

Welcome to Solar Weekly Insight, presenting the most important developments in the global solar and energy storage industry, ranging from significant industry trends, policies, research, and new technologies to markets and pricing.

This week's edition focuses on PV module prices in February 2016, and has a look at the European PV market, potentially back on track. In addition, our newsletter features an interview with Apricum Principal Florian Mayr on how to determine meaningful, comparable costs of energy storage.

Furthermore we highlight GTM Research's forecast on the U.S. solar market to grow 119% in 2016, PV manufacturers' announcements to invest over USD 5 billion in new production capacity, technology upgrades, as well as an important report on Off-grid solar, expected to become a USD 3.1 billion market opportunity by 2020.

PV price index: European PV modules and products from China, Japan and Korea on average 1.6 percent cheaper in February

Crystalline solar PV module prices for products manufactured in Europe, China, Japan and Korea decreased on average by 1.6 percent in February 2016.

Price trends February 2016				
Module type, origin	€/Wp		Trend since 2016-01	Trend since 2015-01
Crystalline modules				
Germany, Europe	0.58		- 1.7%	 - 3.3%
Japan, Korea	0.65		- 1.5%	 + 6.6%
China	0.55		- 1.6%	 + 1.9%
Southeast Asia, Taiwan	0.49		+ 2.1%	 + 6.5%

However, only German and European module prices decreased since January 2016 by 3.3%.

Prices for modules from China, Japan and Korea on average increased by 7.5 percent since January.

[PV price index](#)

Market comment

Solar companies started reporting significantly better figures – is the European market already back on track?

PV Market expectations in Europe appear to be looking up again for the first time this year. A contributing factor has been the very mild winter, which has already spurred the pace of installations in many parts, Martin Schachinger (pvXchange.com) reports in his market comment.

Shortage of inexpensive modules in the European Union persists

However, he notes that this is the big European picture. Germany, with its disappointing January and February figures, has yet to feel the effect of the upturn. Nevertheless, throughout Germany, the small and medium-sized system sector has been much livelier than it has been over the past few months.

The reason, however, is not to be found in positive price development or a supply situation that is favorable for the market. There is still a shortage of inexpensive modules in the European Union. Overall, the selection of modules has become very limited. Due to minimum import prices, which still apply, manufacturers are mostly only focusing on products with higher efficiency or smart junction boxes, such as j-boxes with built-in module optimizers or other intelligent circuits.

Global PV market is steadily growing

Several solar companies have reported their annual sales figures in recent weeks. Once again, the figures are looking up when compared with the previous year, even for European companies.

Thanks to a steadily growing global market, most manufacturers, systems integrators and system builders did well. Last year also saw significantly fewer bankruptcies in the solar industry than in previous years. That is, of course, also due to the fact that the wheat has now been separated from the chaff, and that only companies with solid finances and prospects for long-term profitability have survived, concludes Schachinger.

New Solar/Storage Interview

Apricum Principal Florian Mayr on how to determine meaningful, comparable costs of energy storage

The future market for stationary energy storage systems (ESS) is one of the most heavily discussed topics in the power industry today. Significant growth is expected in particular for stationary battery systems, which accounted for only 2 GWh globally in 2015 but are expected to grow to 33 GWh by the end of the decade.



In this storage interview Apricum Principal Florian Mayr explains how to determine meaningful, comparable costs of energy storage.

Florian Mayr: “The key to comparing apples to apples is to make sure that individual cost figures are calculated at the same level of detail and are based on comparable assumptions. The prerequisite for this is a deep understanding of the different factors influencing the costs of an ESS, i.e., upfront costs, O&M costs, charging costs, usable energy over lifetime, residual value and financing costs.” [More](#)

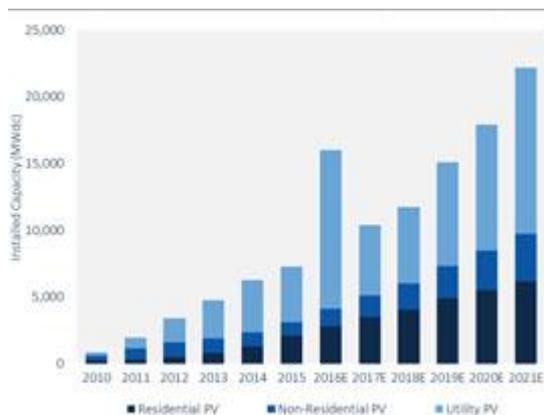
Promotion



ees® North America, co-located with Intersolar North America, covers the entire value chain of innovative battery and energy storage technologies and is the ideal platform for all stakeholders in the rapidly growing energy storage market. ees® North America provides the best opportunity to explore energy storage systems in combination with PV and beyond.

