SOUND SOLAR PANEL
SSP
Double Evolution

Photovoltaic Noise Barrier

On the way for the future

Benefits of our proposal

- Solves the noise problem
- Produces electric energy
- Benefits from tax savings
- It pays for itself
- It is financed by contributions

Possible Applications

- Along transport routes with high noise pollution, such as roads, motorways, railways.
- To protect sensitive sites such as schools, hospitals, parks, residential areas.
- The photovoltaic barrier promotes energy transition by producing clean energy from renewable energy sources.

etway
energy transport way

www.etway.it

SSP (Sound Solar Panel)

Sound-absorbing panel integrated with photovoltaic module

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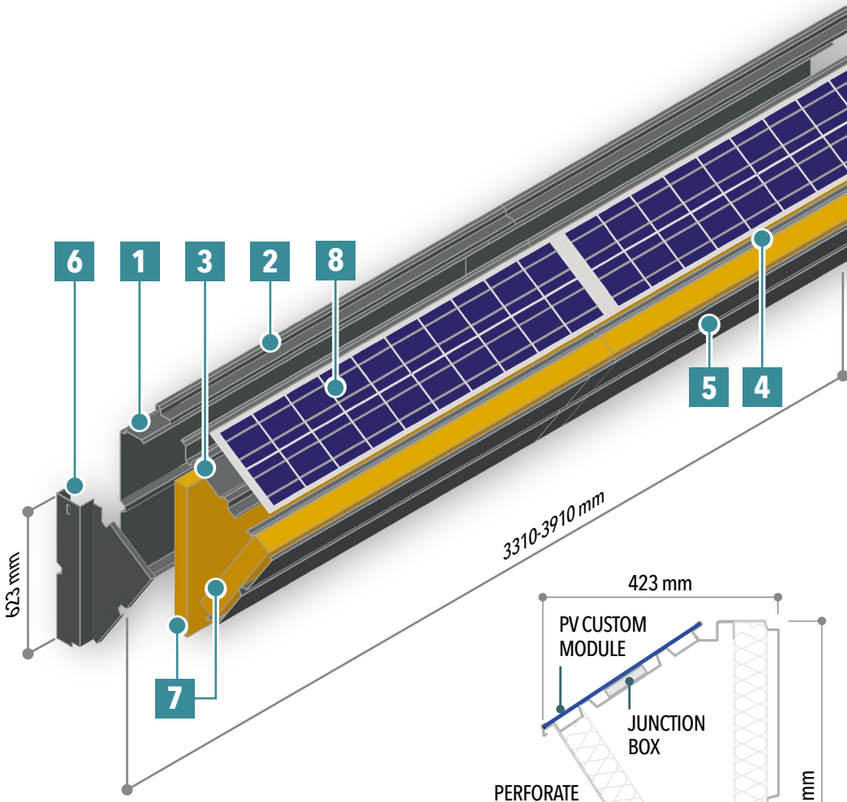
GENERAL DESCRIPTION OF THE PRODUCT

1	Rear solid, coated galvanized-steel sheet, sound-proofing element
2	Upper connection element, shaped male-female for laplinking
3	PV module supporting element, shaped for ventilation and cables duct
4	PV module fixing element, for maintenance and substitution
5	Drilled, coated galvanized-steel sheet, with six different diameters from 2.5 to 7 mm
6	Lateral cover with EPDM soundproofing and vibration-damping bulb seal
7	Double polyester blankets, nominal density 40 kg/mc
8	Custom photovoltaic module



PHYSICAL CHARACTERISTICS

distance between the posts	3400 mm	4000 mm
metal sheet material	pre-galvanized steel DX51D with zinc cover Z275	
sheet metal thickness	0,7 mm	
surface finishing of metal sheet	polyester powder coating minimum thickness 80 micron	
drilling	differentiated diameters from 2,5 to 7 mm , opening 34%	
external dimensions of panel	3310x623x423	3910x623x423
panel weight	70 kg	93 kg
colour	to choose in the RAL range	
polyester blankets thicknesses	50 mm - 80 mm	
polyester blankets density	40 kg/mc	
wind load	2,5 kN/mq (UNI EN 1794)	1,7 kN/mq (UNI EN 1794)
stone impact	Complies with the requirements Annex C	
fragments fall	C 2	
snow load	Magnitudo 10 kN / 2mx2m (UNI EN 1794)	
own weight	0,8 KN/m	

