cost of solar photovoltaic installations, coupled with the increase in the price of electric energy, has hastened the arrival of numerous types of innovative proposals in energy generation systems. Circutor, after years of dedication and endeavours in improving electrical efficiency, has designed a wholesale solution that integrates instant self-consumption with recharging for electric vehicles.
The most comprehensive system

PVing Parks provide a solution that combines a solar photovoltaic canopy with a recharging system for electric vehicles. This solution allows us to produce energy during solar hours, to cover part of the electrical consumption of an installation, as well as the recharging of vehicles. PVing Parks are comprised of all the necessary elements for their installation:

- Photovoltaic modules
- Structures
- Inverter

Features

- Photovoltaic modules
- Structures
- Inverter
- AC and DC protection panels
- Control and monitoring equipment
- Electric vehicle charging systems

Advantages

- Use of renewable energy. Reduction in CO₂ emissions, the entire energy generated by the system is done so cleanly thanks to the photovoltaic panels.
- Recharging for electric vehicles. Offering the possibility of being able to add chargers for the electric vehicle. In this manner, we will be able to integrate PV generation and recharging in one solution.

Certification and stability
Compliance with the CTE and the Eurocode (includes climatic loads of the Canary Islands). Deemed stable so that the foundations/shoes need not be very large.
European regulations:
Eurocode 0, 1 e 3.
Spanish equivalent regulations:
Technical Building Code.
DB-SE-SE
DB-SE-AE
DB-SE-A

Channelling of all wiring
The wiring of the PV modules is conducted inside the canopy and can be easily manipulated through registers, being hidden and protected.

Waterproofing
Not all solar canopies contemplate this aspect, but CIRCUTOR canopies feature the proper profiling set to collect and drive water while preventing leaks.

Electric vehicle charger integration
It is the sole canopy that has envisaged the incorporation of an electric vehicle charger in its primary structure.

Aesthetic impact
Although subjective, the design of the CIRCUTOR canopy has borne in mind their proportions and formal definition to distance them from the industrial aesthetics that the rest of the canopies designed with standardised IPE profiles tend to display.

RAL colour of customisable paintwork.
3 series in modular canopies

**PVS**  Modular canopies with charging point integration for electric vehicles

- **PVS 2** / **PVS 2-R**
- **PVS 4**

**PVM**  Modular sloped canopies

- **PVM 2**
- **PVM 4**

**PVY**  Modular canopies with dual slope

- **PVY 2**
- **PVY 4**

**Reduced energy costs.**
Distributed generation helps to reduce energy consumed from the power grid.

**Remote surveillance.**
Monitoring and supervision of the electrical consumption of the installation and PV generation. All to improve performance and efficiency of the system.
PVS Series

The PVS series consists of 3 models: PVS 2, PVS 2-R and PVS 4. PVS canopies have been designed to offer a fully modular and robust system, ensuring the integration of different charging solutions.

The structure of the canopy is made of galvanised steel that is subsequently applied with a primer and painted. This process allows us to guarantee more durability and protection of the product against oxidation, and also tailor the canopies to suit the user’s needs.

PVS2-R goes one step further and incorporates a fully integrated recharging system to ensure maximum performance while maintaining an avant-garde design. This furthermore allows for the housing of the protection and power equipment within the foot of the structure.

INTEGRATED CHARGER

Warranty for 10 years
PVS Sizing

PVS configurable modules

5m module

8m module

Combinaciones PVS

5m + module

8m module

5m + module
PVM series

The PVM series consists of 2 models: PVM2 and PVM4.

The PVM series is ideal for connecting large parking areas covered with solar photovoltaic panels. This canopy maintains the construction characteristics of the PVS family, offering a lighter solution with a Magnelis surface finish.
PVM Sizing

PVM configurable modules

5m + module

Original

Upgrade

8m module

Original

Upgrade

15m module

Original

Upgrade

PVM combinations

Module 5m

Original

Upgrade

Module 15m

Upgrade

Module 15m

Upgrade
The PVY series consists of 2 models: PVY2 and PVY4.

The PVY series came into being to adapt to specific projects. It is a dual wing version with the same features as the PVL series, but with the cover forming a valley shape. This peculiarity allows for a maximum height on both sides, making it ideal for parking lots expecting to receive vehicles of greater height.
PVY sizing

PVY configurable modules

5m Module

Original

Upgrade

8m Module

Original

Upgrade

8m Module

Original

Upgrade

FASTENING AND PROFILE BELTS IN ALUMINUM. DESIGNED FOR THE ELECTRICAL WIRING CHANNEL. OPTIMAL INTEGRATION OF THE PV MODULES AND MAXIMUM WATERTIGHTNESS THE SYSTEM.
Applications

Ideal solution for business infrastructure, retail parks and service areas. Offering users the possibility to charge their vehicle and generate photovoltaic energy, to supply the consumption of its installation. This type of infrastructure is ideal for places where recharging points are needed for electric vehicles in addition to providing covers for vehicles, a system is provided for recharging via renewable energy, with the place given preference for users with electric vehicles.

Energy management software

Two versions of the software are available for the canopy and infrastructure management related to it. PVmonitor, offers the main electrical installation data and information on its energy usage. The other, more complete version, (PowerStudio SCADA), offers total management and energy monitoring of the entire canopy.
Charging of electric vehicles

In addition to the generation of photovoltaic energy, the canopies are complemented with an advanced recharging system for electric vehicles, thus adding more features to the structure. Two types of systems are available for charging electric vehicles associated with solar photovoltaic canopies. On the one hand, the WallBox or charging points, that are integrated directly into the foot of the canopy; alternatively, the option with Urban r posts may be chosen, thus offering a dual socket, in addition to built-in communications, giving freedom to the user to decide the place of the installation, not being integrated into the canopy’s primary structure.

Connection
Connector type: Type I, Type II or Schuko
Charge Type: Mode 1 / Mode 2 / Mode 3

Electrical features
Input voltage: 230 VAC / 400 VAC
Input frequency: 50....60 Hz

Interface
Access: RFID system card
Communications: Ethernet or 3G (Optional)

Safety
Protection degree: IP 54 / IK 10