**From:** JoAnn Stirling [mailto:joann@fsec.ucf.edu]
**Sent:** Wednesday, April 11, 2012 9:05 AM
**Subject:** Solar Facts

FSEC PAB members, These solar facts are sent to you by the request of Dr. Fenton.

**Solar Facts:** Solar is big news in the press right now. With this increase in coverage has come plenty of misinformation. Here’s the real story of U.S. solar power:

**•  The solar power industry is the fastest growing industry in America.** Today there are more than 5,500 companies operating in the U.S. solar supply chain employing more than 100,000 Americans. The value of the U.S. solar industry was $6 billion last year, a 67% increase over 2009, with the growth proceeding apace into 2011. The U.S. remains poised to install 1,750 megawatts of PV in 2011, double last year’s total and enough to power 350,000 homes, *(*[*Source: SEIA & GTM Research’s Market Insight Report*](http://www.seia.org/cs/research/SolarInsight)*)*.

**•  The U.S. is a net exporter of solar products.** In 2010, U.S. solar firms achieved a positive trade flow of $1.9 billion globally. Furthermore, the U.S. was a net exporter of solar products to China last year by more than $240 million, *(*[*Source: SEIA & GTM Research’s U.S. Solar Trade Assessment*](http://www.seia.org/cs/news_detail?pressrelease.id=1532)*)*.

**• Solar is achieving record cost reductions.** Surging demand has dropped solar module prices approximately 75% in just the past three years, with another 50% expected over the next three, *(Source: Navigant Consulting and other market data)*. This mirrors the experience with cell phones, digital cameras and flat-screen—and follows the rule of thumb in electronics manufacturing that costs decrease 20% each time production volume doubles. Those favorable technology prices combined with business efficiencies have delivered increasing value to consumers. The average pre-incentive cost of going solar decreased 17% in 2010 alone, the most significant annual reductions since the data has been tracked. Costs declined another 11% in the first half of 2011, *(*[*Source: Lawrence Berkeley National Lab’s Tracking the Sun IV*](http://votesolar.org/press/press-release-u-s-solar-industry-achieved-record-cost-reductions-in-2010-according-to-doe-report/)*)*.

**• Solar prices are competitive with conventional power right now.** Utility contracts for solar power are being signed in the U.S. at prices competitive with new coal and natural gas plants and well below the cost of new nuclear. Utilities in California, the nation’s largest solar market, have secured contracts for over 4.4 gigawatts of solar at prices below new natural gas generation, *(Source: Vote Solar analysis)*.

**• An investment in solar is an investment in jobs.** Solar investments creates more jobs per megawatt than any other energy resource,  *(Source: UC Berkeley Energy Resources Group).* 100,237 Americans are currently working in the U.S. solar industry – that’s more than coal mining or steel & iron manufacturing. Solar businesses added 6,735 new workers in all 50 states since August 2010, which represents a 6.8 percent growth rate. During the same 12-month period, jobs in the overall economy grew by a mere 0.7 percent, while fossil fuel electric generation lost 2 percent of its workforce, *(*[*Source: Solar Foundation’s National Solar Jobs Census – 2011*](http://thesolarfoundation.org/research/national-solar-jobs-census-2011)*).*

**• U.S. investment in solar lags far behind spending on conventional energy resources.** Federal incentives going to the oil & gas industry have averaged $4.86 billion annually for 100 years, and nuclear has averaged $3.5 billion for 50 years. Meanwhile annual support for all renewables including solar has averaged only $370 million for just the past 15 years, *(*[*Source: DBL Investors*](http://votesolar.org/wp-content/uploads/2011/09/DBL-Energy-Subsidies-report.pdf)*).*

**• The Solyndra bankruptcy is not indicative of the health of the U.S. solar industry – in fact the opposite is true.** As with any competitive and growing market, some companies will prosper and others will fail. Solyndra and other recent manufacturing bankruptcies are a casualty of successful rapid cost reduction in the solar industry, which made their relatively expensive technology uncompetitive. That price reduction is good for American consumers and continued solar growth – and it came about with the direct support of market-building government incentives that have stimulated demand for solar, both in the U.S. and abroad, *(*[*Source: Lawrence Berkeley National Lab’s Tracking the Sun IV*](http://votesolar.org/press/press-release-u-s-solar-industry-achieved-record-cost-reductions-in-2010-according-to-doe-report/)*)*.

