

# French solar energy market at a glance



## Photovoltaic sector

**A very promising market that could place France among the world leaders in photovoltaic energy.**

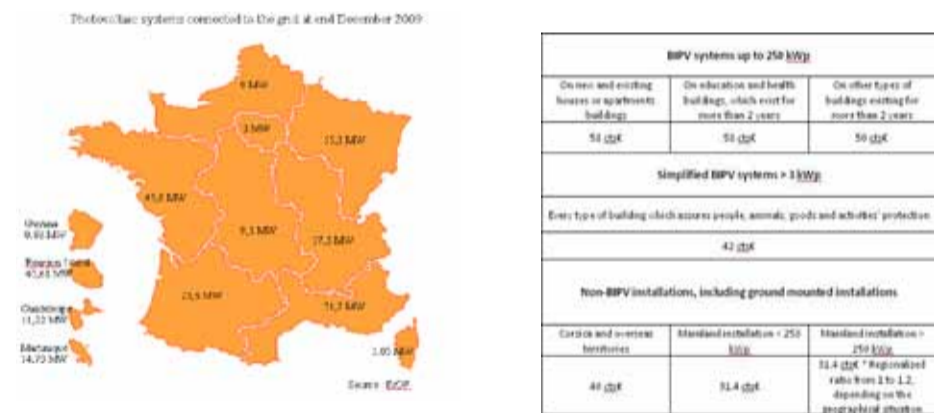
Since the introduction of guaranteed electricity purchase prices in 2006, sales of photovoltaic solar panels have increased significantly from year to year. Sales more than doubled in 2007 and 2008 and increased by 140% in 2009. Photovoltaic solar panels are an effective means of producing electricity without emitting CO<sub>2</sub>. This technology also owes its success to the wide variety of ways in which panels can be installed, as well as to its manufacturing potential and the associated jobs created. It also improves the security of electrical supply as well as providing off-grid systems for rural electrification. By 2020, photovoltaic panels will be widely used in new buildings because they are an effective response to meeting future heating regulations in France: Bâtiment Basse Consommation (BBC – Low Energy Buildings) with consumption less than 50 kWh/m<sup>2</sup>/year as from 2012 and Bâtiment à Energie Positive (BEPOS – Positive Energy Buildings) by 2020. The solar electricity market has expanded considerably over recent years.

**Key figures:** In 2008, growth continued with the installation of 105MWp, 75MWp in mainland France and 30MWp in overseas departments and territories. The cumulated output rose to 175MWp. In 2009, an additional 250 MWp was installed, an increase of 140% over 2008 and the industry's annual turnover exceeded 2 billion euros. The cumulative installed power reached 430 MWp. However, delays in connection meant that the total power connected to the grid stood at 268 MWp at the end of 2009, an annual production of 290 GWh.

**Jobs:** The photovoltaic sector will create about 35 full-time jobs for each MWp produced and installed. In 2008, this sector provided nearly 8,500 jobs. With an annual market in 2020 of around 2GWp, the sector could provide 70,000 jobs.

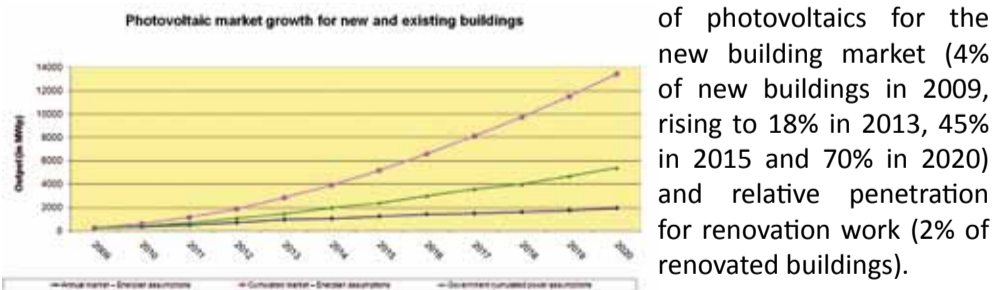
The structure of the solar electricity feed-in tariff, which encouraged the integration of systems into buildings from 2006, concentrated the French market on BIPV (Building Integrated PV). This was in pursuit of the policies set out by the Grenelle de l'Environnement, which associated the development of photovoltaic sector with the improvement in energy efficiency of buildings.

The grid parity of PV in France will be achieved between 2014 and 2019 depending on the type of consumer and the development of high power photovoltaic stations.



Photovoltaics therefore provides a means of satisfying technical and strategic requirements to meet low consumption building standards -Bâtiment Basse Consommation (BBC)- with a consumption of less than 50 kWh/m<sup>2</sup>/year by 2012 and energy producing buildings (Bâtiment à Energie Positive (BEPOS) by 2020.

