

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 recently published or updated 2015 global solar PV deployment figures, and new insight on the bright future for energy storage.

In our new Solar Interview Apricum Principal Florian Mayr informs on creating successful business cases for solar-plus-storage using the example of Europe, and especially Germany.

PV market

Global solar PV installations grew 34% in 2015; 59 GW added last year

In the recent days GTM Research and the PV Market Alliance (PVMA) published new figures on global PV deployment in 2015, with a conservative 51 gigawatts announced by PVMA, and 59 GW estimated by GTM.

Anyway, this indicates at least a growth of 25 percent compared to 2014 (approx. 40 GW).



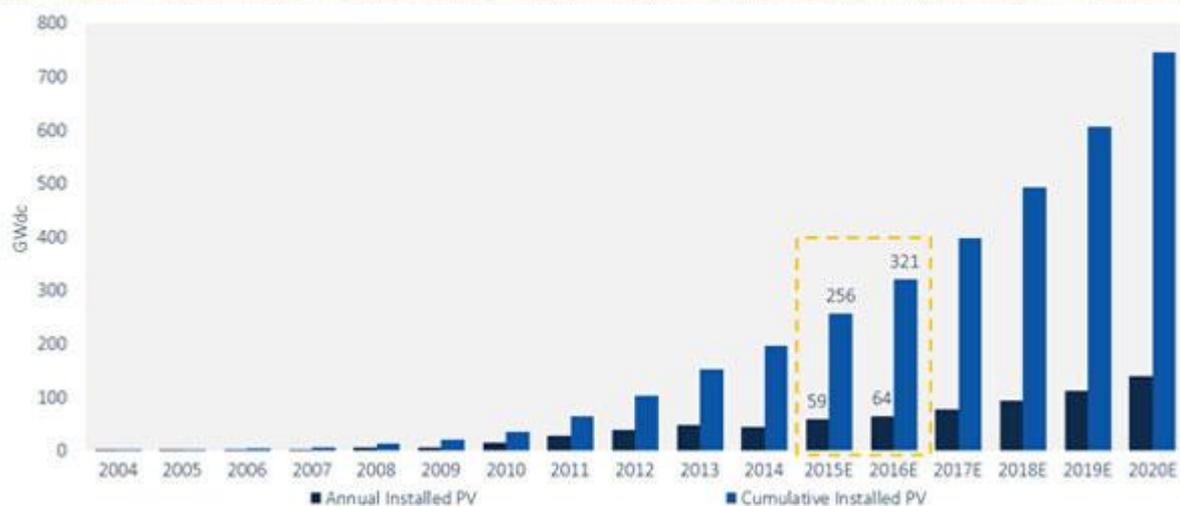
Utility-scale PV plant in China. In 2015, China overtook Germany with 43 GW cumulative installed PV capacity

According to preliminary numbers from GTM Research 59 gigawatts of solar photovoltaics (PV) were installed globally in 2015, a 34 percent increase over 2014's total.

GTM Research forecasts the cumulative world-wide PV generation capacity total to reach 321 gigawatts by the end of 2016. [More](#)

The PV Market Alliance (PVMA) recognized significant growth in 2015 with a market reaching at least 51 GW, exactly matching last year's PVMA central scenario forecast. [More](#)

GTM Research Global PV Demand 2004-2020E



Global solar PV demand 2014–2020E (black), cumulative installed PV (blue). Source: GTM Research

Promotion

The [EU PVSEC](#) is the world's largest Conference in the field of photovoltaics and uniquely combines scientific, technological, industrial and application-related issues from the perspective of research and development, industry, finance and politics.



The conference program is coordinated by the European Commission, DG Joint Research Centre

With around 1,200 keynote, plenary, oral and visual presentations from more than 80 countries, several workshops, expert panels and specific industry fora, the EU PVSEC counts as the most outstanding science-to-science and science-to-industry platform.

Energy storage market

World Energy Council report outlines bright future for energy storage

According to the new report “E-storage – shifting from cost to value” published by the World Energy Council (Abu Dhabi), energy storage costs are expected to fall by as much as 70% over the next 15 years.



For the full report see: www.worldenergy.org/

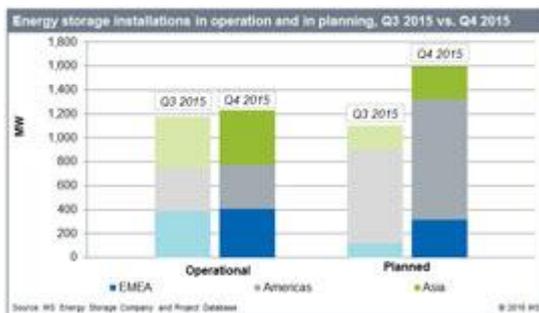
The report, which focuses on solar and wind applications, says that the focus only on investment costs is leading to the perception that energy storage is more expensive than it actually is because it ignores the system value of stored energy.

Solar storage will become more competitive as new battery technology drives prices down. While batteries are currently too expensive for large-scale use, improving technology is cutting costs, which means storage systems could replace some plants and avoid the need for new ones, as well as reduce demand for oil.

