



PVSITES TRAINING SESSIONS

CRICURSA DEMO-SYSTEM

GRANOLLERS - BARCELONA, 7 NOVEMBER 2019

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CRICURSA



*This project has received funding from the
European Union's Horizon 2020 research
and innovation programme under grant
agreement N° 691768*

PVSITES DEMO-SITES

DEMO 4: CRICURSA

INDUSTRIAL BUILDING

BIPV industrial roof system

PVSITES DEMO-SITES



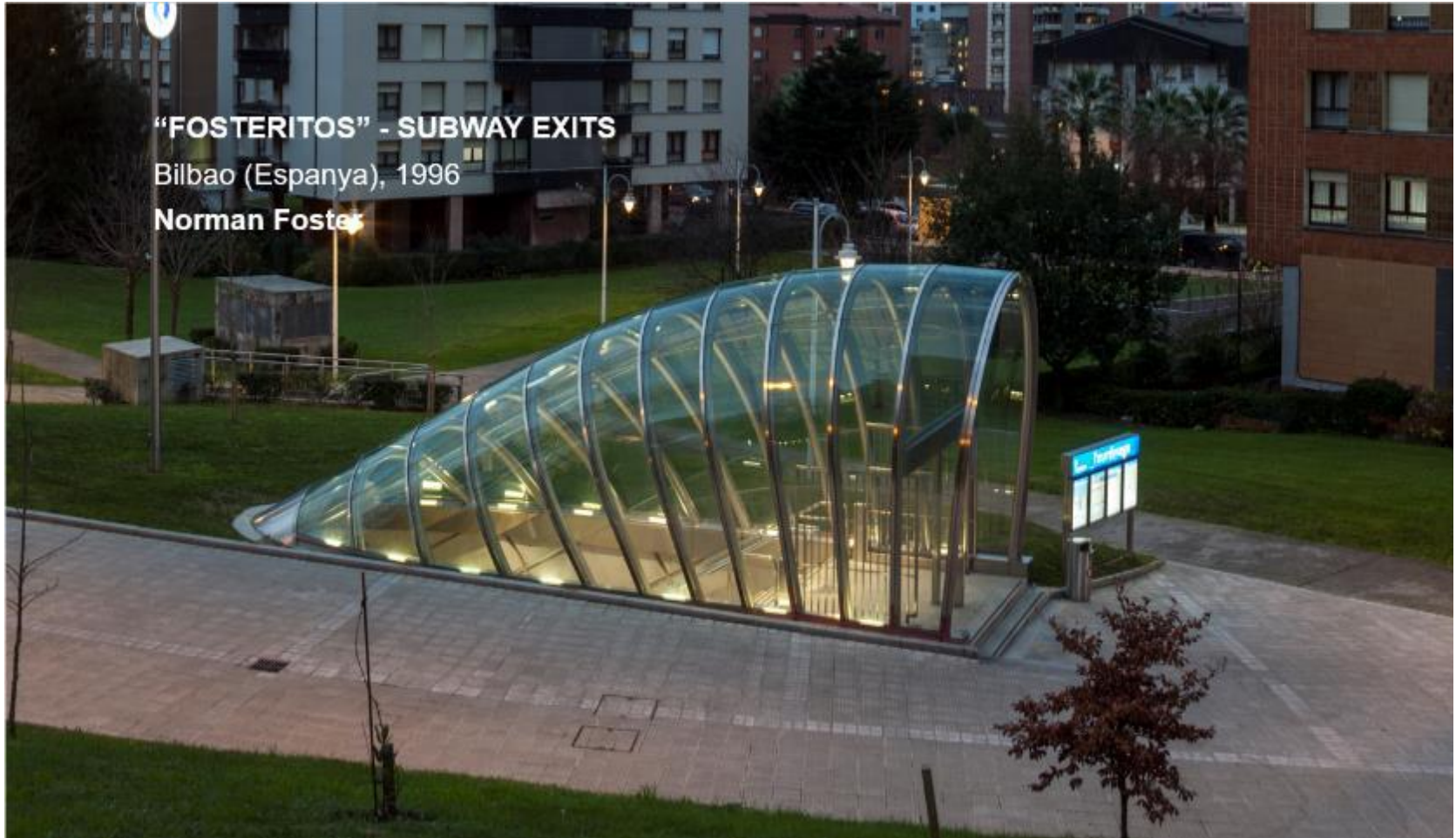
For more than 90 years, Cricursa has been dedicated to creating architectural glass which defies the imagination.