GTM Research: U.S. solar market set to grow 119% in 2016; installations to reach 16 GW

The U.S. solar market is set to grow a staggering 119 percent this year, says GTM Research (Boston, Massachusetts, U.S.) in its “U.S. Solar Market Insight 2015 Year in Review,” published in conjunction with the Solar Energy Industries Association (SEIA).



U.S. PV installation forecast, 2010–2021E

Led by the utility-scale segment, GTM Research forecasts 16 gigawatts of solar to be installed in the U.S. in 2016, more than doubling the record-breaking 7.3 gigawatts installed in 2015.

GTM Research expects the U.S. solar market to surpass 100 cumulative gigawatts by 2021.

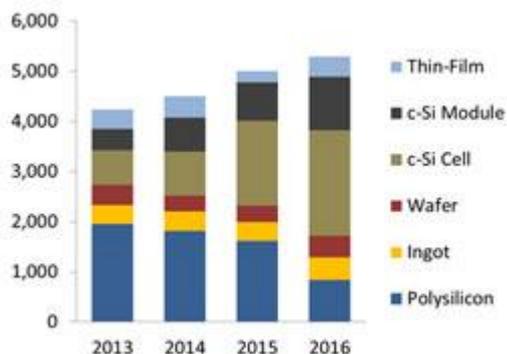
In fact, the U.S. is on the verge of its millionth solar installation.

“This is a new energy paradigm, and the solar industry officially has a seat at the table with the largest energy producers,” said SEIA president and CEO Rhone Resch. [More](#)

PV manufacturers to invest over USD 5 billion in 2016 for new production capacity, technology upgrades

The solar photovoltaic (PV) manufacturing sector is forecast to increase capital expenditure (capex) on new factories and technologies in 2016 by more than 60 percent, compared to 2012, when manufacturing capex fell to a six-year low.

Manufacturing-related investments are forecast to reach a five-year high of USD 5.3 billion in 2016, according to the new “PV Manufacturing & Technology Quarterly” report from the market research division of Solar Media Ltd.



The growth in solar PV manufacturing capex is being driven mainly by two factors: the requirement to upgrade the productivity of existing solar cell production lines to increase solar module power ratings; and the need for Chinese suppliers to locate solar cell and module capacity outside China to fully capitalize on overseas end-market demand growth. [More](#)

Chart left: Solar manufacturing capex across the value chain between 2013 and 2016

New report

Off-grid solar to become a USD 3.1 billion market opportunity for the solar industry by 2020

A new report tracks the groundbreaking technological advances and innovative business models which have emerged to transform the lives of millions through affordable modern solar photovoltaic (PV) energy services.



According to the Off-grid solar market trends report 2016, annual investments into the off-grid solar sector have risen fifteen-fold since 2012 to USD 276 million in 2015.

The report expects off-grid solar to become a USD 3.1 billion market opportunity for the solar industry by 2020, reaching 99 million households. [More](#)

Off-grid solar improves energy access for an estimated 89 million people in Africa and Asia, the report finds

Promotion

INTERSOLAR SUMMIT RETURNS TO BROOKLYN! – March 24, 2016 | Brooklyn, NY, USA

Intersolar Summit is returning to Brooklyn NY on March 24th, 2016! With both solar and energy storage markets surging in the northeast, the organizers expect another sell-out to solar and storage professionals engaged in all aspects of these growing markets, especially now the solar investment tax credit (ITC) has been extended for another 5 years. Intersolar Summit USA East gives its attendees a chance, to stay on top of latest policy developments, opportunities and key issues impacting the U.S. East Coast solar and energy storage markets and offers great business matchmaking opportunities.



Further information: <http://www.intersolarglobal.com/en/summits/usa-east.html>

Registration: <https://www.messe-ticket.de/INTERSOLAR/SUMMITUSA2016>

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