

# German PV market overview

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## ABSTRACT

The global PV market is undergoing fundamental change. According to a new survey by EuPD Research, Germany is once again the most important PV sales market worldwide this year. Current market conditions are tightening, but within Germany there is still plenty of undiscovered potential. The transformation of the PV market from a supply-driven sellers' market to a demand-driven buyers' market is, however, an accelerated process rather than a slow development.

## Germany takes the lead once again

After years of constant growth, the global PV market in 2009 is undergoing fundamental change, as shown in the graph in Figure 1. Multiple incidents – the severe financial crisis, the resulting tightening of the market environment and declining sales all along the value chain – are overlapping and to some extent strengthening the other's effects. On the one hand, the financial situation is weakening the largely investment-driven solar industry, while at the same time the political changes that occurred in the past few months are taking their toll on producers of solar components. The recently amended Real Decreto in Spain, for example, caused a total collapse of the once strong and promising Spanish PV market, a market that nowadays is considered to be no more than a one-hit

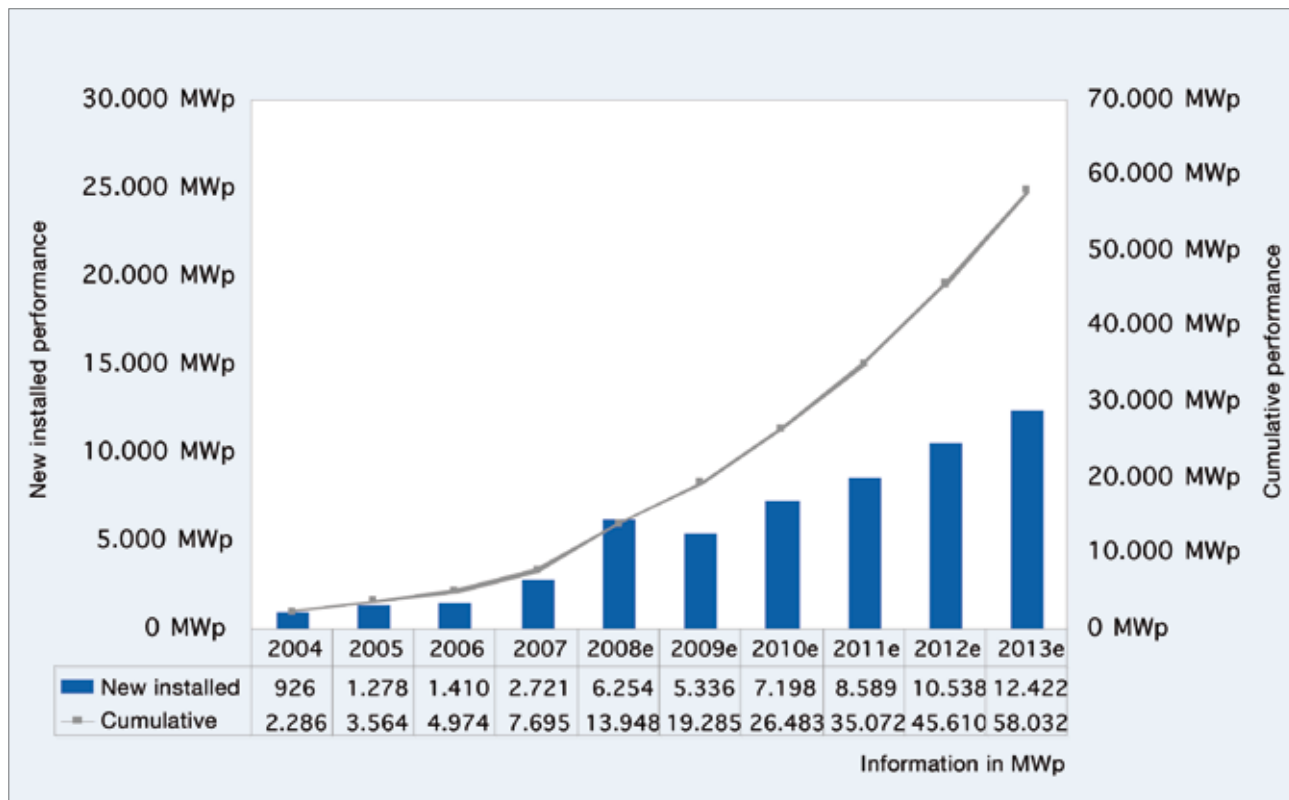
wonder. The growth of other European markets including France, Italy and Greece has fallen far short of expectations, and the credit crisis is causing further uncertainty within the market. At this stage, even the multi-billion dollar bailouts and governmental investment packages have not had a significant positive influence on the tense market situation.