Our projects around the world reflect the search, the curiosity and the magic of a team who works to realise the creativity of the best architects and engineers in the world.

PVSITES DEMO-SITES



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BOMBAY SAPPHIRE DISTILLERY

Laverstoke (Anglaterra), 2014

Heatherwick Studio



PVSITES DEMO-SITES

HOSPITAL REY JUAN CARLOS

Madrid (Espanya)

Rafael de La-Hoz Arquitectos



PVSITES DEMO-SITES



NIKE HOUSE OF INNOVATION 000

Nova York (EUA), 2018

CallisonRTKL



DEMO 4: CRICURSA

Industrial building

Building description

Location	Granollers (Spain)
Typology	Industrial building
Area	13635 m ² (built area)
Floors	2

Characteristics

Industrial and office buildings dedicated to the manufacturing of glass. One of the industrial buildings has recently been constructed.



Area available for BIPV

The new industrial building (blue in the picture) is roofed by metal sheet. An effective BIPV implementation, in the south slope, would be possible. The available area is 530 m².

Orientation: +2° (S).

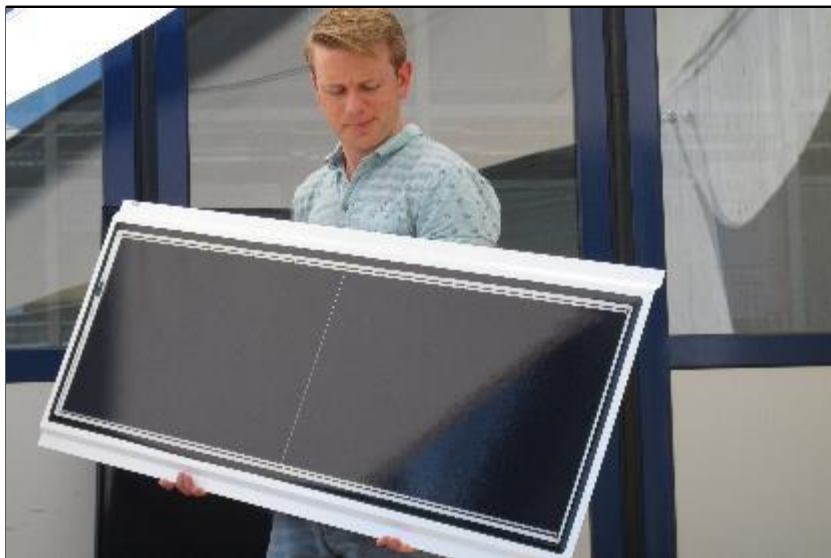
Inclination: 6°.



DEMO 4: CRICURSA

Roof module by FLISOM & Solar inverter by CEA

PVSITES prototypes



PRODUCT by MANUFACTURER

Large area PV modules, made with CIGS monolithically interconnected PV cells laminated onto a metallic back sheet, designed to be attached to roof and facade industrial buildings elements.



Solar inverter by CEA

Silicon carbide-based inverter of 5kW.

