



Greek market picks up speed

In Greece, the time has come for large-scale systems in the multi-megawatt range. In the Drama prefecture, a 5 MW park with Conergy modules was already successfully installed.

Photos (2): Conergy

While the Greek economy is just drifting along and the domestic financial market is struggling to survive, the PV sector is continuing its growth path. In the end, the positive situation is also due to a government that has been paving the way for the sector.

Everybody who has met Stelios Psomas knows that the Policy Advisor of the Hellenic Association of Photovoltaic Companies (HEIAPCO) is rather the modest type. But even Psomas could not hide his enthusiasm during the international exhibition Energy Photovoltaic, which recently took place in the Mediterranean Exhibition Center in Athens for the fifth time. "Only a few months ago, I had expected the newly installed capacities to reach 100 MW in 2010. Meanwhile, I had to revise my estimation upwards to 120 MW and even to 150 MW", says Psomas.

An enormous boom

It's mostly the legal changes that make Psomas optimistic – in particular, the most recent Decree 3851/2010 that has drastically simplified the realization of solar projects in the country. "The decree has been in effect since June 2010 and has given a strong stimulus to the market and the entire sector", says Psomas. There are several important points. "But the

most crucial aspect is that installations with a capacity of up to 1 MW no longer require a production license." This is a milestone, says Gregory Pozidis, CEO of the project developer Data Energy. "The majority of the installations in Greece are below 1 MW. According to the new decree, the operators of such smaller systems do not have to apply for a license at the Regulatory Authority for Energy (RAE) any longer." Pozidis still remembers the situation at the beginning of the last year. At that time, the amount of applications waiting for clearance at the RAE had run up to a total of 3.7 GW. The resulting backlog had caused waiting times of two or three years, which led many projects to fail. But also the application for an Environmental Impact Assessment used to be lengthy and complex. "Small systems below 500 kW now require only an official exemption, which is easily obtained and should take no more than 20 days", says Psomas. Systems with a capacity above 500 kW still require the assessment unless they are installed in industrial areas. Rooftop systems are exempted from

the permit as well. To give another example, the Decree 3851/2010 has also raised the upper capacity limit for PV systems to 2.2 GW by 2020. For systems with a capacity above 1 MW the decree reduced the permitted timeframe for the licensing procedure to two months.

Many new market participants

The improved conditions on the Greek PV market have not gone unnoticed. Quite on the contrary, the Greek market is attracting a lot of new players. One example is the French module manufacturer Teneosol. "We attended the trade show Energy Photovoltaic for the first time this year and are planning to establish a subsidiary in Greece in the near future", says Engin Yaman, General Manager Germany of the French module manufacturer. "The lowering of bureaucratic hurdles has made Greece an attractive market." Teneosol will most likely base its subsidiary in Athens where the infrastructure is already in place. "But this has not been decided yet. What also speaks in favour of Greece is the fact that systems with a capacity of up to 10 kW have become eligible for an attractive feed-in tariff since June last year. From our previous activities in France, we already enjoy many years of experience in the residential rooftop segment", adds Yaman.

Accordingly, Energy Photovoltaic '10 triggered a great response. Compared to the number of 170 exhibitors who found their way to Athens in 2009, the



The international exhibition Energy Photovoltaic in Athens took place for the fifth time this year. Photo: Europamedia

trade show was already able to draw 250 companies to its exhibition halls this year. In fact, the participation numbers almost went beyond its scope making it necessary for the organizers to create additional space in the conference area. "The trade show is growing steadily in size", confirms Jonathan Pina, Commercial Director of the Spanish component manufacturer PLP Solar. Pina had already attended the event last year. "It's also the private home owners that are showing a strong interest in solar." This is not always unproblematic. "You have to make sure to

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do business and cover all appointments during the weekdays. There are simply too many people during Saturdays or Sundays, which means that the industry representatives get very busy and have almost no time for you."

But also the structure of the exhibitors has changed over the last years, notes Gregory Poidis. "Companies that used to be active on the market only two years ago have disappeared meanwhile. Many of them were Greek companies. New domestic players have now taken their place but hardly anybody has heard of them before", says the market expert. One of the reasons for the change has been the lengthy licensing process at the RAE. "This has forced many companies out of business. Suddenly, however, solar is thought of as sexy. And now that the market is running smoothly, everybody tries to jump the bandwagon and get a piece of the cake. It's one of the reasons why people that used to be active in plumbing, for example, are now founding PV companies." And this is something that brings about many problems, as these companies lack the technical training. It's also the main reason why the Greek banks are cautious with loan requests. "They are not necessarily reluctant with loan approvals for solar projects. But they have noticed the changing market situation and now require evidence of the developer's expertise in the area of solar." Experience from previous projects is of course the best way of doing this. Nevertheless, the Greek banks are in principle willing to provide the financing for new projects. Jonathan Pina has even heard "that the PV sector is the only area where the banks currently agree to issue loans at all".

