

Azurmendi Restaurant





Aesthetic integration

The BIPV modules are completely integrated in the building image, being semi-transparent elements characterized by a uniform appearance, that are not so different from traditional glass panels that could be integrated in the roof and the façade.

Energy integration

The building has been LEED Silver certified. The BIPV system is part of an overall concept based on the sustainability from different points of view. Besides the photovoltaic source, the building uses geothermal energy that acclimatizes almost 100% of the building. Other aspects are: the materials used are recycled or recyclable; there is a green cistern-roof where rainwater is recycled for irrigation and WC cisterns, which, in addition, serves as a very good insulator.

Technology integration

The BIPV system is made of insulated glass-glass modules (L vision), which incorporate a thin-film amorphous silicon layer that filters the natural illumination, with a 10% of visible light transmittance level.

Decision making

The Azurmendi restaurant is a bio-climatic structure with a greenhouse where the cooking ingredients are what is planted there. It was designed as a sustainable building in terms of water, materials and energy. The photovoltaic system was exposed in the atrium roof providing an educational message to the customers. It also represent an important shading structure to prevent the overheating of the interior space.

Lesson learnt

The PV system helped to address different aspects: the aesthetic, as the architectonic integration is absolute; the energy-related, because the PV system generates electricity for the lighting of the building and it helps to shade the space (Arch. Naia Eguino).

PROJECT DATA

Project type	New construction
Building function	Commercial
Integration system	Semi-transparent tilted roof
Location	Barrio Leguina, s/n, 48195 Larrabetzu, Biscay, Spain

BIPV SYSTEM DATA

Module type	Custom made modules
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Solar technology	Amorphous silicon thin-film
Nominal power [kWp]	21
System size [m²]	283.6
Module size [mm]	1,628 x 1,309, 2,653 x 1,309
Orientation	South-West
Tilt [°]	90 (façade), 6 (roof)

BIPV SYSTEM COSTS

Total cost [€]	-
€/m²	-
€/kWp	-

PRODUCER DATA

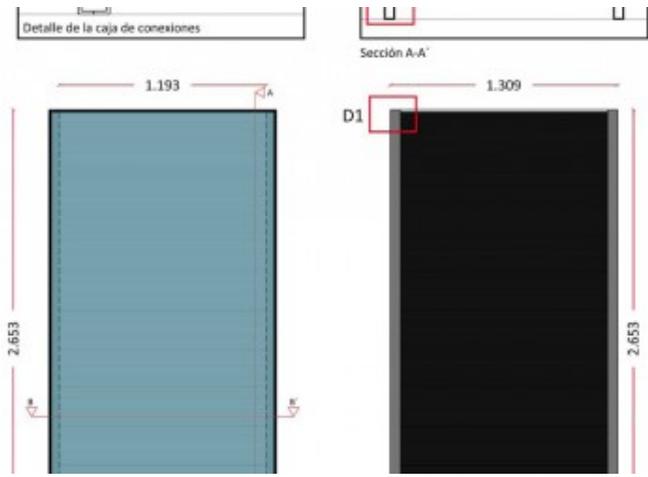
Producer	Onyx Solar
Address	C/ Río Cea 1, Ávila, Spain
Contact	info@onyxsolar.com +34 920 21 00 50
Web	https://www.onyxsolar.com/



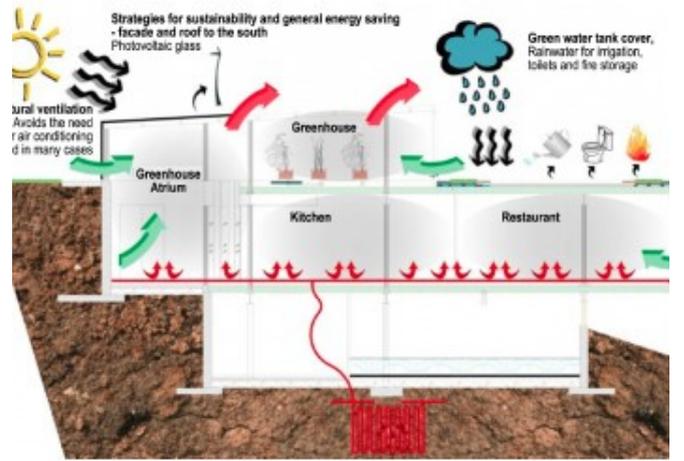
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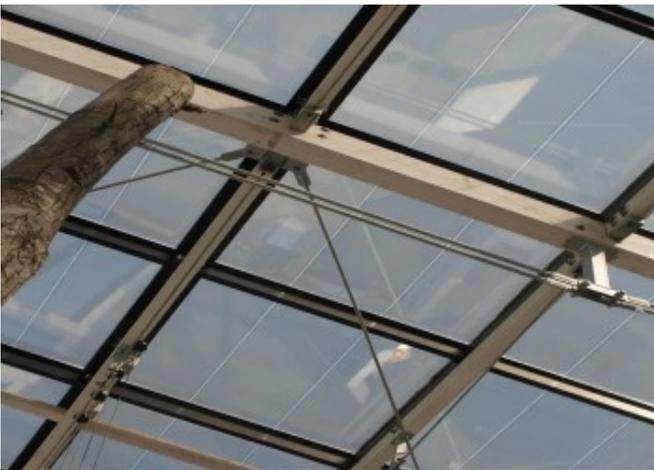
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1. BIPV roof and façade from the inside © Onyx Solar
2. BIPV roof and façade of Azurmendi restaurant © Naia Eguino
3. BIPV roof and façade on the entrance atrium © Onyx Solar
4. BIPV modules from Onyx Solar © Onyx Solar
5. Cross-section through the bio-climatic building © Naia Eguino
6. BIPV roof structure © Onyx Solar
7. Entrance atrium shaded by the BIPV modules © Naia Eguino