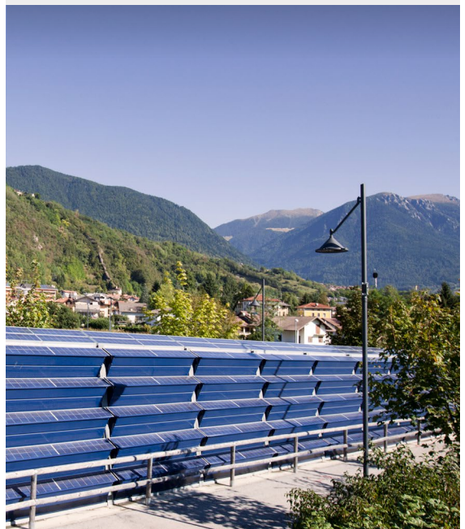
ACOUSTIC CHARACTERISTICS (in situ tests - Adrienne Method)

reflection of the panel	DLRi = 11 dB (UNI EN 1793-5)
transmission of the panel	Sound Insulation Index G = 32 dB (UNI EN 1793-6) CLASSE D3
sound-absorption	DLalfa = 12 dB
sound-proofing	DLRI = 30 dB

ELECTRICAL CHARACTERISTICS

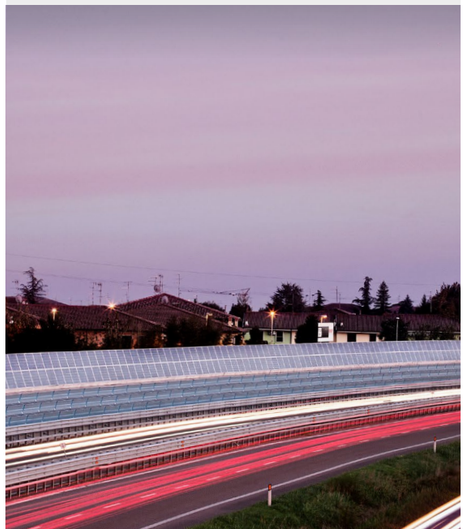
PV module type	monocrystalline silicon	
PV module power (Pmax)	2*115 Wp	2*140 Wp
dimensions PV module	1660*340*4,5 mm	1980*340*4,5 mm
glass thickness	3,2 mm	
temp. coefficient PV (Pmax)	-0,37 %/°C	
optimal operating voltage Vmp	11,50 V	13,70 V
optimal operating current Imp	10,22 A	
open circuit voltage Voc	13,80 V	16,44 V
short circuit current Isc	11,24 A	
cell efficiency	22,82 %	23,15 %
module efficiency	20,38 %	20,80 %
junction box	IP65	