### Natural process of consolidation

In the short term, adapting to these totally new market conditions will be an enormous challenge for producers, suppliers and distributors. For some of them it might even pose an existential threat. A long-term perspective shows that the PV branch is only undergoing a natural process of consolidation. But there is no need to panic. Within the last 10 years, photovoltaics has developed tremendously from a niche technology

to a serious alternative in regards to power generation. From an economic perspective, the PV branch has developed from a small high-tech segment to a considerable business factor, especially in Germany.

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Source: EuPD Research 2009

Figure 1. Development of global PV demand.

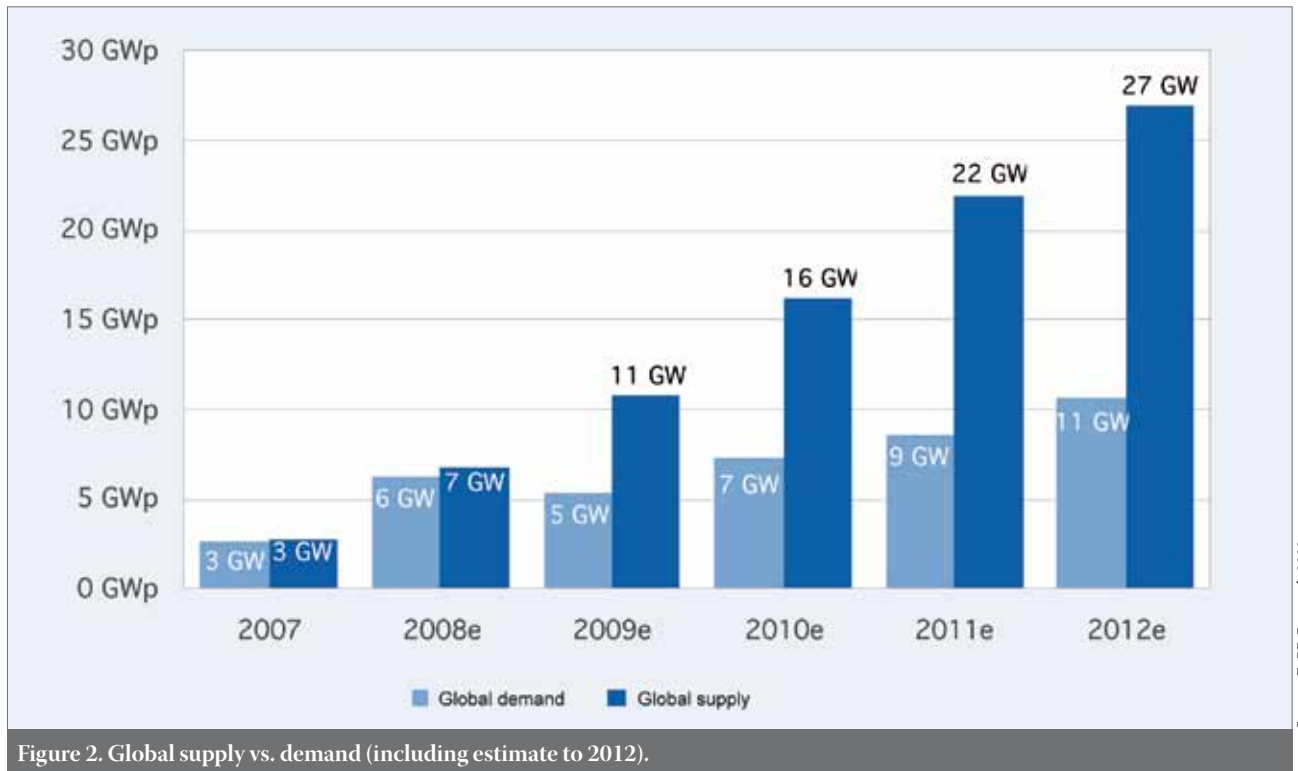


Figure 2. Global supply vs. demand (including estimate to 2012).

