Solar Weekly Insight
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2014-09-23

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

This week's edition focuses on two new PV technology world records, studies on utility-scale PV costs and competiveness, global PV micro-inverter and power optimizer market forecast, and the Middle East and Africa PV market.

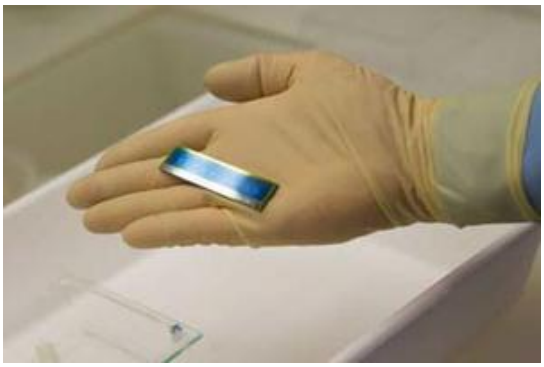
Solar Server also presents an exclusive Interview with Suntech's Head of Sales (Americas) on challenges and perspectives in Latin America's PV market.

New week, new PV world records

This week started with two solar PV records announced by ZSW in Germany and Meyer Burger from Switzerland. ZSW succeeded in bringing back the thin-film PV record to the institute with a 21.7 percent CIGS solar cell performance. Meyer Burger manufactured a 327 watt PV module on industrial production equipment.

ZSW brings thin-film PV world record back to Germany; CIGS solar cell reaches 21.7 percent efficiency

The Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW, Stuttgart, Germany) has set a new world record in thin-film solar photovoltaics (PV). Scientists in Stuttgart achieved 21.7 percent efficiency with a solar cell made of copper indium gallium diselenide (CIGS).



ZSW succeeded in bringing back the record to the institute with this cell's performance. Swedish researchers achieved a new best mark in June, which has now been surpassed by 0.7 percentage points. The record-setting cell has an area of 0.5 cm², a standard size for such tests. It was manufactured in a laboratory coating plant by way of a coevaporation process that is highly reproducible in the lab. More

Picture left: Thin-film solar photovoltaic cell strip with ZSW's record-setting solar cell

Meyer Burger announces further PV record with 327 watt solar module manufactured on industrial production equipment

Meyer Burger Technology AG (Thun, Switzerland) has just set another solar photovoltaic (PV) record for standard solar modules with 60 cells: 327 watts.

This impressive development and performance leap, combined with a simultaneous reduction in production costs, was made possible by Meyer Burger's high-efficiency HJT and SWCT technologies in close coordination with the pertinent wafer, cell and module processes, the company notes. More

Picture left: Meyer Burger achieved the solar photovoltaic record using industrial production machines

Prices of rooftop and utility-scale solar photovoltaics declined significantly in the U.S.

The cost of solar energy in the United States continues to fall substantially, according to the latest editions of two annual reports produced by the Department of Energy's Lawrence Berkeley National Laboratory (Berkeley Lab).

A third Berkeley Lab report, written in collaboration with researchers at Yale University, the University of Texas at Austin and the U.S. Department of Energy (DOE), shows that local permitting and other regulatory procedures can significantly impact residential photovoltaic (PV) prices. More

According to the second edition of the "Utility Scale Solar" report, larger utility-scale solar PV projects in the United States have made great strides in delivering competitively priced renewable electricity in recent years. More

According to the latest edition of "Tracking the Sun", an annual PV cost tracking report produced by Berkeley Lab, installed prices for residential and commercial solar PV systems completed in 2013 fell by roughly USD 0.70 per watt (W) or 12 up to 15 percent from the prior year. More

The three reports, along with related summary slide decks, 2-page fact sheets and data files (as applicable), are available for download at: http://emp.lbl.gov/reports/re. Upcoming webinars on these reports will be announced in the near future.

LCOE analysis:
Costs of PV continue to drop, solar power is increasingly cost-competitive with traditional energy sources

Last week, financial advisory and asset management firm Lazard Ltd. (New York) released its Levelized Cost of Energy Analysis – Version 8.0, an in-depth study comparing the cost of generating energy from conventional and renewable technologies.

The study shows the acceleration of an ongoing trend: Utility-scale solar and wind power are increasingly cost-competitive with traditional energy sources such as coal and nuclear, even without subsidies. More

Picture left: The costs of generating electricity from all forms of utility-scale solar photovoltaic (PV) technology continue to decline dramatically, finds the analysis. The study estimates that the levelized cost of energy (LCOE) of leading PV technologies has fallen by nearly 20% in the past year, and nearly 80% in the last five years.

