



PHOTOVOLTAIC POWER SYSTEMS TECHNOLOGY COLLABORATION PROGRAMME

IEA PVPS TASK 15 – ENABLING FRAMEWORK FOR THE ACCELERATION OF BIPV

Executive summary

**Succesful Building Integration of
Photovoltaics**

—

A Collection of International Projects

IEA PVPS Task 15

February 2021

Contributors:

Austria - Dieter Moor, ertex solar; Astrid Schneider, AIT; Peter Illich - Technikum Vienna, Canada - Véronique Delisle, Konstantinos Kapsis, Natural Resources Canada, China - Limin LIU, Beijing, CORONA Science & Technology, Denmark - Karin Kappel, Solar City Denmark, Germany - Astrid Schneider, Solar Architecture, Italy - Laura Maturi, Jennifer Adami, EURAC; Alessandra Scognamiglio, ENEA, Japan - Hisashi Ishii, LIXIL, The Netherlands - John van Oorschot, Michiel Ritzen, ZUYD, Norway - Anna Gerd Imenes, TEKNOVA, Spain - Nuria Martin, CIEMAT, Sweden - Bengt Stridh, Mälardalen University; Rickard Nygren, White arkitekter; David Larsson, Solkompaniet, Switzerland - Francesco Frontini, Pierluigi Bonomo, Erika Saretta, SUPSI

Editors:

Tjerk Reijenga, BEAR-ID (the Netherlands), Michiel Ritzen, ZUYD (the Netherlands), Alessandra Scognamiglio, ENEA (Italy), Karin Kappel, Solar City (Denmark), Francesco Frontini, SUPSI (Switzerland)

Proof-reading:

Helen Rose Wilson, Fraunhofer ISE Freiburg (Germany)



Despite we all know that a shift towards energy self-sufficient buildings is necessary, despite the important energy related regulations and directives, despite the availability of many technologies and components, despite the topic of the use of photovoltaics in buildings has been investigated for over 20 years now, the use of photovoltaic in buildings is still not an “out of the box” choice.

This book shares the experience of people who thought of applying photovoltaics (and finally did!), as well as showing how buildings can look like when having a photovoltaic skin.

With this approach it is not relevant to seek for an overall methodological coherence, as the case studies collected in this work are very heterogeneous, and the paths the main stakeholders followed to reach the final goal are very diverse and the results variegated. To select the best case studies and generate the necessary insight, an approach was built upon the research questions brought forward within the task 15 group. A total of 25 case studies from 11 countries were collected, and they were classified in public buildings (5 cases), commercial buildings (12 case studies) and, residential buildings (8 case studies).

As a result of the investigation it is possible to summarize some short conclusions to outline the state of the art of the use of BIPV, and the necessary steps to be taken towards its further deployment.

All the investigated cases are successful because of the strong willingness of some inspired stakeholders somehow involved in the realization of the building, who obstinately wanted to make a difference.

Effective drivers for the use of BIPV are the large availability of variegated photovoltaic components and modules, as well as the knowledge of all the stakeholders involved in the process (from approval offices, to the client to the architect to the installers).

Therefore it is relevant to continue with the applied research on BIPV components, and on education and training issues. Such effort is necessarily interdisciplinary and it is still an inspiring challenge for the next years.

The report can be downloaded from the IEA-PVPS website: www.iea-pvps.org