



Building Integrated Photovoltaic Policies in Italy

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BIPV is central in achieving decarbonization targets. Key elements are dissemination of good practices and sharing the principles rather than regulations and incentives. In a nutshell, it is a cultural process.

Italy at the end of 2020 has an installed PV capacity of 21,6 GW. Around 2,5 GW are BIPV plants are incentivised by Gestore dei Servizi Energetici (GSE, the Italian implementing body in charge of allocating RES incentives and support sustainability) under Feed-in Law. Since 2013, after the FiT era, new MW of additional BIPV have been installed, with renewed growth since 2017 in terms of installed capacity.

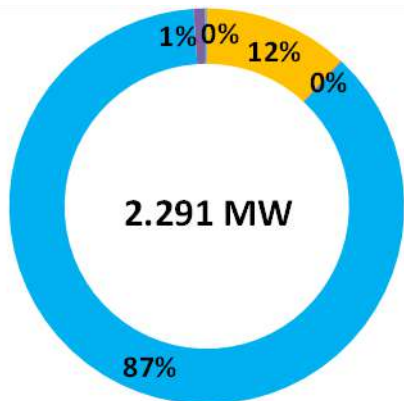
This report, mainly dedicated to policy makers, investigates the process developed in Italy during the FiT years (2005-2013) and in the following period without incentives. Market actors and GSE debate on how to overcome barriers and how to support the BIPV sector. Moreover, it studies the effectiveness of the implementation of this incentive policy.

It exploits GSE rich database of BIPV plants, guidelines, publications and all documents produced during the discussions with the actors who took part in this process, together with information received by GSE over the years from BIPV stakeholders and information of questionnaires received by early 2021.

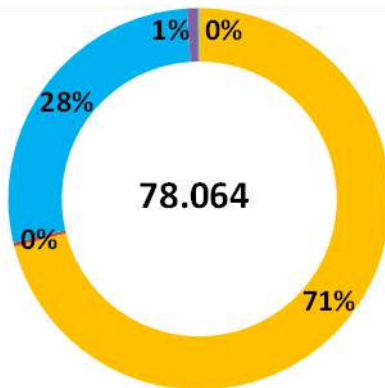
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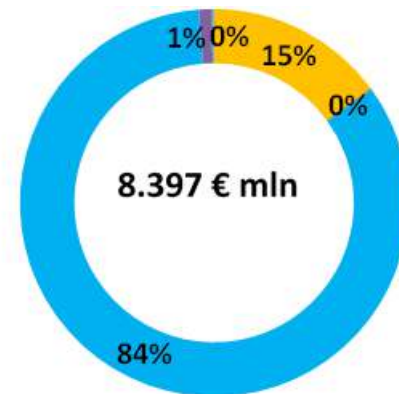
Second FiT law: totally integrated plants



Plant capacity



Number of plants



Investment cost

Total integrated plants, modules that simply replace part of the roof or of the façade, or a shelter.

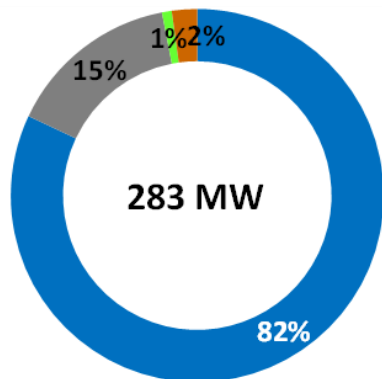
The yearly incentives granted are around 1,15 billion €.

- Households
- Apartment buildings
- Firms, consortiums, cooperatives
- Public Administrations
- Schools and Health Structures

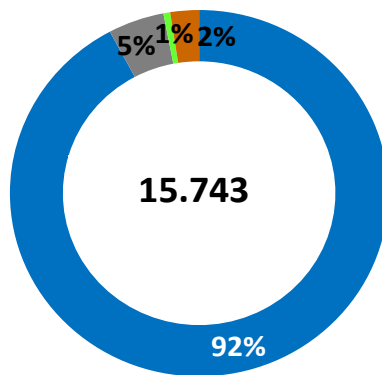
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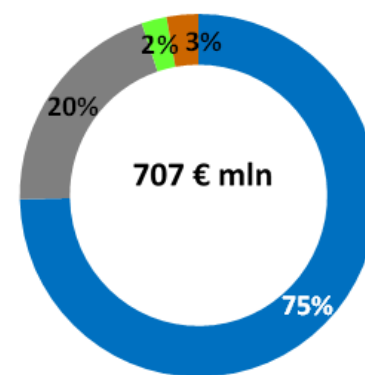
Third, fourth and fifth FiT law: Innovative BIPV



Percentage capacity by category of product



Percentage number by category of product



Percentage of investment cost by category of product

BIPV plants with innovative characteristic, the BIPV system substitutes the traditional building element, guaranteeing waterproofness and their typical functions of the traditional elements, like thermal regulation. Thus, the building with an energy need, from a mere structure becomes a living organism in which BIPV takes part to the energy flows.

The yearly incentives granted are almost 98 million €.


- Special components
- Thin film
- Transparent modules
- Tiles

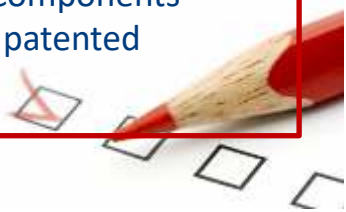
Special components are standard PV laminates together with an EU patented mounting system

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The questionnaires from stakeholders show the evolution and the present condition of BIPV market. Things worked better than others. Critical issues are also highlighted below.

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- The path of the introduction and the **implementation** of BIPV in the Feed-in Laws
 - **Sharing** with the actors of the market
 - **Publications** (Guidelines, Catalogue of Innovative BIPV), adopted in some Regions to grant capital incentives
 - **Dialogue** with certification bodies and public administrations
 - **Qualitative improvements** of components
 - **Innovation**, (EU patent for the mounting systems)
 - Role of the **building** (energy efficiency)
 - From PV producer market to building **BIPV market**

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- Critical issue of **certification** (for modules and inverters)
 - The **performance** of innovative BIPV systems not correctly installed - complains from PV owners
 - **Counterfeiting** of PV modules, labels, and infringement of patents of mounting systems
 - More than **80%** of the installed power and 90% of the plants were Special Components (with standard laminates with a patented mounting system)

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Answering to the initial question whether the implementation of the BIPV incentive scheme has been effective, it can reasonably be said that a market still exists in Italy in 2021 and that relevant results have been achieved. This is confirmed by the replies received from producers, since they declared that after FiT era they installed new MW of BIPV.

Moreover, many regions have adopted GSE Guidelines after the end of FiT era.

Barriers to a full deployment of BIPV still exist, but with a shared process involving all the actors of the market they can be, over time, solved.

This report shows a possible way to build this process and the main topics and challenges to be faced, thus becoming an approach to be replied in other countries.

The report closes with few suggestions, starting from the Italian experience, in order to improve the development of BIPV market (BIPV plants obligations in buildings, the adoption of good practices, the role into the building, the importance of performance, the need to simplify the authorization processes).