



ASTURMADI RENEERGY designs, calculates and manufactures canopies with solar photovoltaic modules and devices to charge electric vehicles during their parking.

The recharger system applied in the canopy allows to obtain the energy from both public power grid and photovoltaic solar panels.

Moreover, the system can provide the public power grid with the generated energy and stock up on it later.

EXPERIENCE



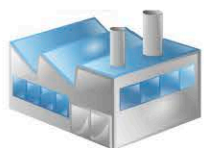
- ✓ ASTURMADI RENEERGY technical team has more than 10 years of experience in photovoltaic sector and more than 1,2 GW of projects executed.
- ✓ Participation in projects in more than 20 countries.

DESIGN



- ✓ Design and calculation of the structure to achieve the requirements imposed by the clients and current regulation from each country.
- ✓ Structural solutions are designed in an innovative way with a high aesthetic value.

MANUFACTURING



- ✓ Own manufacturing cold formed profiles according to UNE-EN 10162. Different steel qualities are selected to cover project needs.
- ✓ Coating treatments are applied to guarantee the structure durability (Hot Dip Galvanized, Posmac, Magnelis, Magicinc or similar).

ASSEMBLY



- ✓ Easy assembly process. Nor cutting or welding is necessary in construction.
- ✓ Versatile structure, applicable to private housing and department store (shopping center, studios, hospitals, airports...)

QUALITY



- ✓ Metal structure manufactured according to UNE-EN 1090.
- ✓ Hot Dip Galvanized structure and / or ZM coating treatment (Zinc-Magnesium) according to UNE-EN ISO 1461 and UNE-EN 10346 respectively.

WARRANTY



- ✓ 10 years structure warranty (expandable).
- ✓ Coating warranty is dependant from the environment where the structure is installed according to UNE-EN ISO 14713 (*).

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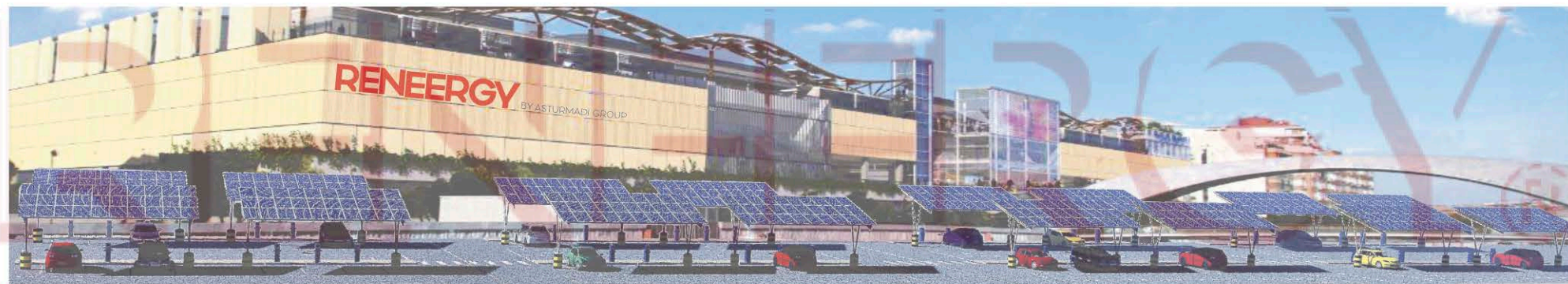
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GENERAL CHARACTERISTICS

Modular Structure	Canopies for electric vehicles
Panels	30 modules of 60 or 72 cells
Maximum Slope	Tailored to specific client conditions
Material	Cold formed and Hot rolled steel with a yield strength greater or equal to 275 N/mm ²
Finishing Treatment (*)	Hot Dip Galvanized according to UNE-EN ISO 1461 or ZM (Zinc-Magnesium) according to UNE-EN 10346
Lacquered	All structures can be lacquered according to client specifications.
Maximum Wind	Tailored to local Codes or specific client conditions

Modular solar canopies are designed as Parking concept for department stores (shopping centers, airports, companies, hospitals...) or private houses. They have the ability to use the solar energy captured by photovoltaic modules to charge electric vehicles and/or illuminate the canopy. To avoid energy waste, the canopy structure is connected to the public grid, in order to be able to donate the generated energy when it is not necessary for its applications and in the same way to recovery that energy in the night hours or when there is an excess by the same.



(*) Standard Coating Warranty

	Environment	Warranty
C2	Exposed rural inland	50 years
C3	Urban inland or mild coastal	25 yeras
C4	Industrial inland or urban coastal	10 years
C5	Industrial with high humidity or high salinity coastal	5 yeras

Service life is guaranteed maintaining enviromental conditions without changes.