Source: EuPD Research 2009

It is clear that the market has experienced high annual growth rates resulting in stable sales areas but has been strongly dependent on national incentive schemes. According to the new EuPD Research survey on one of the core sales markets in the world, the German PV market, Germany will once again be the leading market worldwide in 2009. The study, entitled "The German PV Market: Understand the Demand – Explore the Potential" estimates a respectable cumulative 2GW of newly installed capacity in 2009. Due to robust framework conditions in Germany and strong non-partisan governmental support, the German PV market remains solid in comparison to its international competitors.

Although context factors in Germany are very positive, the regional demand will not be enough to compensate for the global supply surplus. However, guaranteed feed-in tariffs (FiTs) by the Erneuerbare-Energien-Gesetz (EEG) as well as secured access to capital for plant builders by the state-owned bank Kreditanstalt für Wiederaufbau should ensure constant market growth.

### Knowing the market is crucial

In general, all companies that are planning activities in the German market environment should consider the regional distinctions. While the aforementioned legal framework is consistently positive, the distribution processes in this country are unique. The authors' findings suggest that in the German market, the installer is the ultimate gatekeeper, which leads to the conclusion that companies and wholesalers should establish a strong

regional network with installers or experts on site. Although the process of diffusion in the German market is very well developed, familiarity with installer networks as well as the knowledge of undiscovered potentials is crucial.

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According to the study, the theoretical potential for rooftop systems in Germany is between 100 and 170GW, depending on the underlying model assumptions, approximately half of which consists of one- and two-family homes (i.e., private customers). Considering open-space systems, it is political will, rather than availability of space, which will define the direction of the market development. While some states like Bavaria and Brandenburg have held a very liberal position on the use of PV in the past and are even planning to extend the number of solar parks, others states like Baden-Württemberg and Hesse pursue a rather restrictive approval policy.

Regional differences are not only apparent in the various governmental

approval practices, they are also caused by different natural conditions like the varying amount of solar radiation. In many cases, there are also regional trends, which can be attributed to diffusion processes, different earning capacities, population densities, etc. Close inspection of these disparities reveals interesting market insights and also shows blank spots on the German PV map.

### Market growth: moderate but stable

EuPD Research expects the volume of the German PV market to add up to a record 1.75-2.08GW in 2009, which will likely be surpassed in 2010. Depending on whether the development in the supplier-driven market is sustainable, two scenarios are realistic from 2011 onwards. If the industry is able to sustain continuous market growth, caused by the consequent development of the German market and the initiation of pull effects on the demand side, an increase in annually installed capacity of up to 3.2GW in 2012 is possible. If the strong market growth in 2009 and 2010 should turn out to be a one-time effect – caused by the current strengthening of sales efforts on the German market and the slump in prices – a reduction in the development of the market can be expected. Based on our 'consolidated growth scenario', the authors expect the market volume in 2011 to amount to about 2.3GW, a value that would be below the newly installed capacity in 2010. From 2011 onwards, however, the market should begin growing again on a moderate but stable level.

In the medium term, key indicators like the decline of system prices and the positive business climate cause positive signals for the market development. In addition, most market segments still contain huge market potential, and many regions within Germany have remained largely unaffected by the PV boom of the past few years.

### Where is Germany heading?

In 2009, the development of the PV industry will be determined by the amendment of the EEG as well as by further far-reaching circumstances like the financial crisis, the upcoming Bundestag election and the excess supply. Presumably, the financial crisis will have quite different consequences for the demand and supply side. In comparison to other countries, the German demand side is less seriously affected by the crisis because the credit volume of the Kreditanstalt für Wiederaufbau (KfW) has been increased to up to €50 million and guarantees reliable access to capital. In addition, the appeal of safe return investments like PV plants has been increasing because of the continuing slump of the capital markets. This hypothesis is also supported by the results of a EuPD Research survey of German installers and wholesalers, in which about one third of installers expects the financial crisis to further stimulate the demand for PV products.

