Solar Retrofit

LET NATURE DO THE WORK

ABOUT US

Solar Retrofit was born from the simple intuition of exploiting the vertical walls of buildings, creating an efficient and aesthetically functional structure for photovoltaic modules.

Our wall mounting systems for photovoltaic modules are:

- Triangle models
- Coplanar models

The **triangle models** allow you to maximize the efficiency of the photovoltaic modules positioned on the vertical walls by optimizing the inclination of exposure to the sun's rays.

The **coplanar models** allow the creation of solar curtain walls even with optimized inclination of the PV modules.

Short Model

Shelter Model

Long Model

TRIANGULAR SYSTEM

Optimal inclination of the panel with respect to the sun's rays; the same that is obtained by installation on a flat roof or on the ground

The light reflector increases efficiency by approximately 8/10 percentage points

Rear ventilation creates natural cooling that improves module performance by approximately 10%

Coplanar Model 80°

Coplanar Model 90°

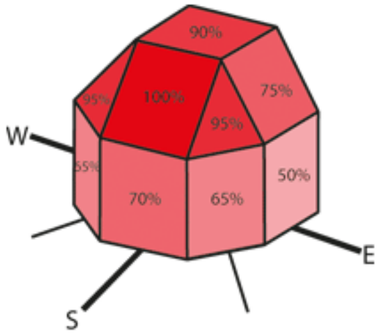
COMPLANAR SYSTEM

With an inclination of 80° they improve the energy produced by 16% compared to a traditional 90° installation on a facade

With a 90° inclination they allow you to create perfectly vertical facades

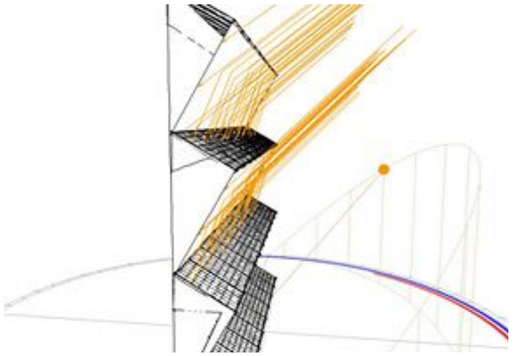
Versatility due to the possibility of adapting to all types of PV modules

THE ADVANTAGES



The main advantage of the Solar Retrofit triangle photovoltaic solar module mounting system is the increase in energy efficiency.

- Optimal inclination of the photovoltaic module at 30°
- The position of the photovoltaic modules with respect to the Sun significantly influences the amount of energy captured and therefore the amount of solar energy generated.
- Compared to the solution with a 90° inclination (traditional coplanar), the photovoltaic system on a vertical facade installed at 30° increases production by 30%.



Light reflector

The solar radiation that reaches the photovoltaic solar module is composed of:

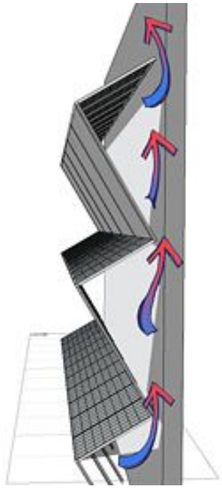
- Optimal inclination of the photovoltaic module at 30°
- The position of the photovoltaic modules with respect to the Sun significantly influences the amount of energy captured and therefore the amount of solar energy generated.
- Compared to the solution with a 90° inclination (traditional coplanar), the photovoltaic system on a vertical facade installed at 30° increases production by 30%.

The primary function of the reflector is to increase the **diffuse radiation with a greater irradiation of the underlying photovoltaic module** by approximately 10% which therefore increases its production by this %.

THE ADVANTAGES

Rear ventilation

The efficiency of a photovoltaic module decreases as its temperature increases.
Solar Retrofit promotes natural ventilation on the back of the panels, thus **increasing efficiency** by approximately 10% compared to a traditional wall system, without ventilation.



The triangle Solar Retrofit solution allows you to obtain a **better energy performance**: considering the energy production per square meter, a quantity of energy approximately 50% greater is produced compared to solutions installed in application to the facade.

This is mainly due to the **optimal inclination of the modules** -30° to the horizontal compared to the 90° of the solution coplanar to the facade - and to the better ventilation of the back modules.