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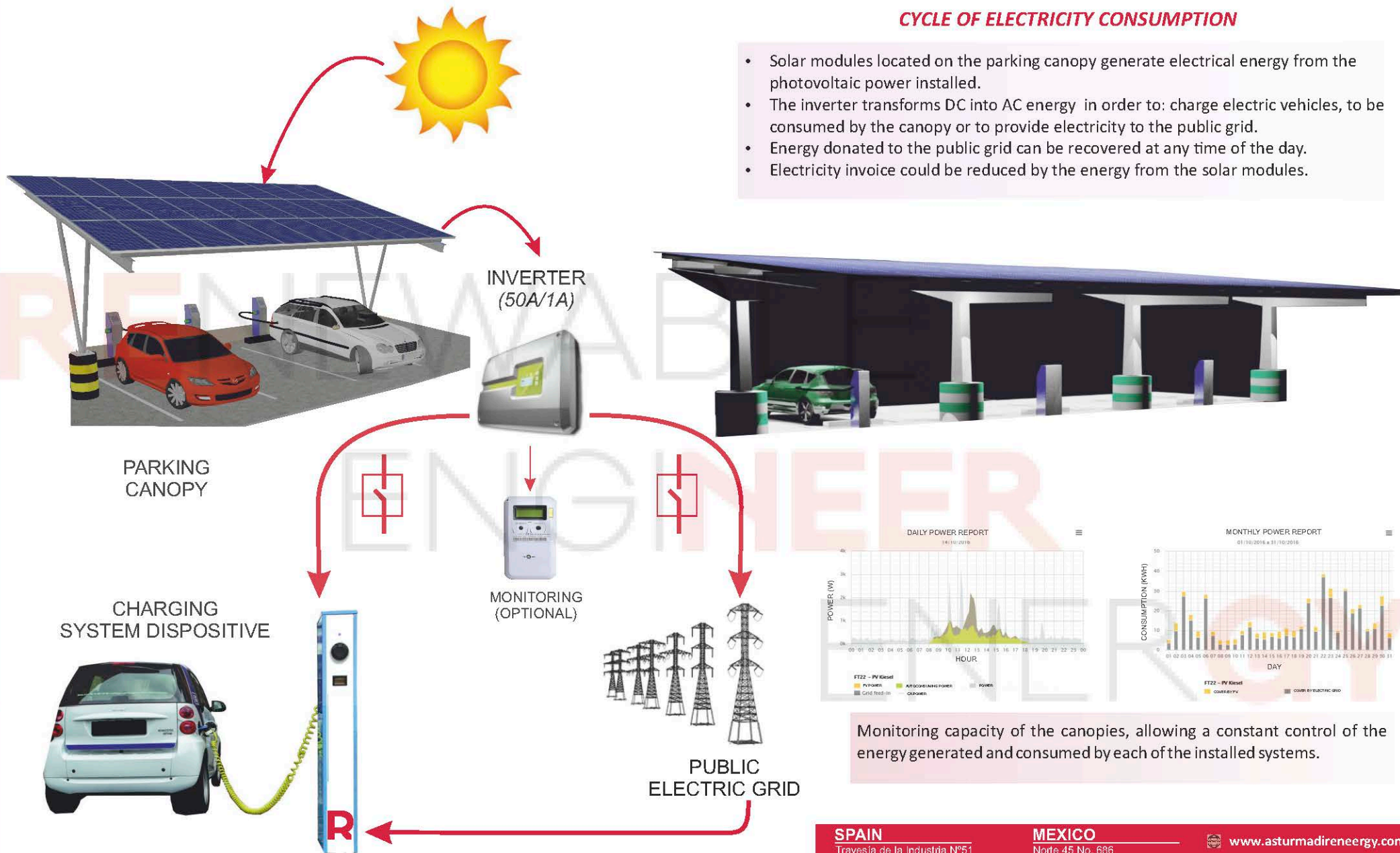
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CYCLE OF ELECTRICITY CONSUMPTION

- Solar modules located on the parking canopy generate electrical energy from the photovoltaic power installed.
- The inverter transforms DC into AC energy in order to: charge electric vehicles, to be consumed by the canopy or to provide electricity to the public grid.
- Energy donated to the public grid can be recovered at any time of the day.
- Electricity invoice could be reduced by the energy from the solar modules.

Monitoring capacity of the canopies, allowing a constant control of the energy generated and consumed by each of the installed systems.

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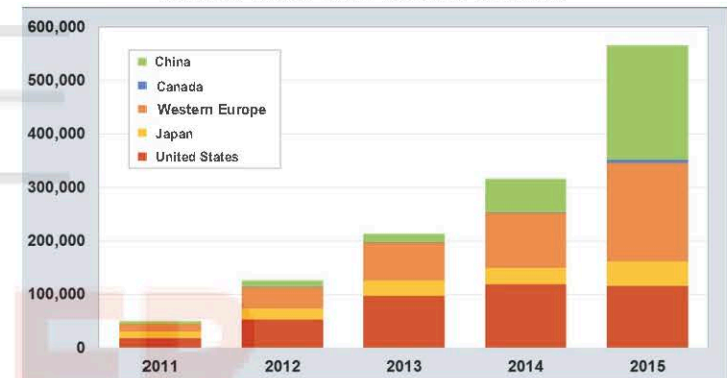
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Solar canopies designed by ASTURMADI RENEERGY can obtain energy efficiency and economical profitability from an existing space, providing added value due to the possibility of holding charging points for electric vehicles.

The modular design gives the system the ability to be installed in both private houses or department stores.

Annual sales from electric vehicles



Canopies amortization



- 30- panel modular solar canopy.
- Complete amortization of the investment before to first 10 years.
- Canopies with the ability to use the energy generated in electric vehicle charging.
- The energy generated by the solar modules could be injected into the public grid, obtaining a complete efficiency of the system at all times.
- Structures that could be installed in both particular houses and department stores (airports, shopping center, hospitals...)
- Different canopy typologies could be designed according to client requirements.
- Customizable electric charge devices (single or double, adjustable height, electric hose mounting...)

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