[More](#)

Global energy storage pipeline grew by 45 percent in Q4, 2015, and reached 1.6 GW

According to IHS, battery cost reductions, government funding programs and utility tenders led to a 45 percent increase in the global energy storage pipeline in the fourth quarter of 2015 compared to the previous quarter. Thus, the global pipeline of planned battery and flywheel projects had reached 1.6 gigawatts (GW) in Q4, 2015.



IHS recorded an increase of nearly 400 megawatts in the global energy storage pipeline during Q4, 2015

“Continued battery cost reduction, government funding programs and utility tenders have helped spark a notable acceleration in the global energy storage market, and IHS recorded an increase of nearly 400 megawatts in the global pipeline during the final quarter of 2015,” comments Marianne Boust, principal analyst for IHS Technology. [More](#)

Several large-scale projects were announced at the end of 2015, signaling that the storage industry is shifting from research-and-development demonstration projects to commercially viable projects.

Solar Interview

Apricum Principal Florian Mayr on creating successful business cases for solar-plus-storage

With rapidly developing technology, falling costs and innovative business models, solar-plus-storage is attracting a lot of attention at the moment.



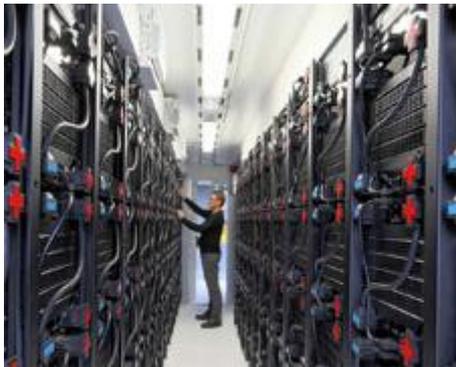
In this new interview, Florian Mayr, principal and head of the energy storage practice at Apricum – The Cleantech Advisory (Berlin, Germany), helps to better understand the solar-plus-storage business case landscape today in Europe, where it is headed and highlights the critical factors for success. [More](#)

Florian Mayr: “Here in Europe the application of energy storage in conjunction with solar is mainly driven by the residential segment.”

New large-scale energy storage projects

Leclanché to supply one of the largest energy storage systems in the world

Swiss battery manufacturer Leclanché has been selected by Hecate Canada Storage II, an emerging Canadian Project Development and Electrical Systems Integrator, to deliver one of the largest grid ancillary services projects in North America, and to provide 13 MW/53 MWh in Ontario.



Leclanché will supply the entire Battery Storage Systems for all the contracted facilities to be built near Toronto.

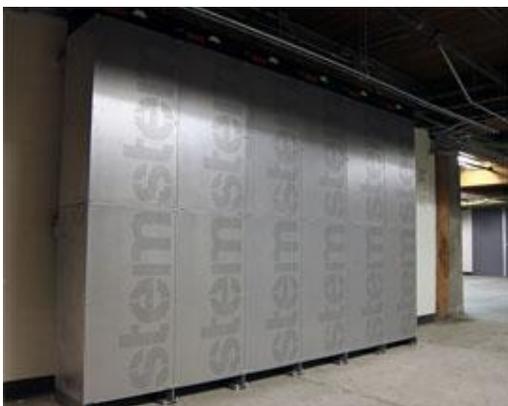
Leclanché will team up with Deltro Energy Inc. who will procure, design and construct the site facilities balance of plant scope and high voltage connections to the grid.

Deltro will also be the operator of the facilities and Greensmith Energy will provide the energy management system, when the projects come on line, expected in Q4, 2016. [More](#)

Stem partners on energy storage project to integrate distributed PV resources on Hawaii grid

Stem, a provider of advanced energy storage technology, software and data analytics, announced it has partnered with the Hawaiian Electric Companies in a federally-funded research program as part of the “Sustainable and Holistic Integration of Energy Storage and Solar PV” (SHINES) program.

The project is supported by a USD 2.4 million award from the U.S. Department of Energy’s SunShot Initiative and a matching USD 2.4 million from Hawaiian Electric.



The initiative, “Integrating System to Edge-of-Network Architecture and Management (SEAMS) for SHINES Technologies on High Penetration Grids,” aims to streamline grid planning and operations for utilities in regions with high concentrations of distributed generation (DG) resources. [More](#)

As part of the three-year project, Stem plans to deploy its intelligent storage systems at local businesses on O’ahu, Maui and Hawai’i Island.

DNV GL releases one-stop guideline for safe and reliable grid-connected energy storage systems

DNV GL in January 2016 published the GRIDSTOR Recommended Practice (DNVGL-RP-0043). This independent set of recommendations combines all key standards and guidelines with credible industry experience and insights, to help guarantee the safe implementation and operation of energy storage systems for all stakeholders such as end users, manufacturers, investors or insurance companies.



The GRIDSTOR Recommended Practice provides simple, clear and practice-based guidance on energy storage safety, performance and operation and goes far beyond any existing standards in covering the key quality criteria in those areas. [More](#)

The DNV GL Recommended Practice on grid-connected energy storage systems is available freely, with no obligation, at: <http://rules.dnvgl.com/>

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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