

SOLAR SECTOR UPDATE

From... MAC Global Solar Energy Index

the tracking index for

Guggenheim Solar ETF* (NYSE ARCA: TAN)

Solar Index Performance

The MAC Solar Index, which is the tracking index for the Guggenheim Solar Energy ETF (NYSE ARCA: TAN), is up by 8% so far in 2014 through January 24, adding to the 130% rally seen in 2013.

The rally in solar stocks over the past year has been driven mainly by the stabilization of polysilicon and solar panel pricing (see charts on p. 3) combined with strong solar demand and improved profitability of solar manufacturers. The 2011-12 shake-out in the solar industry has ended now that many lower tier players were forced out of the market, thus bringing supply and demand into better balance.

China, Japan and the U.S. take over the reins from Europe

Global solar PV installations in 2013 rose sharply by 33% to a record high of 40.7 gigawatts (GW) from 30.6 GW in 2012, according to data provided by Bloomberg New Energy Finance. Global solar returned to strong double-digit growth rates in 2013 after the poor growth rate of +6% seen in 2012 due to the solar shake-out. Over the last 5 years, new global solar installations have grown by six-fold at a compounded annual growth rate of 44%.

Demand for solar soared in 2013 as China, Japan and the U.S. took over the leadership role from Europe. New solar installations in 2013 soared by 232% in China to 12.0 GW and by 230% in Japan to 8.1 GW. Solar in Japan continues to surge as the government pushes alternatives to nuclear power after the Fukushima nuclear disaster in 2011.

The strength in solar demand in China, Japan, the U.S. and elsewhere more than offset weakness in Europe where reduced subsidy support caused a decline in annual installations. German new solar installations in 2013 fell by -58% to 3.2 GW from 7.6 GW in 2012. Germany still has the world's largest amount of cumulative installed solar at 35.4 GW, but China is catching up fast after installing 9

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The MAC Global Solar Energy Index (SUNIDX) is licensed as the tracking index for the Guggenheim Solar ETF* (NYSE ARCA: TAN).

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Note: Index performance does not reflect transaction costs, fees or expenses of TAN.

MAC Global Solar Energy Index (SUNIDX)



GW more than Germany in 2013. At that rate, China will have more cumulative solar installations than Germany in just four years. The diversification of demand is a healthy development for the solar industry, which has become less dependent on developments in individual countries.

In China, the State Council, which is the country's cabinet and the top governing body, continues to pursue its goal of boosting cumulative PV capacity to 35 GW by 2015 from about 20 GW at the end of 2013. China should be able to easily meet that goal. In fact, China's Energy Administration said that the government is pushing for 12 GW of new solar PV installations in 2014, up from its previous target of 10 GW and matching 2013 installs of 12 GW. The Chinese government is also pursuing a plan to promote "orderly competition" in the solar industry, which is an attempt to force smaller and less competitive players out of the market

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in order to improve profitability and competitiveness of the largest Chinese solar players. In other support for the solar industry, the Chinese government in Sep 2013 offered tax breaks for solar power manufacturers with a refund of 50% of value-added taxes. In addition, the Chinese government in November 2013 opened its energy conservation and environmental protection industries to foreign private investment.

In the U.S., PV installations in 2013 grew by +18% y/y to 3.96 GW from 3.34 GW in 2012. That 2013 growth rate of +18% y/y slowed substantially from +80% in 2012 as utility and commercial PV project growth slowed and as the year-earlier comparison climbed from low levels in previous years. However, the U.S. in 2013 moved into third place globally with its 3.96 GW of annual installs. China and Japan were ahead of the U.S in first and second place, but the U.S. moved ahead of Germany for the first time ever.

Solar in California received a boost in October 2013 when California Governor Jerry Brown signed a bill into law that allows California solar power producers (residential or commercial) to engage in unlimited net metering versus the previous restriction of 5% of a utility's peak load. Under net metering, a homeowner or solar power producing company can sell excess power back to the grid at pre-determined rates, thus making solar projects even more attractive.

Residential solar catches fire in U.S. thanks to easier financing

U.S. residential solar soared in 2013 with help from aggressive sales and financing solutions offered by companies like Solarcity (SCTY). U.S. residential PV installations in 2013 rose by +52% y/y, according to the "U.S. Solar Market Insight Report" from GTM Research and SEIA. There were 31,000 individual new U.S. residential PV installations just in Q3-2013, bringing the cumulative total in the U.S. to 360,000 residential units, according to GTM Research.

