

A LOW CARBON ECONOMY REQUIRES A LARGE SCALE INTEGRATION OF PHOTOVOLTAIC PRODUCTS IN BUILDINGS

Kick-off meeting of PVSITES project (Tecnalia, 28th-29th January) gathers more than 30 European experts to contribute to a large market deployment of building-integrated photovoltaic systems.

Building-integrated photovoltaics (BIPV) is currently an expansive market, in which Europe has the leadership in terms of installations, followed by USA. One of the main drivers for BIPV market growth in the European Union is the increasingly demanding legislation related to buildings energy performance. However, a continuous growth of the market requires compliance with strict requirements in terms of design flexibility, aesthetics, durability, cost reduction, grid integration, compliance with standards and operation & maintenance. Within this framework, a European consortium of 15 partners including several SMEs, large companies and research centers is developing H2020 PVSITES project, "Building-integrated photovoltaic technologies and systems for large-scale market deployment".

PVSITES project, coordinated by Tecnalia Research & Innovation (Spain), will demonstrate in several buildings throughout Europe an ambitious catalogue of photovoltaic technologies and systems, specially tailored to provide a robust answer to market demands. During the project lifetime, a detailed analysis of the BIPV market, the relevant stakeholders and their needs will be performed, and specific business models for the products and services implemented during the project will be developed. PVSITES will accomplish the development activities needed for the set up and monitoring in real buildings of a relevant number of photovoltaic solutions for building integration, based on the most innovative crystalline silicon and flexible thin film (CIGS) technologies. The project will also demonstrate novel grid connection technologies and energy management tools. In parallel, the development of a software tool for the coupled simulation of photovoltaic production and building energy performance will be addressed. Life-cycle assessment at product and installation level is another major objective of the project.

The demonstration activities involve different building segments (residential, industrial and commercial), several architectural integrations (opaque roofs and façades together with semitransparent skylights and ventilated façades) and climatic zones (West, Central and Southern Europe). High impact dissemination actions will be also accomplished in terms of cost-effective renewable generation, reduction of energy demands and smart energy management.

PVSITES has a total budget over 8 million euros, and is partially funded by the European Commission under Grant Agreement No. 691768 and the Swiss Government. PVSITES industrial partners (11 out of 15) cover the

main part of the BIPV industrial value chain, including: designers (BEAR Holding), PV and BIPV manufacturers (Flisom, Onyx), construction industry and ESCOs (Acciona), optical elements (Film Optics), and end-users: FormatD2 (architects and owners of demo site in Belgium), Cricursa (architectural glazing manufacturer and owner of demo site in Spain), Vilogia (constructor and manager of demo site in France), Tecnalia (RTO, owner of demo building in Spain) and Flisom (SME and manager of two demo sites in Switzerland). Research to Market (R2M) is specialized in exploitation management of innovative projects, with a large expertise in solar energy and WIP is an expert in dissemination and communications activities to support market activities. Finally, four research organizations support part of the consortium technical activities: Tecnalia (coordinator), CEA, CTCV and Nobatek.

The expected duration of project activities is three and a half years, ending in June 2019.



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