Market segments continue to grow

Needless to say, the boom of the Greek market is showing an effect. "The market has matured as far as to allow for the realization of projects in the multi-megawatt range", says Stelios Psomas. In the past, Greece had mainly been home to systems below 1,000 kW. "This continues to be the case, but the number of large-scale systems in the range of several megawatts is rising", explains Psomas. One example is the EPC contractor Biosar. The company only just finished a 3 MW system and is about to complete another 5 MW solar park. "Biosar has grown into the largest EPC contractor in Greece", says Psomas. Moreover, the company recently obtained a loan from Piraeus Bank for the realization of a new 10 MW project. "We believe in green business and to this end we have developed banking products, which provide the opportunity and the motivation for our customers", says Elena Primikiri, Deputy Director of Green Banking Products Division of Piraeus Bank. Kyriakos Agiannidis, Commercial Director of the EPC contractors Positive Energy, confirms the trend. "We currently have a 5 MW solar plant under construction in the Drama prefecture, which is one of several projects we are realizing in the multi-megawatt range".

A positive trend is also noticeable in the residential rooftop segment. After the introduction of a feed-

in tariff for systems with a capacity of up to 10 kW at mid-year 2009, the development had been slow at first. "There had been many uncertainties as a result of the financial and economic crisis. In addition, the license requirement through the Local Planning Authority had got in the way of many projects", says Alexander Zachariou, Commercial Manager of the thin-film manufacturer HelioSphera based in Greece. The licensing through the Local Planning Authority previously deterred many investors who did not want to be spied on. This obligation has meanwhile been abolished by the government. "And that's when it really took off. So far, a number of 260 systems with a capacity between 6 and 8 kW have been installed and applications for another 1,600 systems are waiting for approval", says Zachariou.

After a slow start and some delays, the market is finally picking up speed. "Taking into account newly installed capacities in the range of 150 MW in the current year, I would say that between 200 and 250 MW will be possible in 2011", says Agiannidis. But more growth should not be expected, he adds. "Our market is growing slowly but steady, and that's a good thing. A Spanish scenario is something we want to avoid". Following this path, the Greek PV market is little by little growing into a prime location for solar companies around the world. And Stelios Psomas already knows what's next. "The latest trend is rooftop systems on industrial halls".

Markus Grunwald

Further information:

Data Energy: www.dataenergy.gr
 Helioco: www.helioco.gr
 HelioSphera: www.heliosphera.com
 Phosus Bank: www.phosusbank.gr
 PLP Solar: www.plp-solar.com
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Clearer policies for PV – the message: Game on!



The poster says "We handle our own PV installation funding." In other words: give us your roof or your land – we'll do the rest.

Photos (2): Nikos Nazander



The Greek government sent a clear signal for the development of the photovoltaics market when it passed law 3851/2010 in June. The initial results are already visible – and hopes are soaring.

The conditions for photovoltaics in Greece have never been better. This was clearly visible at the 5th International Energy Photovoltaic 2010, the biggest solar event in the Balkans, which took place from October 21 to 24. Despite the economic crisis, 230 participants from 15 countries took part in the exhibition and some 25,000 visitors came to Plania, close to Athens. "We have 30% growth compared to 2009," says Maria Beria, Marketing Director at the fair's organizer Leaderexpo. At the exhibition, SUN & WIND ENERGY spoke with some of the most active PV market players in Greece who commented on the current state of the market.

HelioSphera is a Greek producer of thin-film micro-morph panels. Since its first panels went into production in September 2009, it has ramped up two 30 MW production lines which were completed in April 2010. The company has supplied 15 MW of panels to customers in Europe – primarily in Germany, Italy, Slovakia, France, Belgium and the Czech Repub-

lic – but it has also shipped its products to Israel and Japan. Sales will top 25 MW by the end of 2010. Only 8% of the company's production is supplied to Greek customers but the company expects this share to increase next year as the Greek market grows. "Although financing is more difficult to get than it has been in previous years, this could also be considered positive as it protects the market from the explosive growth that led Spain to a collapse in 2009," says Alexander Zachariou, Commercial Director of HelioSphera. "Many of the bureaucratic barriers have now been removed and particular market segments, like commercial and residential rooftops, are becoming attractive and easier to develop."

KLT is a well known company in the Greek PV market. It had plenty of visitors during all 4 days of the trade fair. "In the past two years KLT has successfully completed 227 turnkey PV projects in Greece," says George Kakkos, President of KLT Energy SA. "The large number of interested investors that visited the

exhibition shows that the PV business is going to triple in the country in the next three years from its present level."