COMPLANAR SYSTEM

The coplanar mounting systems can be supplied with an **80° inclination to improve the energy performance of the PV modules** or in a perfectly vertical version to create traditional curtain walls.

SOME OF OUR PROJECTS

Gelsia SPA

SOME OF OUR PROJECTS

Esselunga

Essevu

SOME OF OUR PROJECTS

Natura Si

ACAM Centro Gas e Acque


PLAN
ADVERTISING
bioè
naturasi
bistrot bio
bioè
naturasi
bistrot bio
naturasi
Solar
Retrofit

WRAPPING PROJECT

Special films for wrapping photovoltaic panels

Thanks to these films, photovoltaic systems can be integrated almost invisibly into the surrounding environment. Avoid potential objections to solar projects and adapt your systems to the environment as best as possible.

Print

NoReflect

Print

It allows solar panels to be covered in a variety of designs, opening up new avenues to explore. This high-quality film can be customized with digital images. Thanks to its special adhesive, the film can be easily replaced or removed

Advantages

- ✓ Custom prints
- ✓ It integrates into the surrounding environment
- ✓ Possible solution in case of stop payments
- ✓ Module heat reduction
- ✓ Resistance to dirt and water

Print

NoReflect

NoReflect

Reduces sun and light reflections. It offers an optimal solution, reaching an efficiency of over 98%. This economical and effective solution can be applied at any time to existing or new systems.

Advantages

- ✓ Anti-reflective surface
- ✓ Solution in case of opposition or disputes with neighbors
- ✓ Elimination of glare from an existing installation
- ✓ **98%** energy efficiency