U.S. residential PV is catching fire as a large number of solar installation firms are now aggressively selling PV to homeowners with little or no money down. There are a variety of financing vehicles but the common feature is that solar becomes a no brainer in many states when homeowners can install solar with no money down and have a lower payment than their current electricity bill.

Solarcity made a big splash in Nov 2013 when it sold \$54.4 million of notes backed by solar leases and power-purchase agreements. That transaction proved that there is substan-

tial investor demand for solar-backed notes and raised the profile of solar as an asset class. The low 4.8% yield on the securities provided evidence of strong demand. Standard & Poors rated the notes BBB+, which is an investment grade rating.

Deutsche Bank solar analyst Vishal Shah said, "Bottom line, the Solarcity asset-backed security transaction improves overall sector profitability and sets the stage for a lot stronger growth of the U.S. solar market over the next 12-18 months." Mr. Shah added that the Solarcity deal "opens the gates" for other solar companies to raise capital through the asset-backed security markets and that he expects SunPower (SPWR) and the broader solar sector to be primary beneficiaries. Solarcity is also working to open solar investment to smaller investors when it purchased Common Assets, a firm that specializes in crowd funding.

The use of securitized notes and other capital-raising tools allows solar installation companies to more easily satisfy their capital needs. Moreover, these new funding solutions mean a lower cost of capital for PV solar projects, thus reducing the bottom line cost of solar for home and business owners and making solar economically attractive to an even larger target market.

U.S. starts new trade investigation against China

The U.S. may have restarted its solar trade battle with China. The U.S. International Trade Commission (IUSITC) in early January 2014 opened a new anti-dumping and anti-subsidy investigation on Chinese solar products imported into the U.S. The investigation comes in response to a complaint by SolarWorld and other U.S. solar manufacturers that Chinese firms are taking advantage of a loophole in last year's U.S. tariff decision by sourcing solar cells out of Taiwan, thus avoiding the tariff that they would otherwise pay when they ship solar panels from China to the U.S.

The U.S. last summer slapped tariffs of 31% and more on Chinese solar panels that contained Chinese-made solar cells. China in autumn then retaliated by slapping duties on polysilicon shipped by U.S. polysilicon firms to China. The new U.S. move is only an investigation and any final decisions will not come until later this year. Meanwhile, the Solar Energy Industry Association is trying to come up with a compromise that will minimize or eliminate both U.S. and Chinese tariffs since there is little net benefit to U.S. solar manufacturing firms and a negative impact on U.S. solar installation companies that want to simply minimize their solar hardware and installation costs.