**• Even with the Solyndra failure, the DOE’s loan guarantee program is on track to deliver strong returns on taxpayer investment.** First, it’s important to understand that a loan guarantee is not a loan or a cash grant or a tax credit – it results in spending only if the borrower goes into default. So neither the $535 million Solyndra guarantee nor the billions of dollars backed by the full program represent direct spending of taxpayer dollars. The 1705 loan guarantee program that Solyndra participated in was appropriated $2.5 billion, the amount that the program is expected to cost taxpayers over the 30 year lifetime of the loans. That budget cost allows 12.85% of the loans to default. The Solyndra loan guarantee itself  represented only 2.8% of the 1705 program portfolio (and only 1.4% of the total loan guarantee portfolio), leaving plenty of room for further defaults without losses. And that’s in the worst-case scenario under which the government recovered nothing from Solyndra’s reported $859 million in assets. It’s more likely that the government will recover some or even all of its losses on Solyndra. In the meantime, for $2.5 billion in public program costs spent over the next three decades, the DOE loan guarantee program has generated $18.8 billion in loans \*today\*, supported gigawatts worth of new solar project development, and created thousands of jobs during a major recession. Every public dollar can generate up to $13 of private investment to repower our economy with renewables, *(*[*Sources: Brookings Institute analysis*](http://www.brookings.edu/opinions/2011/0927_solyndra_muro_rothwell.aspx)*,* [*SEIA Loan Guarantee Program fact sheet*](http://www.seia.org/galleries/pdf/DOE_Loan_Guarantee_Program_Factsheet.pdf)*)*.

Solyndra collectors & attached racks worked great and saved money, and space vs. traditional mounting racks. However the plunging price of panels price per watt in the global market made their price high, and not very competitive for those who didn’t’ understand mounting and racks. The collectors worked well, and solved some key roofing issues. Right product, wrong time.

The facts are on our side. We need your help to spreading the word . . .

**Please try this at home. Here are some resources to help.**

[Get Some Sun: Wednesday Webinar Series](http://votesolar.org/resources/get-some-sun-solar-webinars/%22%20%5Co%20%22blocked%3A%3Ahttp%3A//votesolar.org/resources/get-some-sun-solar-webinars/%22%20%5Ct%20%22_self)

* [Polls](http://votesolar.org/resources/polls/)
* [Studies & Reports](http://votesolar.org/resources/studies/)
* [Sample RFPs](http://votesolar.org/resources/sample-rfp/)
* [Incentive Comparison Model](http://votesolar.org/resources/incentive-model/)

**Other websites we find useful.**

More on solar technology and resource potential:

* [National Renewable Energy Laboratory](http://votesolar.org/resources/www.nrel.gov/learning/re_solar.html)

More on solar policy and advocacy:

* [American Solar Energy Society](http://www.ases.org)
* [Interstate Renewable Energy Council](http://www.irecusa.org)
* [Solar Electric Industries Association](http://www.seia.org/)
* [Solar Electric Power Association](http://www.solarelectricpower.org)

More on state and local incentives where you live:

* [Database of State Incentives for Renewables and Efficiency](http://www.dsireusa.org)

More on solar education and job training:

* [The Solar Living Institute](http://www.solarliving.org)

More on climate change science and advocacy:

* [Real Climate](http://www.realclimate.org)
* [The Intergovernmental Panel on Climate Change](http://www.ipcc.ch)
* [Natural Resources Defense Council](http://www.nrdc.org)
* [The Union of Concerned Scientists](http://www.ucsusa.org)
* [The Columbia Climate Center](http://www.earthinstitute.columbia.edu/crosscutting/climate.html)