**The outlook for 2020:** France should reach 13.4GWp cumulated by the end of 2020 in the construction industry alone. This outlook assumes significant penetration



The outlook for 2020 presented by EPIA in its study «Set for 2020», predicts a cumulated French market in 2020 of over 60 GwC.

For further information see the study carried out by Enerplan, «Panorama du photovoltaïque en France et prospective 2020». Summary on [www.enerplan.asso.fr](http://www.enerplan.asso.fr).



## Solar Thermal sector

**The French market continues to grow**

Solar heating panels have been used in France since the 1980s but were not widely available until the end of the 1990s.

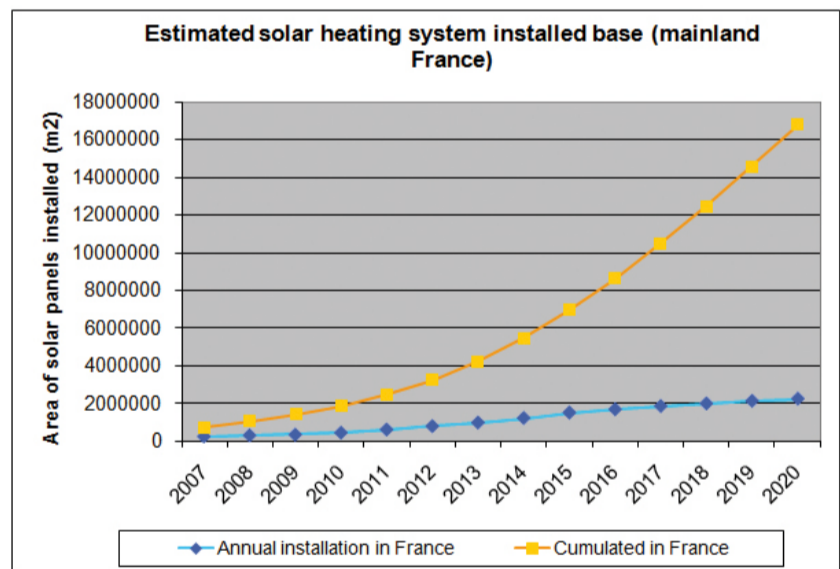
Although the advantages of solar heating were unanimously approved by the Austrians and Germans, they were only “rediscovered” in France in 1999, through the introduction by the French Environment and Energy Management Agency (ADEME) of the Plan Soleil to encourage the use of solar energy for the production of hot water and heating. At the time, only a few hundred solar water heaters had been installed in France.

**Key figures:** By the end of 2009, more than 715,000 homes were equipped with them. Despite a drop in the growth rate in 2009, the solar heating industry has developed from a niche market into a sector that is becoming firmly established. The fact that it is smaller in comparison with neighbouring European countries is a growth incentive for the industry.

It has recently been hailed as one of the most dynamic markets in Europe. The industry and the government continue to aim for the massive deployment of solar energy for the production of hot water by 2020.

In 2008, the French market was evaluated at an installed solar heating panel area of 313 000 m<sup>2</sup>, a rating of 219 MWth. The growth in the French market in 2008 was 23%. The cumulative rating installed in France and its overseas territories at the end of 2008 was 1314 MWth. In 2009, only 265,000 m<sup>2</sup> of additional solar heating panel area was installed in mainland France, a rating of 185.5 MWth or 90,000 homes with solar panels. This was 15% less than in 2008, a drop that was partly compensated for by an increase in the installations for residential blocks. The total solar heating panel area in mainland France and overseas reached 2,220 million m<sup>2</sup>, a rating of 1,550 MWth for 715,000 homes. The turnover in the solar heating industry in 2009 amounted to €324M.

**The Outlook :** The French market holds high potential for increasing solar panel sales. On the basis of new and existing homes, the total area of solar panels could exceed 21 million m<sup>2</sup> in 2020, with nearly 7 million homes fitted with solar panel



systems, the equivalent of 14 GW.

This potential may be realised with the legislation implementing the policies defined by the Grenelle de l'Environnement, in particular from 2009 onwards by renewable energy heating for residential buildings and zero interest loans announced by the government that can be claimed in addition to 50% tax credit. The tightening of heating regulations in 2012 will be a lever to increase the installation of solar systems in new buildings.

The annual market for 2020 estimated at 2,900,000 m<sup>2</sup> or 2GW, will provide 48,000 jobs.

**Enerplan** is involved in the various measures currently being implemented to assure the quality of solar systems and their installation:

- It has created and manages the Ô Solaire brand, which sets the standard for domestic solar heating systems: [www.o-solaire.fr](http://www.o-solaire.fr)
- It is an active member of the Qualit'EnR association for the quality of the installation of renewable energy systems, which manages the Qualisol label for the quality of solar panel heating system installers: [www.qualisol.org](http://www.qualisol.org)