Solar Pricing

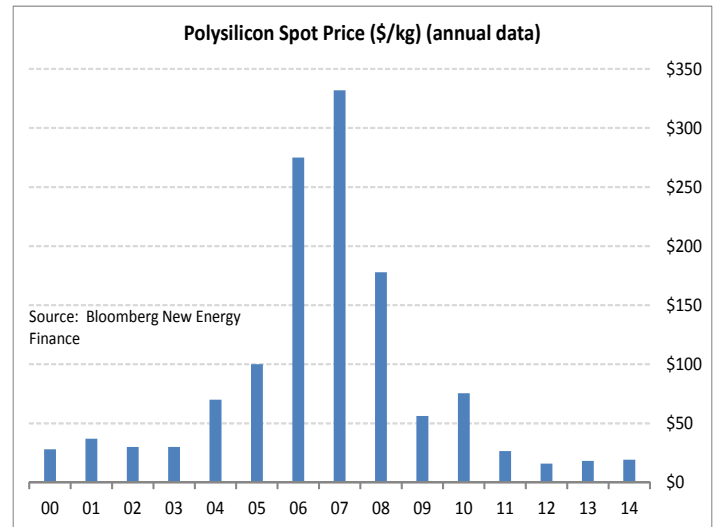
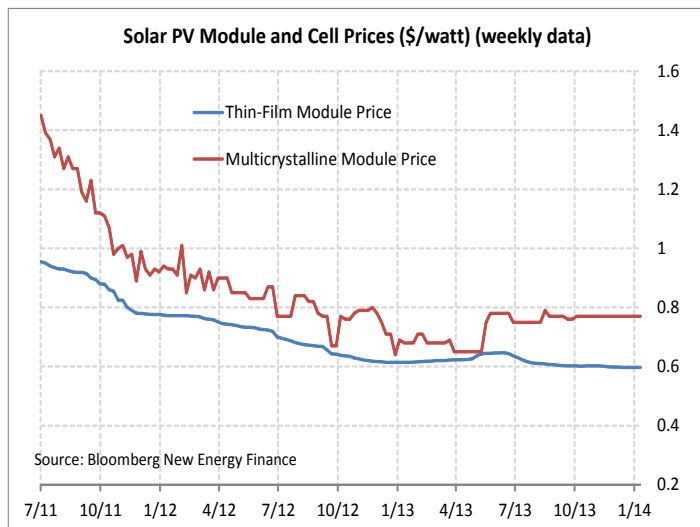
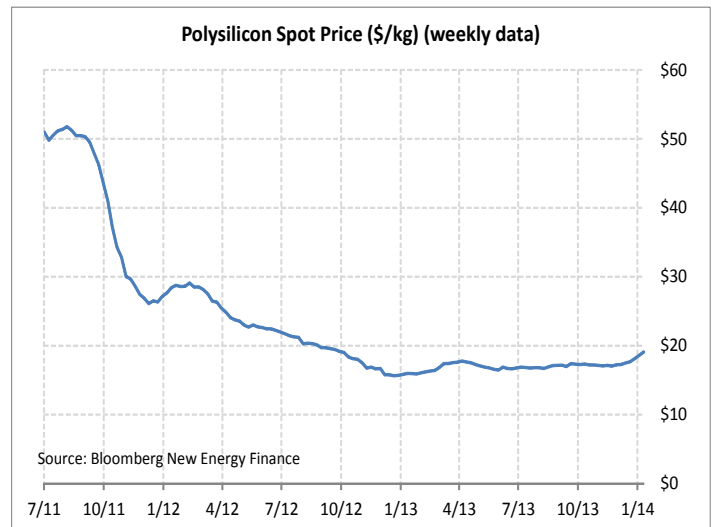
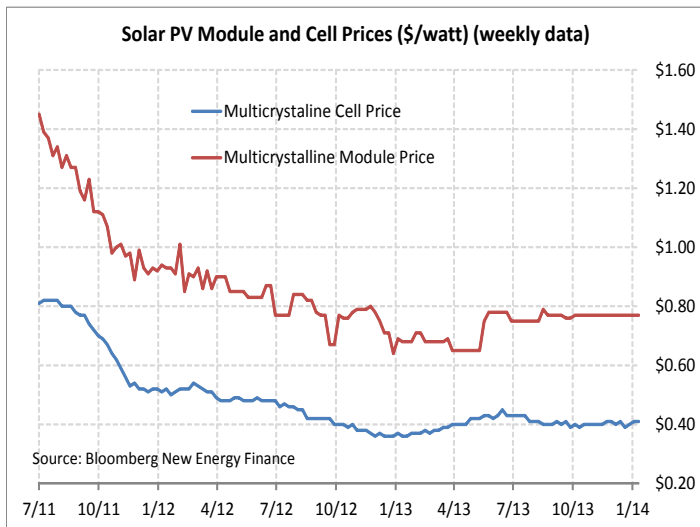
Prices for solar cells and modules hit record lows in late 2012 but then recovered modestly and moved sideways during 2013. Specifically, the price of multicrystalline solar cells posted a record low of 36 cents per watt in late 2012 and early 2013, recovered to a 1-1/2 year high of 45 cents in June 2013, and then faded to the sideways range of 39-41 cents during the remainder of 2013, according to data from Bloomberg New Energy Finance. Multicrystalline solar cells prices are currently at 41 cents per watt, up 25% from the record low of 36 cents posted in late 2012.

Meanwhile, solar module prices posted a record low of 64 cents per watt in Dec 2012, recovered to a 14-month high of 79 cents in Aug 2013, and then moved sideways near 77 cents in the last several months of 2013, according to data from Bloomberg New Energy Finance. Solar module prices are currently at 77 cents, up 20% from the record low of 64 cents posted in Dec 2012.

Spot polysilicon prices posted a record low of \$15.83 per kilogram in Dec 3012 and then recovered to the \$17 area by spring 2013, according to data from Bloomberg New Energy Finance. Polysilicon prices showed further strength in late 2013 and closed the year at \$18.32, up +15.4% y/y. Polysilicon prices in mid-Jan 2014 moved higher to a 1-1/3 year high of \$19.27.