Positive Energy is part of a group of companies founded by a team of noted Greek entrepreneurs. It is an EPC contractor focused on the effective implementation of PV projects. Its project portfolio today exceeds 20 MW, including projects under development. Through its affiliated company, Gennext S.A., the group's investment vehicle, it also has a forward-looking project pipeline which will be developed over the next three years. "The Greek PV sector will definitely benefit from the recent new legal framework. Feed-in tariffs are now crystal-clear and there is less bureaucracy. We expect a healthy growing market for the next 10 years," says Konstantinos Mavros, CEO of Positive Energy. "According to the National Renewable Energy Action Plan submitted to the EU, the indicative target for PV is 1.5 GW by the end of 2014, which guarantees an annual market of 300 to 400 MW."


"Investments in the PV sector may be the safest investing activity, as revenue and annual production is highly predictable in sunny Greece. PV in Greece could be a safe-haven investment for local and foreign capital," says Michalis Papaeconomou, Managing Director of Advartia, an EPC contractor for PV farms in Greece. "So far, our company has invested over €20 million of foreign funds in PV installations and in the very near future we will invest even larger sums in farms under construction. A Bulgarian branch has just



The Greek manufacturer HelloSphera presented its black thin-film module.

been opened, and by the end of the year our company will open branches in other countries as well."

Kostal Solar Electric Hellas was founded in March 2010 in Thessaloniki. It is the latest of Kostal's subsidiaries following others in Spain, France and Italy. The company distributes Piko inverters made by Kostal. An ambitious team has made a successful entry to the Greek market and has set its sights high. "It seems that the PV sector is probably one of the few sectors showing dynamic potential during the economic crisis. Wholesaling and installing companies of PV products seem to be growing fast and this has



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There were few new products at the trade fair. This interesting tracker concept from Thessaloniki was a notable exception.

had an obvious positive impact on our company's goals. Over the next few years, we expect to continue our steady, strong growth and be one of the most important players in the Greek inverter market," says Kostas Floros, Commercial Manager of Kostal Solar Electric Hellas.

Christos Filandros from Data Venia, the authorized representative in Greece and Cyprus of inverter manufacturer Refusol GmbH, was satisfied as well. "Our participation in this exhibition gave us the opportunity to meet with old and new customers. We are optimistic about the future based on the dynamic of the market," he says.

"Greece is a country that offers great prospects in energy investments," says Antonis Flogeras, a civil engineer at construction company Procom Energy, which installs PV systems throughout Greece. "Still, everyone wonders about the stability of prices for their income and expenses. As a result, any investment is characterized as a high risk. On the other hand, the current exhibition is an optimistic sign for development in energy. The optimism derives from the fact that companies were able to inform investors about the opportunities that exist in the market and to show the public that energy can be a step toward seeing a more optimistic future."

Krannich Solar Mon E.P.E. is a subsidiary of Krannich Solar GmbH & Co KG from Germany. Since 2007, the company has had a branch office in Thessaloniki, and it opened a sales office in 2009 in Athens. "At the moment the interest in small roof installations up to 10 kW is rather big. For the first time, it is possible to get a project within 2 or 3 months. In this sector, Krannich Solar has a 20 % market share," says Alexandros Athanasiou, CEO of Krannich Solar Greece.

Farmers' "sun rush"

With the government's decision to permit farmers and other land owners to install ground mounted PV farms up to 100 kW in mainland Greece – but not on Crete and other islands non-connected to the grid – getting the right support is essential in the application process. Actvus is a good example of a company providing just such support. Founded in 2007 by young electrical engineers and green energy enthusiasts, Actvus concentrates on turnkey solutions. Their target for 2011 is to install 10 MW. Konstantinos Papakostopoulos, electrical engineer and Marketing Director at Actvus, explains: "Three months ago, when the new law allowed farmers to install PV farms, the agricultural community reacted immediately, but some people gave farmers bad information. The people proposed filing applications through these communities, even though they had absolutely no experience in PV. Furthermore, some of them even told the farmers that all of the costs would be covered by the bank when in fact, the ATE bank leasing programme, for instance, only covers 85 % but not 100 % of the costs. This clearly shows that to start an investment, you need to have some knowledge and some funds of your own." Such misinformation caused a situation where farmers stayed in line outside PPC (Public Power Corporation) offices during the first night to file their applications on time – and now the total number of applications exceeds the cap for farmers all the way out to 2014.

Concerns and criticism

A new government brought with it new names for ministries. Meanwhile, few people remember that it was the previous government that initiated the "PV