

# The impact of the revised French FiT

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## ABSTRACT

The French Ministry for the Environment, Ecology, Sustainable Development and Sea (MEEDDM) officially published a new decree concerning photovoltaic electricity generation and feed-in tariffs (FiT) on January 12th 2010. This was followed by a second decree, published on March 16th 2010, which contained some additional information and revisions to the first. This paper outlines the effects the revisions will have on France's solar industry and provides guidelines for future developments in the country.

## Presentation of the new feed-in-tariff

For the government, the main goal of the revised FiT was to stop speculation on the photovoltaic market, while also providing a new framework for the development of this market. The new FiT is now effective until the end of 2012, which effectively means that this particular FiT scheme will remain unchanged until 2013. From this date onwards, and assuming there is no change in the meantime, the FiT should normally decrease by 10% each year. The new decree has fixed three types of FiT based on building integration criteria (see Table 1).

### BIPV systems

Building-integrated PV systems up to 250kWp benefit from a tariff of €0.58 or €0.50, depending on the intended use of the building in question. The government has also provided the following new definition of the term 'building integrated':

- The PV system must follow the roof angle of a wind- and waterproof building (four sides closed)
- PV modules (or thin-film modules) must provide the waterproofing for the building
- Removal of the modules or films could not be performed without damaging the waterproofing ability of the building.

This definition also includes architectural PV systems with features such as windows, balconies or flat roof balustrades and sidings or shading over windows. The €0.58 level is only applicable in the case of an installation on new and existing houses or apartment buildings. It is also applicable on education and health buildings that have been in existence for more than two years. The €0.50 rate is valid for BIPV systems on other types of buildings that have stood for more than two years.

### Simplified BIPV systems

PV systems above 3kWp that include simplified building integration are eligible for an FiT of €0.42. Simplified BIPV

systems refer to installations that comply with the following requirements:

- PV system is parallel to the roof
- PV system (in its entirety) replaces components which provide wind- and waterproofing to the building
- PV system (in its entirety) ensures wind- and waterproof qualities.

From 2011, this €0.42 FiT will also be applicable to systems under 3kWp that adhere to the following conditions:

- System is installed on the roof and follows the roof angle of a wind- and waterproof building (four sides closed) that provides protection to people, animals, goods and activities



Figure 1. BIPV installed on an industrial roof.

<b>BIPV systems up to 250kWp</b>		On new and existing houses or apartment buildings	On education and health buildings (in existence for more than two years)	On other types of buildings (in existence for more than two years)
2010 (transition phase)	<ul style="list-style-type: none"> <li>• PV system is parallel to roof angle</li> <li>• PV system replaces components of wind- and waterproofing</li> <li>• PV system ensures wind- and waterproof qualities</li> </ul>			
2011	<ul style="list-style-type: none"> <li>• PV system has to follow the roof angle of a wind- and waterproof building (four sides closed)</li> <li>• PV modules (or thin-film modules) provide waterproofing of the building</li> <li>• Removal of the modules or films could not be performed without damaging the waterproofing ability of the building</li> <li>• Tariff also valid for architectural PV systems with features such as windows, balconies or flat roof balustrades and sidings or shading over windows</li> </ul>	☐0.58	☐0.58	☐0.50
<b>Simplified BIPV systems &gt; 3kWp</b>		Every type of building that provides protection to people, animals, goods and activities		
	<ul style="list-style-type: none"> <li>• PV system is parallel to the roof</li> <li>• PV system (in its entirety) replaces components which provide wind- and waterproofing to the building</li> <li>• PV system (in its entirety) ensures wind- and waterproof qualities</li> <li>• Tariff also valid for architectural PV systems with features such as windows, balconies or flat roof balustrades and sidings or shading over windows</li> </ul>		☐0.42	
From 2011, systems under 3kWp will be eligible if they comply with specific conditions	<ul style="list-style-type: none"> <li>• Installed on the roof and has to follow the roof angle of a wind-and waterproof building (four sides closed), that provides protection to people, animals, goods and activities</li> <li>• PV system (in its entirety) should replace roof and waterproofing components</li> <li>• PV system (in its entirety) has to in itself ensure that the building is waterproof</li> </ul>			
<b>Non-BIPV installations, including ground-mounted installations</b>				
	Corsica and overseas territories		☐0.40	
	Mainland installation < 250kWp		☐0.314	
	Mainland installation > 250kWp*		☐0.314	

\* Regionalized ratio from 1 to 1.2, depending on geography and insolation levels.

Table 1. Summary of France's new feed-in tariff conditions.

- The PV system (in its entirety) should replace roof and waterproofing components
- The PV system (in its entirety) has to in itself ensure that the building is waterproof.

### Non-BIPV installations

All other kinds of installations, including ground-mounted installations and solar thermal concentrated power systems below 250kWp, are eligible to a €0.314 tariff in mainland France. For systems above 250kWp, the tariff becomes regionalized, taking into account the insolation of the implantation site. This ratio will range from 1 in the south of France to 1.2 in the north of mainland France.