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But the effects of the excess supply are different for the various market participants. For the suppliers, it intensifies the competitive pressure and as a consequence further accelerates the consolidation process. Excess supply also encourages the price decline of PV products, which again could have positive effects on the return for the end customer and eventually stimulate demand. The effects should be noticeable at least in the customer groups where the rate of return is the decisive purchase criterion. The next Bundestag election at the end of the third quarter of 2009 is another important event for the market. However, EuPD Research assumes that

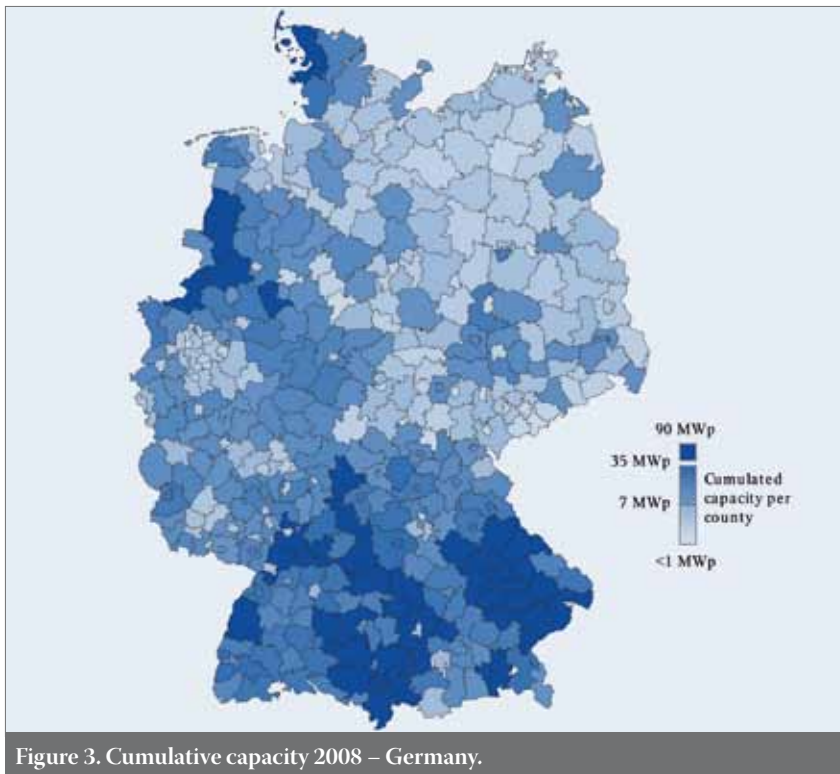


Figure 3. Cumulative capacity 2008 – Germany.

the effects of the election on the PV market will only be felt in the medium term, if at all.

There are several indicators which give reason to hope for a record year in the German PV market, including the decline of module and system prices caused by the global excess supply, relatively moderate (sometimes even potentially positive) effects of the global financial crisis, the record high in business expectations for the next six months, and no immediate risks for German PV. Nevertheless, in the first quarter of 2009 the cumulative newly installed capacity was estimated to be 230-290MW, based on statements by market participants along the value chain. Although this level is not alarmingly low for a first quarter, neither is it the hoped-for sign of considerable market growth in the German market.

### Reference

- [1] “The German Photovoltaic Market: Understand the Demand – Explore the Potential”, EuPD Research, June 2009.

EuPD Research’s report “The German PV Market: Understand the Demand – Explore the Potential” was published in June 2009. The comprehensive survey reflects current developments in the world’s leading PV market and analyzes customer segments and market potentials at a national and regional level. For further information contact EuPD Research at [welcome@eupd-research.com](mailto:welcome@eupd-research.com).

### About the Authors



**Daniel Pohl, MA**, graduated from the University of Bonn and the University Paris-Sorbonne with a qualification in North American Studies, literature and political science. He has been working as an editor and media consultant in the field of economics and renewable energies and is now heading the corporate communications department at EuPD Research in Bonn. Throughout his career he published numerous articles on diverse energy topics in national and international special-interest magazines.



**Jan Winkler** received his M.B.A. from the Free University of Berlin, Germany and Universidad de Granada, Spain. He is working as a consultant in EuPD Research’s Business Consulting Unit, focusing on strategic marketing in European photovoltaic markets. Within his research Winkler is covering the fields of market segmentation, strategic pricing and market forecasting. As one of the two authors of EuPD Research’s survey “The German PV Market: Understand the Demand – Explore the Potential”, he is an expert on Germany’s photovoltaic market.

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Source: EuPD Research 2009

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