The hunt for market share

In 2011, Europe still had 74% of global installed PV capacity; in 2012 it was 55%, and in 2013 the share, at 11 GW, was 29%. “Europe’s uncontested leadership position in the international PV market is over,” says Oliver Schäfer, the president of the European Photovoltaic Industry Association (EPIA). And there has been a commensurate decline in module and cell production in Europe, which has driven many locally active European manufacturers to insolvency. Installations in other parts of the world have increased, however. And of all manufacturers it is the Chinese that are currently expanding their capacity again; in part, by investing in new production lines, but also through takeovers and with the help of OEM partners. “Although the industry is betting on a more regionalised photovoltaic production in the long term, the installation boom in China and Japan is resulting in capacity expansion, particularly in China,” says IHS Analyst Stefan de Haan. De Haan thus believes that Chinese manufacturers may manage to increase their market share even more this year. While many manufacturers have been fixated on cost reduction and cost control, the Chinese are using the opportunity to expand market share — and they are getting plenty of help. The company JinkoSolar, for instance, received €120 million in financing from China Minsheng Banking for the completion of PV projects in China. The China Development Bank is also making a generous contribution toward providing its domestic industry with strong support to boost global earnings.

Leading by example

The leading Chinese manufacturers can still flex their muscles in the market, however. That is due in part to the strong demand in China, but development in the Asia-Pacific region in general is also playing into its hands. And of all manufacturers it is the Chinese that are currently expanding their capacity again; in part, by investing in new production lines, but also through takeovers and with the help of OEM partners. “Although the industry is betting on a more regionalised photovoltaic production in the long term, the installation boom in China and Japan is resulting in capacity expansion, particularly in China,” says IHS Analyst Stefan de Haan. De Haan thus believes that Chinese manufacturers may manage to increase their market share even more this year. While many manufacturers have been fixated on cost reduction and cost control, the Chinese are using the opportunity to expand market share — and they are getting plenty of help. The company JinkoSolar, for instance, received €120 million in financing from China Minsheng Banking for the completion of PV projects in China. The China Development Bank is also making a generous contribution toward providing its domestic industry with strong support to boost global earnings.

The vertically integrated solar company Trina Solar is providing a shining example when it comes to market share. Early this year the company announced that it would invest EUR 33 million in a joint venture with Changzhou NESL Solartech, a move expected to boost production to 500 MW a year within twelve months. “Since we expect demand for modules to continue growing, especially in China, Japan and in new markets, the joint venture will strengthen Trina Solar’s position in the market,” says CEO Jifan Gao. The joint venture is an inexpensive way for Trina Solar to increase production capacity. Trina will hold a 51% stake in the new company, while the Yabang group will hold 49%. Trina did not wait long before making its next move. This time, Trina Solar expanded its market share in the area of cell production and secured a majority position of 51% in the company Hubei Hongyuan PV Science Technol. Trina announced that it had concluded a contract with the equipment manufacturer Shenzhen S.C. New Energy Technology Corporation, which will hold the remaining 49% of the shares. The two companies now want to expand the capacity of Hubei Hongyuan in China to 420 MW by the middle of the year.
Canadian Solar did not lose any time either. Although the company has its headquarters in Canada, it produces most of its cells and solar modules in the Middle Kingdom. And in China, in particular, Canadian Solar expects to see rising demand. In the fourth quarter of 2013, 43 % of Canadian Solar’s sales were in China. Now that the Chinese government has raised its 2014 solar power installation target to 14 GW, Canadian Solar expects more orders from China. To meet the high demand from China, Canadian Solar wants, at a minimum, to expand its module capacity there. In order to cover the investment costs for the planned expansion from 2.4 to 3 GW, Canadian Solar carried out a new share and bond issue in February which raised US$ 256 million in fresh capital for the company.

In the shadow of China and Japan

Capacity expansion is not just the order of the day in China and Japan. Companies in neighbouring states are also stocking up. In Thailand, for instance, the company Solartron Public has commissioned the German firm Solsol to increase the capacity of its cell and module production plants from 65 to 180 MW. The background is an expected increase in demand volume from China for production capacity in Thailand, which is dependent on minimum prices for Chinese solar products in Europe. Development is similar in South Korea, where LG Electronics will expand its module production capacity to 160 MW. By the end of next year, the company will have 600 MW of capacity. Hanwha Q Cells in Malaysia is pursuing the same goal. It will raise cell production capacity by 204 MW. “With the expansion, the Hanwha Q Cells Malaysia facility will finally exceed 1 GW of cell production capacity, thereby ensuring a continuous supply of multi-crystalline high quality solar cells to our certified module manufacturing partners,” says Seong Joo Ryu, Managing Director of Hanwha Q Cells Malaysia.

In other parts of the world manufacturers are ramping up as well. “Manufacturers are attempting to increase their presence in emerging markets in

Production facilities, such as this one in Malaysia, are on the rise in the Asian region.