Promotion

Intersolar Summit Middle East:
Ambitious goals – Market participants discuss the solar potentials in MENA

The conditions for the use of solar energy in the Middle East are excellent: intense solar irradiation, extensive areas for the establishment of large PV power plants and an aspiring and energy-hungry economy. Saudi Arabia alone is planning new projects with a total solar capacity of 41 gigawatts until 2032. Those targets are considered to be one of the most ambitious ones in the entire sector.

Reason enough for the organizers to once again plan the Intersolar Summit, this time in the Kingdom of Saudi Arabia in October, following three successful “Market Briefing” events. The Intersolar Summit Middle East will take place on 14th and 15th October in the Riyadh International Convention and Exhibition Center.

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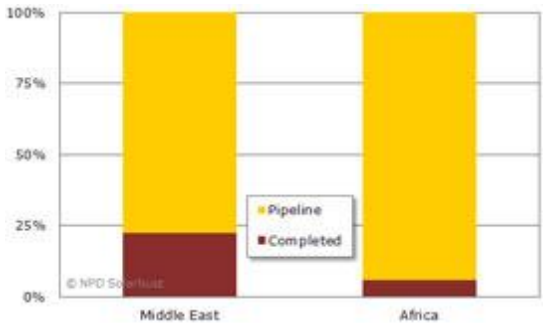
Middle East and Africa PV market accumulates 12 GW pipeline

According to NPD Solarbuzz solar PV projects in Africa have a total potential capacity of more than 11 gigawatts (GW) and projects in the Middle East amount to a total potential capacity of at least 1.3 GW.

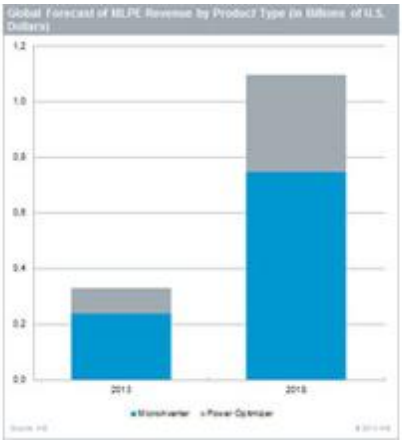


More than 99 percent of the potential PV capacity listed in the “Middle East and Africa Deal Tracker“ is from ground-mounted PV projects, and average sizes of these projects in Africa tend to be larger than in most established PV markets. More

Picture left: Completed and Pipeline PV Project Completion Rates Across the Middle East and Africa. Source: NPD Solarbuzz Middle East and Africa Deal Tracker

Global solar PV micro-inverter and power optimizer market to break USD 1 billion barrier in 2018

The world-wide market for photovoltaic (PV) solar micro-inverters and power optimizers is forecast to more than triple in the coming years, rising to more than USD 1 billion in 2018, as both established and new regions increase their adoption of the emerging technology, according to IHS Technology.



Worldwide market revenue for solar PV micro-inverters and power optimizers, collectively called module-level power electronics (MLPE), will rise at a compound annual growth rate of 27 percent to total USD 1.1 billion in 2018, up from USD 329 million in 2013, IHS forecasts.

“The market has grown to more than USD 300 million in size, despite continued price pressure due to new entrants into the business and decreasing PV system prices. Future demand for micro-inverters and power optimizers is expected to be spurred by continued acceptance in mature European PV markets, such as Germany and France,” said Cormac Gilligan, senior analyst for solar inverters at IHS.

Image left: IHS forecasts the global market for photovoltaic (PV) solar micro-inverters, power optimizers to more than triple in the coming years

Homeowners to invest more than USD 625 billion in residential energy generation, storage by 2023

Distributed energy resources (DER) innovations are causing a broad disruption that is altering the traditional relationship between utilities and their residential customers. According to a recent report from Navigant Research homeowners and other residential customers are on pace to invest more than USD 625 billion, cumulatively, in DER from 2014 through 2023. More

“The growing affordability of DER technologies is giving customers greater control of their energy consumption - turning some homes into miniature power plants that generate all the power they consume and even deliver power back to the grid,” says Neil Strother, principal research analyst at Navigant Research.

Picture left: “Solar PV panels are the most visible technology reshaping the residential power landscape, but there are many others, as well”, says Neil Strother

Solar Server Interview:
Suntech’s Head of Sales (Americas) on Latin America’s PV market

Robert Ho, Suntech’s Head of Sales for the Americas, speaks about building a sustainable solar energy business in Latin America.

SolarServer**:** Which countries will become the most exciting markets, and what do you expect to be the drivers for PV deployment?

Robert Ho: Currently, Brazil, Mexico and Chile are the most exciting markets in Latin America. The exponential growth in the demand for clean energy is expected to drive PV development in the region. More

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Publisher:

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Register of corporations-No: HRB 382398
Handelsregister des Amtsgerichts Stuttgart

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