INSTALLATION
BORGO VALSUGANA
l. 40 ml - h. 3,7 m
12 kWp

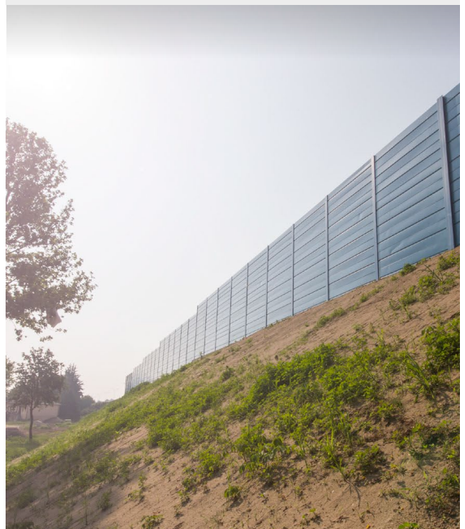


INSTALLATION
CITTADELLA
l. 123 ml - h. 3,7 m
41 kWp

INSTALLATION
OPPEANO
l. 1700 ml - h. 4,6 m
833 kWp



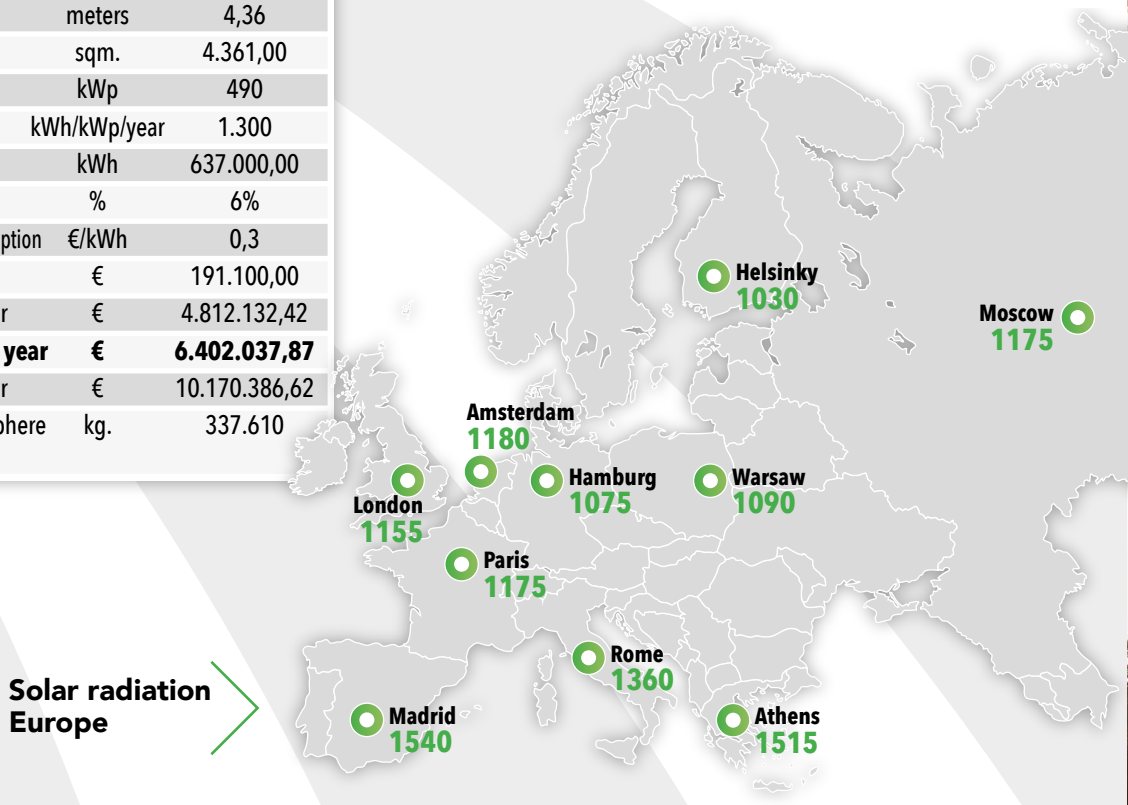
INSTALLATION
LODI
l. 106 ml - h. 5,0 m
designed for 42 kWp



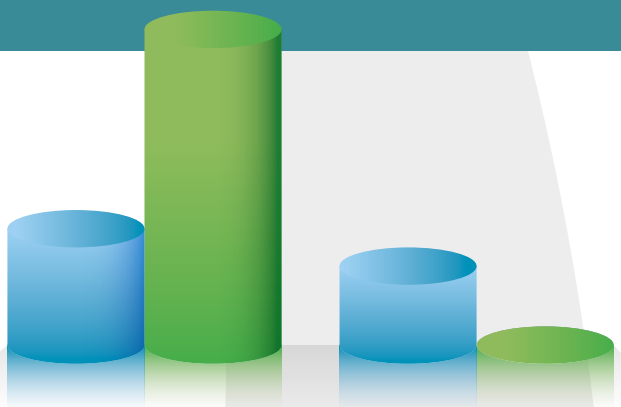
INSTALLATION
ROMA
l. 288 ml - h. 6,5 m
60,48 kWp

Technical financial simulation

DESCRIPTION	U.M.	VALUE
Length	meters	1.000,00
Concrete curb	meters	0
Vertical barrier height	meters	4,36
Surface of the barrier	sqm.	4.361,00
Nominal power	kWp	490
PVWatts calculator	kWh/kWp/year	1.300
First year energy	kWh	637.000,00
Loss of power in ten years	%	6%
Energy sale / Net metering / Direct consumption	€/kWh	0,3
Revenues from renewables 1st year	€	191.100,00
Revenues from renewables 20th year	€	4.812.132,42
Revenues from renewables 25th year	**€**	**6.402.037,87**
Revenues from renewables 40th year	€	10.170.386,62
Loss of CO2 released into the atmosphere	kg.	337.610



Comparative Graph
In the 25th year



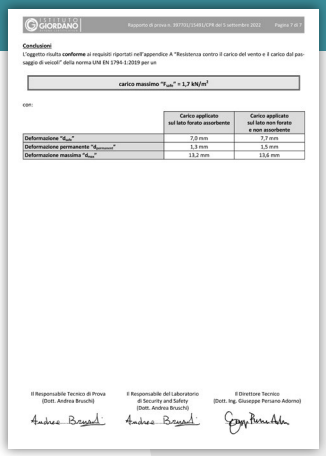
PHOTOVOLTAIC BARRIER

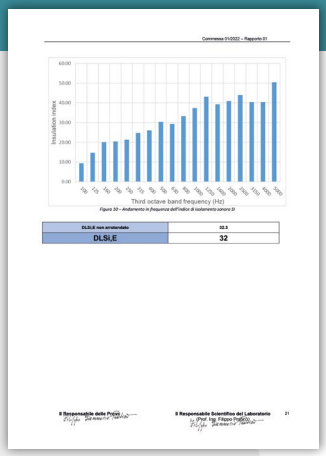
TRADITIONAL BARRIER

Total costs

Energy savings

Certifications





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