



Solar photovoltaic power

A BOOMING SECTOR

France is now one of the top 10 photovoltaic markets in the world after the number of **installations grew by 150% during 2008** (175 MW capacity by late 2008 compared with 70 MW in late 2007).

Growth is occurring throughout France although certain regions (Rhône-Alpes, Provence-Alpes-Côte-d'Azur and Languedoc-Roussillon) are driving expansion in the sector.

Currently the market is focusing particularly on private installations which accounted for 80% of solar panels installed in France in 2008. However, in 2008, the first ground-based power plants came online (mostly in French overseas territories and Mediterranean coastal regions), and the first panels were installed on large rooftops (shopping centers, warehouses, storage facilities etc.).

The photovoltaic sector is directly responsible for 4,000 jobs in France, including 1,500 new jobs in 2008. With annual forecasts for the market approaching a total of 5.4 gigawatts (GW) in 2020, the sector will employ 70,000 people by this time.

Thin-cell solar panel manufacturers may also establish themselves in France, prolonging existing research projects in the field. The development of this technology is likely to create 1,500 direct jobs. Continued government support for the tariff structure along with the building-integrated photovoltaic (BIPV) bonus will generate new professions, combining skills from the solar power and construction sectors: more than 2,000 jobs are expected to be created by 2012. The marketing, engineering and construction phases will also employ 8,000 people.

→ **A FRENCH MARKET WITH AN AGGREGATE CAPACITY OF 5.4 GW BY 2020**

KEY FIGURES 2008

TURNOVER:
€1 billion⁽¹⁾

4TH LEADING MARKET IN EUROPE⁽²⁾

WORKFORCE:
MORE THAN 4,000 direct jobs⁽³⁾

(1)PWC. *L'état de la filière photovoltaïque en France* (The state of the Photovoltaic industry in France).

(2)*Baromètre photovoltaïque* – Eurobserv'er (number of megawatts installed).

(3)SER-SOLER survey

THEY CHOSE FRANCE

Q-Cells SE

This German manufacturer of ground-based photovoltaic power plants is opening a sales office in Saint-Priest (Rhône-Alpes). The global leader in solar cells and thin-cell photovoltaic modules intends to recruit 30 people.

Siliken SL

This Spanish solar photovoltaic modules manufacturer has set up a sales office for its French subsidiary on the outskirts of Toulouse in Portet-sur-Garonne creating 10 jobs.

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WELL-ESTABLISHED FOREIGN COMPANIES IN THE INDUSTRY

The French photovoltaic industry is fully formed with **more than 180 companies downstream in the value chain**. Alongside multi-energy players like BP Solar, EDF Energies Nouvelles and GDF Suez, a new band of photovoltaic "pure players" are emerging which will in time make an impact in the French energy sector (Photowatt, Solaire direct, etc.).

Today **the expansion of the upstream photovoltaic sector in France is profiting foreign cell manufacturers**, whether they are German (Q-Cells most notably), Chinese (Suntech, among others) or Japanese (Sharp, Kyocera, etc.). Photowatt is currently the only company in France to integrate all the upstream phases (from silicon to module production).

The photovoltaic sector is structured around a number of confederations and associations seeking to promote and develop solar photovoltaic power in France: Enerplan (Professional Association for Solar Energy), SOLER (French Association of Solar Photovoltaic Professionals) and the SER (French Renewable Energy Union).

PARTICULARLY ATTRACTIVE FEED-IN TARIFFS

French feed-in tariffs for photovoltaic electricity were fixed in July 2006 and are reviewed each year for all contracts to take account of inflation. In 2009, the base tariff was 0.33 €/kWh and the tariff with the BIPV bonus was 0.60 €/kWh. This latter tariff puts France in a leading position with a more competitive proposition than the 3 principal markets in Europe (Germany, Italy and Spain).

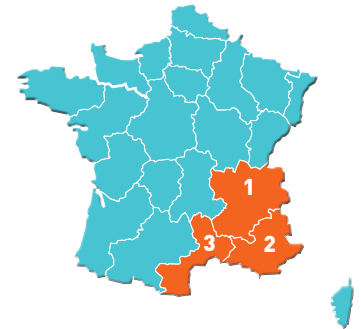
Overall, the French support system for the photovoltaic sector is among the most generous in the European Union, mostly comprising financial aid and tax exemptions for individuals along with investment incentive programs at regional and local level.

SIGNIFICANT TECHNOLOGICAL ADVANTAGES

The Grenelle Environment round table talks, which underlined France's commitment to develop solar power as part of its "Green New Deal", have already led to the emergence of new manufacturing projects, like Solar Nano Crystal (an EDF R&D project seeking to develop cutting-edge photovoltaic technologies).

The Savoie Technolac technology park is home to the National Solar Energy Institute (INES), a specialist center devoted to solar power bringing together nearly 140 researchers whose numbers are due to swell to 250 in the near future.

3 SPECIALIST INNOVATION CLUSTERS



1. Tenerdis

Rhône-Alpes

Tenerdis seeks to expand renewable energy production and optimize the use of these energies in the construction and transport sectors.

www.tenerdis.fr

2. Capenergies

Provence-Alpes-Côte-d'Azur

Capenergies focuses on future energy sources which do not emit any greenhouse gases.

www.capenergies.fr

3. DERBI

Languedoc-Roussillon

DERBI seeks to promote research, innovation, development and provide business startup support in the field of renewable energies applied to construction and manufacturing.

www.pole-derbi.com