SOME PROJECTS

BEFORE

AFTER

Dirt and water resistant surface

It integrates harmoniously into the surrounding environment

DATA SPEAKS CLEAR

Number and power of photovoltaic systems

Comparison between 2022 and 2023, by power class

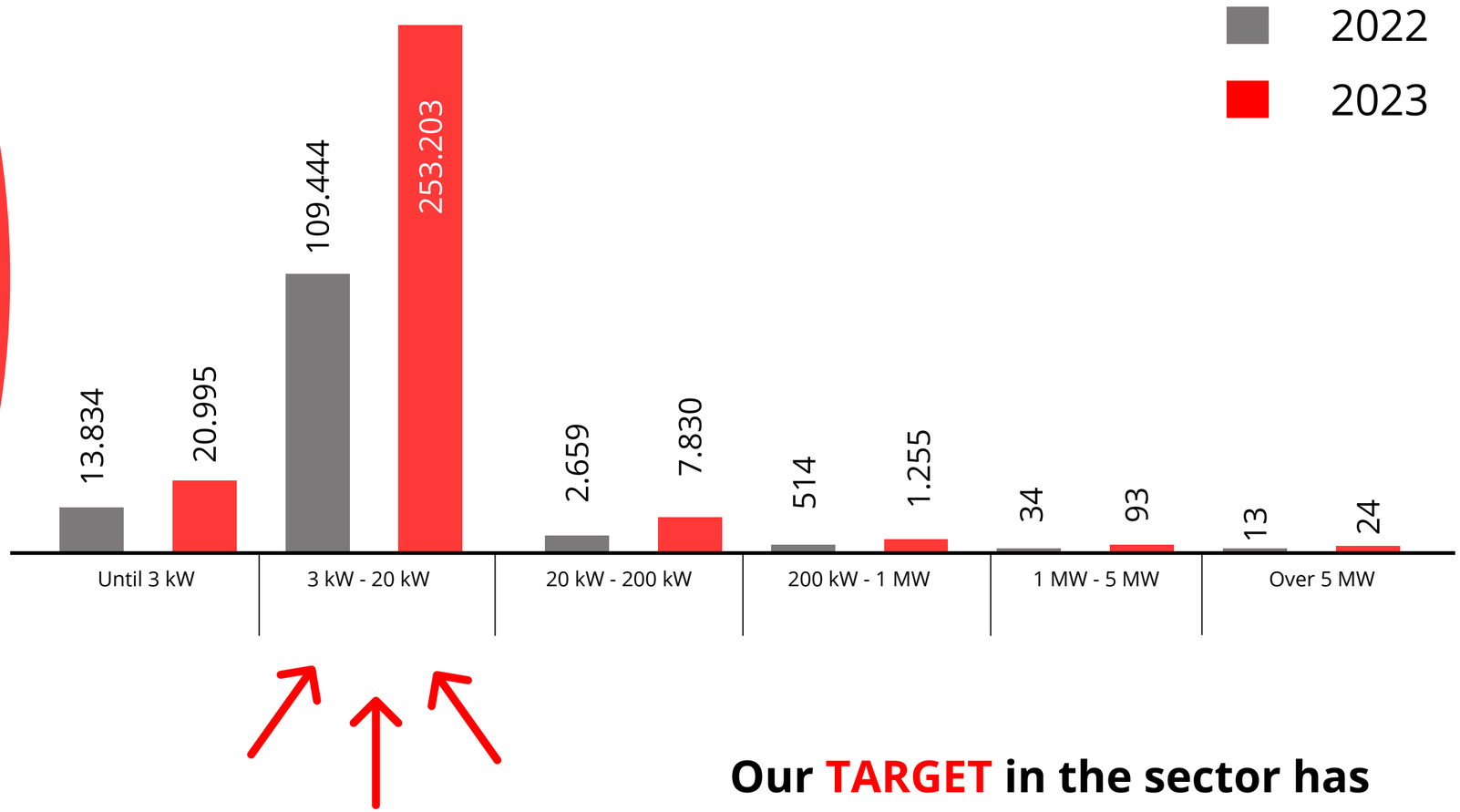
NEW SYSTEMS

156.902 unit

+124%

NUMBER OF SYSTEMS INSTALLED

between January and September



Our TARGET in the sector has continuous growth!

INTERNATIONAL CERTIFICATE IEC 61215

University of Applied Sciences and Arts of Southern Switzerland
Department for Environment Constructions and Design
Institute for Applied Sustainability to the Built Environment
SUPSI PVLab

SUPSI

Certificate
n. 17-1119-A

Released by: **SUPSI PVLab**
Campus Trevano, CH - 6952 Canobbio

Based on the test report: **n. 17-119-A** dated 04.10.2017
Released by: **SUPSI PVLab**
Campus Trevano, CH - 6952 Canobbio

We declare that the product:

SOLAR RETROFIT- wall mounting system for PV modules (BAPV system)
PV module Type: PEIMAR mod. OS260P (60 mc-Si cells)

Manufactured by:
SOLAR RETROFIT SagI
Viale Verbano, 7
6602 Locarno-Muralto (CH)

License holder:
SOLAR RETROFIT SagI
Viale Verbano, 7
6602 Locarno-Muralto (CH)

Has been tested according to:

MECHANICAL LOAD TEST at 2400 Pa
(according to IEC 61215-2:2016, par 4.16)

Technical data, materials and components description are listed in the test report. Any changes of the design, materials, components or processing may require the repetition of testing.

Canobbio, 04.10.2017

Mauro Caccivio
Head of SUPSI PVLab

Certificate_MEL_.docx 1/2 24.10.2017

University of Applied Sciences and Arts of Southern Switzerland

The test has been performed according to IEC 61215-2: 2016 cl. 4.16, in order to verify if the BAPV system manufactured by Solar Retrofit SagI is able to withstand the positive and negative mechanical load applied on a standard PV module, up to max. 2400 Pa - design load.

Tested module type:

Type	Cells number	Cell technology	Glass	Module size	Power
PEIMAR OS260P	60	multi-crystalline	Tempered glass 3.2 mm; aluminium frame 40 mm	1.63 m²	260W

Canobbio, 23.10.2017

Giovanni Bellenda
Technical responsible of SUPSI PV-Lab

Certificate_MEL_.docx 2/2 24.10.2017

SUPSI
Swiss PV Module Test Centre
Accredited ISO 17025
by SAS under n.531

The collaboration with **SUPSI - Swiss University of Applied Sciences**, through the BIPV department, led to the definition of a light and robust product that meets international regulatory requirements. For Solar Retrofit SUPSI performed the **Mechanical load test** according to the IEC 61215 standard.

SUPSI performed simulations, theoretical studies and technical checks that demonstrated the efficiency of the mounting system for photovoltaic modules.

The assessments carried out are:

- **Shadow analysis**
- **Preliminary comparison of integrated solution in façade and system**
- **Evaluation of the shadows and radiation of the system**
- **Reflector Energy Rating**