In the overseas territories, there is only one tariff level for all other kinds of installations, including ground-mounted installations and solar thermal concentrated power systems, which is set at €0.40 (no power distinction applies in these cases).

Despite such evolutions on the concept of BIPV, the decree also refers to the increase of production caps for PV installations. In mainland France, these caps are fixed at 1,500 hours or 2,200 hours if the panels are installed on solar tracking systems; for Corsica and overseas territories, they are fixed at 1,800 hours or 2,600 hours if the panels are on solar tracking systems.

Finally, the last significant change, which has been in force since November 2009, refers to the removal of the license for PV

production for installations under 250Wp ('certificat d'obligation d'achat'). The decree of January 2010 set the obligation that installers must attest that they have realized the installation in compliance with norms and laws.

### Consequences for the PV market

Now that the FiT modification is complete, the details contained therein are becoming clearer. Throughout the months of negotiation with administrative bodies, players within the photovoltaics market learned that they, as the source of practical information, had to supply credible proposals to avoid market overheating, and that further FiT modifications should be expected. The professionals involved



Figure 2. BIPV installed on a glass roof.

in the provision of data needed to avoid speculation behaviours on the market, which could potentially threaten the FiT scheme and, crucially, the government's trust of PV players.

This topic of avoiding market speculation behaviours is now clearly shared by government and members of the PV industry, people who are working on technical innovations, creating jobs, and having a long-term vision for and effect on the market. Many of these actors are active in Enerplan, the French professional association for solar energy.

Before analyzing the consequences of the new tariff's layout, it is interesting to take a look back at the French PV market's development in 2009. On the one hand, the country's cumulated market based on installations connected to the grid is 268MW. On the other hand, the 2009 annual market based on installations sold during the year was around 250MW; this discrepancy between the numbers is mainly a result of the waiting time on the part of installers for grid-connection.

Evaluation of the maturity of the French market requires the comparison of these data with those of Germany, which saw the market reach 8,500MW in 2009, with grid parity foreseen within the next five years. Compared to Germany's current situation, France's new FiT legislation introduced a bonus for non-BIPV installations above 250kW, which will most likely act as a catalyst for development of ground-mounted and medium- to large-scale roof installations, thus revising France's installed power capacity upwards.

In November 2009, the government also published new rules concerning urbanism authorization for this kind of installation in anticipation of more favourable FiT guidelines for ground-mounted installations. Ground-mounted installations are now subject to an environmental impact study.

Moreover, these new conditions for BIPV are seen as technical challenges for the majority of PV manufacturers. In order to be eligible for BIPV conditions, manufacturers must now design innovative integration systems and submit them to an evaluation committee, while the installers must also provide training in these new products and installation methods.

“Ground-mounted installations are now subject to an environmental impact study.”

However, it is all too easy to gloss over the responsibilities of the BIPV installer amid these FiT discussions. Indeed, new BIPV conditions lead to greater responsibilities in areas such as insurance on the part of the installer. By requiring the installer to attest their realization of the installation in accordance with norms and laws, the new FiT clarifies their responsibility in respect to the installation. In a further attempt to drive this point home, since the end of March 2010, every PV installation has to be reported to the CONSUEL (inspection office specialized in electric security).

Every player of the PV sector should now be aware and work in line with insurance obligations (10 years' insurance, special insurance requirements for buildings that are open to the general public, etc.). They also need to be aware of responsibilities linked to installation performances; regardless of the nature of the responsibility (penal, financial...), BIPV does not have space for amateurs, speculators or opportunists. The PV market is not a jungle – it is a strategic technology and should be viewed as a component of building energy efficiency.

In the coming months and years, the French PV market has to be developed in such a way as to ensure quick maturation. With this objective in mind, Enerplan and other professional bodies – including installers and other players in the electricity sector – have launched a 'PV and building think-tank' in order to make this sector more durable. The aim is to prepare professional members of the PV and building industries for future legislation changes and market evolutions.

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The ultimate goal of this initiative is to give industry members a sense of responsibility for the market, and to ensure that every member plays his or her part in this durable market.

#### About the Authors



**Richard Loyen** is Head of Enerplan and has been involved, as co-ordinator or partner, in many Europe-funded projects (DG TREN, Thermie, ALTENER, OPET, SOLARGE, European Solar Days, among others) in the renewable energies field since 1995. He has held the role of Head of the French Solar Professional Association since 1999, and has conducted many studies related to solar energy policies and benchmarking, among others. He is also heavily involved in 'Plan Soleil', the dissemination and promotion program of French solar thermal equipment in the building sector, and in co-ordination on industrial and professional actor actions with Ademe.



**Sylvain Roland** has been Project Manager at Enerplan since 2008. He has a degree in business intelligence and is in charge of Enerplan's participation in the European project 'PV Legal'. Sylvain has conducted various market forecast studies and is responsible for the organization's market analysis.

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