Solar pricing in 2013 stabilized mainly because of stronger demand and reduced production capacity after the 2011-12 shakeout that forced smaller and higher-cost producers out of the market. In addition, the large players are now calibrating their production more closely to demand.

The price of thin-film modules made by First Solar and others prices traded sideways in the range of 60-64 cents per watt during 2013 and then faded in early 2014 to post a new record low of 0.597 cents per watt.



Solar PV Annual New Installations

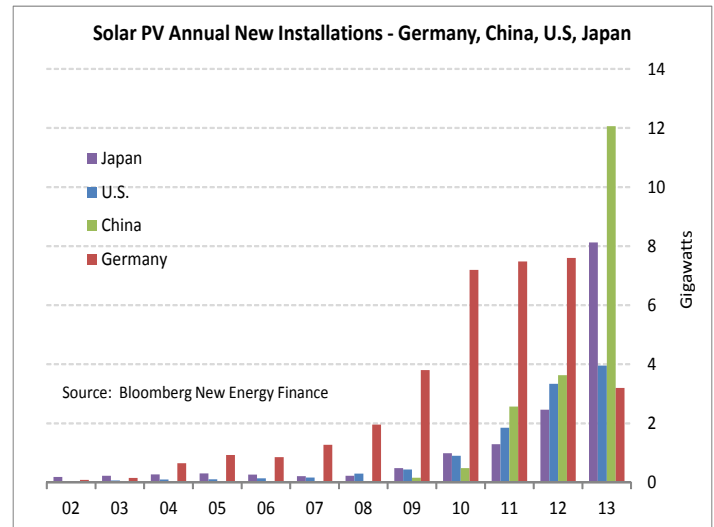
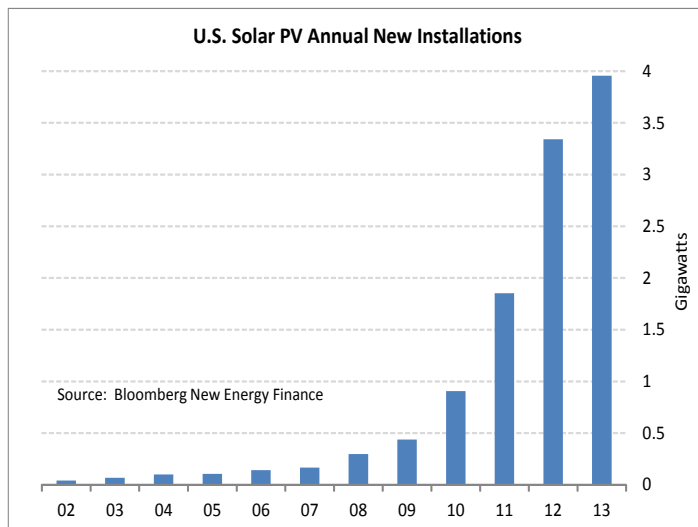
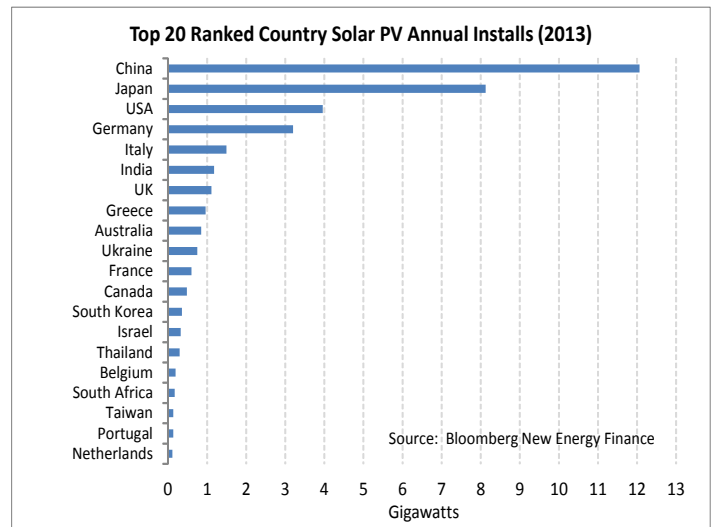
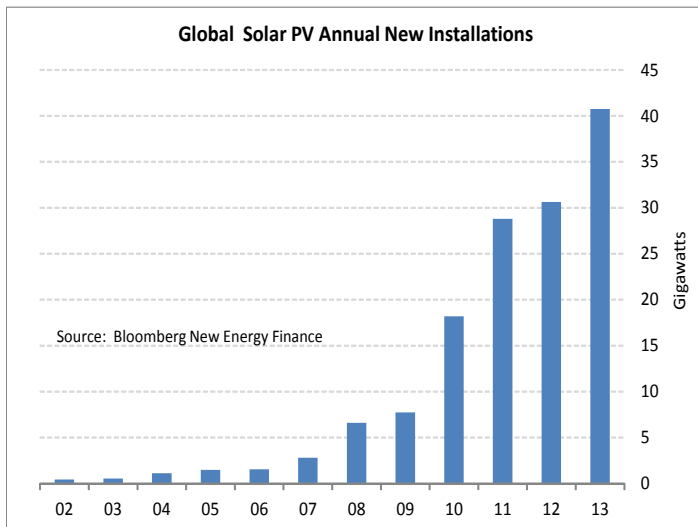
Global new solar PV installations in 2013 grew by +33% y/y to a record 40.7 gigawatts (GW) from 30.6 GW in 2012, improving sharply from the poor +6% growth rate seen in 2012, according to Bloomberg New Energy Finance. Global solar PV installations have grown by a compounded annual rate of +44% over the last 5 years and have risen by six-fold from 2008.