Photo: Hanwha Q Cells
World map of the PV industry
Production sites of 210 cell, 576 module and 86 thin-film producers worldwide

Eva solars

All the end of 2012 SolarWorld plant in Tumurtur boost production capacity 250 MW. By the end of 2014 line module production capacity increased to 300 MW. Production capacity by 2015 is expected to reach 800 MW.

SolarWorld

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Plum Solar

First Solar in Malaysia boost production capacity of 1,000 MW within 2012. By March of 2015, the company increased capacity to 2,000 MW, with goals to reach 3,000 MW by 2016.
particular, especially in Latin America,” says Jon Campos, an analyst at IHS. The move is expected to lead to a significant rise in investments in 2015. According to IHS, manufacturing capacities will increase the most in Latin America, just as they did in 2013. The analysts expect an expansion rate of 35%. Latin America will be followed by the Near East and Africa, at 33%, and North America, where capacities are projected to top 13%. The expansion in Latin America is expected to continue for the next few years. In Africa things are afoot as well. IHS has said that the Chinese manufacturer Hanergy will build a US$ 500 million thin-film fabrication facility in the Ivory Coast. Another example is JA Solar’s plan to build a 150 MW production facility in South Africa in cooperation with Powerway PV.

“With a growth rate of 220 to 250 MW a year, South Africa is an attractive market,” says Gregor Küpper of SolarWorld “PPA for ground mounted arrays are particularly attractive,” he said. Küpper knows of some companies that have either built or intend to build new production lines in South Africa, including domestic companies. “The trend is supported by local-content regulations,” says Küpper. Wido Schnabel, the Business Development Manager at Jinko Solar in Cape Town confirms this: “Our factory is in the start-up phase and will have fully certified production from mid to late July. The capacity will be up to 120 MW per year, depending on demand, and we can double the capacity if demand for local product increases.”

Further announcements of new fabrication facilities are coming out Brazil, Nigeria and elsewhere. Naturally, it would be a mistake to overlook development in the MENA region. Qatar Solar Energy, for instance, reported that it wants to build a PV production facility on the GW scale in the emirate. However, the company has just now started manufacturing solar modules, it says. The factory, located in the outskirts of Doha has a capacity of 300 MW a year, according to the company. Qatar Solar Energy has said it is planning to build an integrated photovoltaic plant with a capacity of 2.5 GW.
The strong survive

The US American market has been overshadowed recently, in particular by the issue of tariffs and low-priced products from China. In the past, numerous US companies have succumbed to the price war, but others have survived. One such survivor is SolarWorld, whose modules are in high demand in the USA. “The Americans
SolarWorld is satisfied with demand in the USA. Production is going all out. Photo: SolarWorld

SolarWorld is satisfied with demand in the USA. Production is going all out. Photo: SolarWorld

Rising OEM trend

The big players in the international market are taking advantage of the current situation in the global market to expand their market shares. They are not only doing this by expanding production capacity and takeovers; many of them are also buying OEM products to achieve their goals. That, in turn opens up opportunities for small companies that do not want to be in the limelight. One such company in Poland’s Jabil Circuit, which now has a capacity of 800 MW, all of it dedicated to making OEM products. Jabil is not alone. In India, Taiwan, South Korea, and Malaysia, increasing numbers of companies are manufacturing products, even though many of those products are not available on the open market. Instead, these companies are focussing on the OEM business. Particularly small companies from China are tapping the capacities available there to have modules produced for markets in Europe and the USA.

Photovoltaics industry worldwide 2014

As in years past, SUN & WIND ENERGY has again surveyed global crystalline cell and module manufacturers and producers of thin-film regarding their production capacities. Published materials and interviews with the companies were also used as a source of information. Studies issued by solar associations and market research companies, such as IHS and iSuppli, also augmented our research. The world map includes a total of 212 cell, 578 module and 66 thin-film production facility locations distributed across 48 different countries worldwide.

The 195 active cell manufacturers achieved a total capacity by the end of 2013 of some 50.8 GW (70 GW at the end of 2012), while the 527 module manufacturers had a capacity of approximately 66.8 GW (80 GW at the end of 2012). In the thin-film module area, the 61 manufacturers could produce a combined capacity of 8.4 GW (14 GW at the end of 2012). Compared to the year prior, total capacities have fallen significantly in all three areas. The top 15 manufacturers, a list dominated by China, can produce a total of some 25 GW of cells annually, some 26 GW of modules, and have a combined market share of 50 and 39 %, respectively. The top 10 thin-film manufacturers, at 7.2 GW, hold a much greater market share of 86 %. The picture is similar with regard to the quantities manufactured. The output of the top 15 in 2013 for both cells and modules was 19 GW, which corresponds to an average utilisation of 77 %. The top 10 thin-film companies produced some 3.3 GW, which corresponds to a utilisation of just 47 %.

Overall, a total of 142 manufacturers could be described as “integrated,” meaning that they had their own cell and module production capabilities. In the current year, manufacturers are highly cautious in view of the challenging market environment, which is why many have abstained from making concrete prognoses.

Markus Grunwald

Michael Forst
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