DEMO 4: CRICURSA

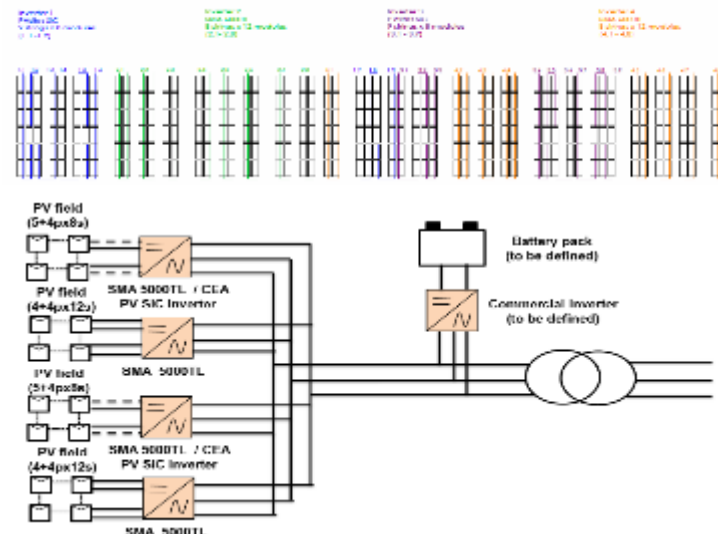
PV system 20.2 kWp

Solar field		
System power	20.2	kWp
Orient // Inclination	+2° // 6°	(°)
Occupied area	277	m ²
No. modules	336	units
PV module		
Module power	60	Wp
Dimensions	1585 x 520	mm
Production		
Specific production	1251	kWh/kWp/year
Estimated production	25270	kWh/year

PV system description

Operation mode

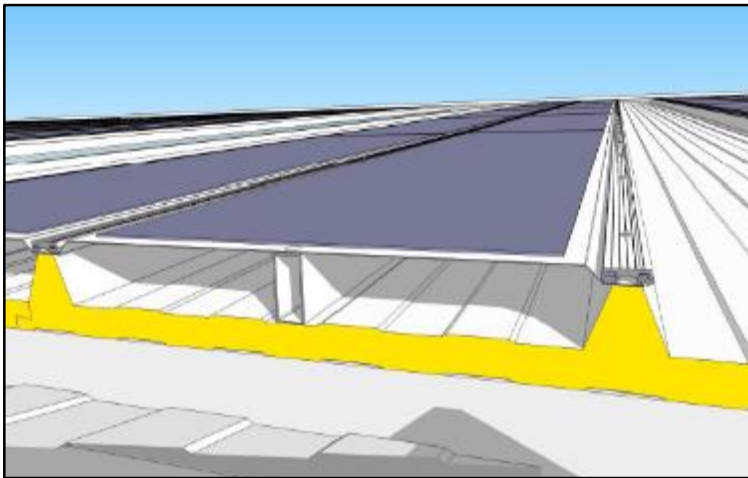
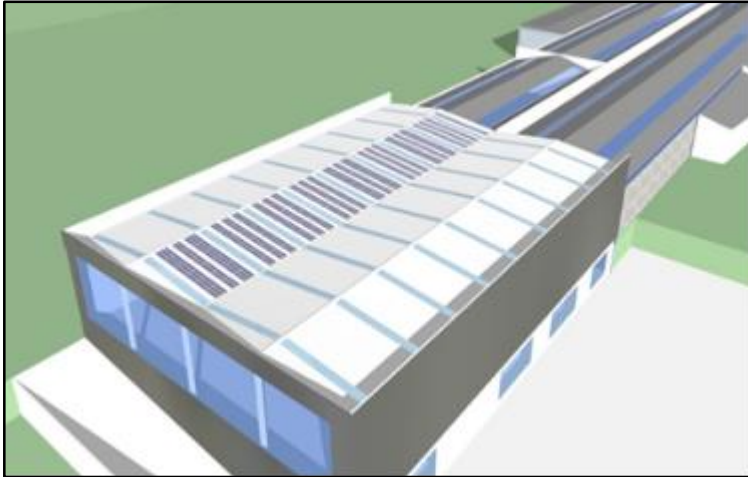
Two Silicon carbide-based solar inverters of 5kW power, by CEA, will be used in CRICURSA; together with two commercial SMA inverters. Electrical configuration for CRICURSA demo-site:



DEMO 4: CRICURSA

BIPV industrial roof

Building integration design



Building integration design

- Attached panels screw directly to the roof
- Create also a camera to ventilation (double layer)
- Using a metal stain steel metallic tube attached to the bottom side of metal sheet, just in the middle to make the installation robust.
- Installation facing the south and occupying 277m2.
- For making the installation with safety where used the life-lines installed already on the roof of CRICURSA

DEMO 4: CRICURSA

BIPV industrial roof

Building installation process



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BIPV industrial roof

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Building installation process



DEMO 4: CRICURSA

BIPV industrial roof

Building integration results



DEMO 4: CRICURSA

BIPV industrial roof

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DEMO 4: CRICURSA

BIPV industrial roof

Building integration results



WP8 Current status