China leapfrogged Germany into the number one world spot for annual PV installs with 12.0 GW of installs in 2013, up by +232% from its 2012 level of 3.6 GW. Japan took second with 8.1 GW of new installs in 2013, up by +230% from 2.5 GW in 2012. The U.S. stood third in new installs at 4.0 GW.

The sharp increase in installs in China, Japan and the U.S. easily outweighed declines in Europe caused by reduced subsidy support. German installs in 2013 fell by -58% to

3.2 GW from 7.6 GW in 2012, although that was still large enough to put Germany in fourth place for world installs. Italian installs fell by -58% to 1.5 GW from 3.6 GW in 2012. French installs fell by -44% to 600 MW from 1.1 GW in 2012. The diversification of solar PV installs beyond Europe was a very healthy development for the solar industry.

U.S. solar PV installations in 2013 grew by +18% to a record high of 4.0 GW from 3.3 GW in 2012, according to data from Bloomberg New Energy Finance. U.S. PV installations over the last 5 years have grown by a compounded annual growth rate of +68%. SEIA is forecasting that U.S. PV installs will grow by an annual compounded growth rate of about +30% over the next three years to 9.2 GW by 2016. The states with the largest new PV solar installations in Q3-2013 were California (455 MW), Arizona (169 MW), and North Carolina (69 MW), according to the SEIA.



Solar PV Cumulative Installations

The amount of cumulative PV electricity generation capacity across the world grew sharply by 40% to 146 gigawatts (a gigawatt is 1 billion watts) by the end of 2013, according to data from Bloomberg New Energy Finance. In just five years, global cumulative solar PV electricity generation capacity has increased by nine-fold from 16.8 gigawatts in 2008 to 146.0 gigawatts in 2013, representing a compounded annual growth rate of +43%.

Germany at the end of 2013 had the world's largest amount of cumulative installed solar electricity generation capacity by far at 35.4 gigawatts, according to Bloomberg New Energy Finance. Germany's cumulative solar electricity capacity in the past 5 years has risen by more than five-fold from 6.1 GW in 2008 to 35.4 GW in 2013.

China moved into second place in 2013 with 19.1 GW of installed PV, representing 13.1% of installed global PV capacity. China's cumulative solar electricity capacity in the past 5 years has risen by 136-fold from 140 megawatts in 2008 to 19.07 GW in 2013.

Italy was in third place in 2013 with 18.0 GW of installed PV, representing 12.3% of world capacity. Japan was in fourth place in 2013 with 15.6 GW of installed PV, representing 10.7% of installed global PV capacity.

The U.S. was in fifth place in world PV cumulative capacity in 2013 at 12.5 GW representing 8.6% of world capacity. U.S. cumulative solar electricity capacity over the past five years rose by more than nine-fold from 1.37 GW in 2008 to 12.5 GW in 2012 and showed an annual compounded growth rate of +47%.

