

Results from the PVSITES project as it achieves its second milestone: “Detailed functional requirements for BIPV systems”

The European- funded PVSITES project focuses on the demonstration of an ambitious catalogue of building-integrated photovoltaic (BIPV) technologies and systems, specially tailored to provide a robust answer to market demands, in [six building demo cases](#) throughout Europe. These goals are highlighted in a recently released [online video](#).

During the first six months of the project, several tasks have been carried out with the common aim of translating market and legal requirements into a coherent set of specifications for the 12 innovative BIPV systems to be demonstrated within the project:

Code	Product	Manufacturer
X1	CIGS roofing shingle on metal substrate	Flisom
X2/X4	CIGS large area flexible roofing membrane and bendable elements	Flisom
X3	Experimental/Innovative CIGS alternatives	Flisom
X5	C-Si glazed products with hidden bus bars and L interconnections	Onyx
X6	Glass-glass products with back contact c-Si cells	Onyx
X7	Curved glass-glass, CIGS technology	Onyx
X8	Framing system for c-Si large area glass	Onyx
X9	C-Si semitransparent low concentration and Solar control BIPV system – skylight configuration	Onyx, Tecnalía, Film Optics
X10	C-Si semitransparent low concentration and Solar control BIPV system – facade configuration	Onyx, Tecnalía, Film Optics
X11	C-Si semitransparent low concentration and Solar control BIPV system – shading element configuration	Onyx, Tecnalía, Film Optics
X12	Glazed modules treated for improved passive properties	Onyx

The related project activities included an assessment of bioclimatic design requirements and of architectural and aesthetical considerations for BIPV products. Technical specifications were also defined for both the PV modules and the energy conversion and management systems under development. The consortium findings are summarized in three reports available to the public [on the project website](#):

- **European climate zones and bio-climatic design requirements:** Design requirements are formulated for the different climates within the EU, taking the European Bioclimatic map as a starting point.

- **Formulation of architectural and aesthetical requirements for the BIPV building elements to be demonstrated within the project:** Aspects such as day-lighting, indoor shading patterns, indoor climate and user acceptance are part of this study.
- **NZEB building concepts for the application of BIPV building elements:** This report deals with the design of several nearly-zero energy building (NZEB) concepts, taking into consideration the work performed on architectural and aesthetical requirements.

With the successful completion of this milestone, the project is on track to deliver its next batch of results. The consortium is actively working on the development of a BIPV software suite and on the building energy management systems (BEMS) for the demonstration sites. The software suite, designed to ease the integration of BIPV systems in buildings at the design stage, will be made available to the general public in the summer of 2017.

For more information visit the PVSITES website www.pvsites.eu, join this [LinkedIn group on BIPV](#), or contact the project coordinator:

Maider Machado

TECNALIA

maider.machado@tecnalia.com

+34 946 430 850

The PVSITES partners:



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 691768.