



The solar jobs message

With 6,735 new jobs created across the country since August 2010, the total number of Americans working in the solar industry is now at 100,237.

Photo: Mainstream Energy

With the bankruptcy of Solyndra's federally-funded solar manufacturing facility and the media backlash against the solar industry that followed, President Obama and other solar energy advocates in the US government have to work hard to convince people that the solar industry is, in fact, strong and does create jobs.

When Lee Johnson, CEO of REC Solar in California, joined the company earlier this year, he was hoping to help continue the company's strong growth, which can be highlighted by the number of jobs it has created. "In 2007, we employed about 70 people, and today we have about 700 people," reports Johnson. "And that does not include contract and temporary labour for shorter contracts." REC Solar is now among the world's largest producers of polysilicon and wafers for solar applications, and a growing manufacturer of solar cells and modules. "If we estimate a 30 to 40 % market growth over the next few years, this means huge job growth for our company and the industry," says Johnson. He also announces REC Solar is likely to hire more people in the first half of 2012 as the company continues to grow.

REC Solar is not the only company growing. As a whole, the US solar industry has created 6,735 new jobs across the country since August 2010, a 6.8 % growth rate, according to the Solar Energy Industries Association (SEIA). That brings the total number of Americans working in the solar industry to 100,237, which is more than double 2009 solar job statistics. "Given the overall economy grew at 7 % last year and many industries have cut jobs," says Andrea Luecke, Executive Director of The Solar Foundation, "the

solar industry has created jobs over ten times higher than the national average."

Others echo Luecke's view of the solar industry's success in creating jobs during economic tough times. The numbers prove it, says Jamie Hahn, co-founder and Managing Director of Solis Partners, a New Jersey-based commercial/industrial/utility-grade solar integrator. "Solar is the fastest growing energy sector today, and by 2014 it will be the largest new energy capacity sector in the US," he adds. The US solar market grew to a US\$ 6 billion industry in 2010, up 67 % from US\$ 3.6 billion in 2009, according to SEIA. The number of solar jobs that have been created demonstrates that the US can transition to a cleaner and more reliable energy source while simultaneously promoting economic growth, solar proponents argue.

Jobs and politics

In spite of such strong growth numbers, the solar industry continues to face strong opposition, from politicians and consumers alike. The spread of misinformation is common, and as a result, people question the legitimacy of the industry. The politics in DC surrounding the solar industry have become very tough, says Rhone Resch, President of SEIA. "It is

more challenging than ever before for the solar industry in Washington DC, but there is also more opportunity for solar to step up and show what it can do as an industry,” he adds. Outspoken opposition from politicians and the media demonstrate that the solar industry is big enough to actually threaten well-funded oil and gas industry lobbyists, states Resch. They are threatened because the solar industry now is starting to have real data about the number of jobs it is providing as the industry grows, he says.

Highlighting solar job growth will be critical for Obama in the upcoming election because unemployment rates are likely to be one of the biggest issues for voters. The US currently has an unemployment rate around 9 % and predictions by Goldman Sachs put the unemployment rate at 8.75 % by the end of 2012. This is bad news for Obama. Since World War II, no president has been re-elected with a jobless rate higher than 7.2 %, with the exception of the 1984 election when Ronald Reagan won. But in the 40 years before that, no president had been re-elected with an unemployment rate of more than 5.3 %. People care about jobs and they often hold the president responsible. Therefore it is vitally important that the solar industry unify its message and clear up some of the misconceptions about it, Resch points out.

How is the solar industry growing?

One of the biggest misconceptions about the solar industry is that it is only economically viable because of government tax breaks and subsidies, which are costly to the government. Although federal government support has been a key ingredient to the growth of the industry – such as the 30 % solar investment tax credit and the 1603 cash grant – the industry’s job growth is not driven by government subsidies alone. A variety of factors contribute to the growth of the

solar industry, including dropping PV module prices, state renewable portfolio standards and incentives, and a growing consumer support for solar. Growth is fueled in large part by the fact that the price of panels is coming down dramatically, thanks to an oversupply of panels and dropping costs of raw materials. Since the start of 2010, the price of solar panels has dropped by 30 %. “Projects that didn’t pencil out a few years ago now will,” says Johnson.

While prices have come down, panel efficiency has gone up, so each panel produces more per dollar. Not only have the panels increased efficiency, but each step along the supply chain has increased its efficiency as the scale of production has increased. “The balance of systems along the supply chain has gotten more efficient and continues to get better as the industry grows,” adds Johnson.

What’s more, traditional energy sources continue to get more expensive, and in some places, are already more expensive than solar. In some places where electricity prices are highest, like in California and the Northeast, solar has reached grid parity: the price of solar energy matches that of traditional fossil fuel resources. “As electricity rates continue to rise, solar will hit grid parity before most people think,” says Hahn. Once solar energy prices can directly compete with traditional energy sources, the solar industry can enter a much wider market because more and more people will be able to afford solar.

In addition to dropping prices, states continue to pass stricter renewable portfolio standards (RPS), which require utilities to procure a certain percentage of their energy from renewable resources by a certain date. “There is a ton of need for renewable resources in some states as RPS standards get stricter,” declares Jason Allen, partner and Vice Chair of the Energy Industry Team at Foley & Lardner LLP in Wisconsin. For example, California’s RPS goal to reach 33 % renewable energy by 2020 has been expanded to



The topic of job growth is crucial for President Barack Obama. Despite Solyndra’s bankruptcy solar manufacturing jobs are on the rise. In 2010 and 2011, 27 new US solar manufacturing facilities have started operation.

Photo: Paul Chinn/dpa

include publically owned utilities as well as investor-owned utilities, broadening the scope of the bill. As states continue to write solar into law, it will guarantee the growth and stability of the industry.

As states make stronger commitments to solar energy, consumers also are starting to more widely accept solar energy, which is helping propel the market forward. The psyche of the American people about energy is changing in the US, reports Hahn. "Because of several energy disasters, such as the gulf oil spill and the nuclear fallout in Japan, and because of continued insecurity in the Middle East, people realize energy is an issue of national security," he adds. More Americans now see solar energy as a solution to larger national and global issues. Solar is moving beyond just early-adopters and is starting to attract more mainstream consumers, says Johnson. "Now that governments, commercial facilities, utilities and consumers are on board, there has been an increasing demand," Hahn adds.

Diversification of the job market

Because of these diverse factors contributing to the growth of the solar market, the industry continues to add jobs. As the industry grows, so does the diversification of what it means to have a "solar job". "A few years ago, most people employed in the solar industry were developers, manufacturers, and installers. The solar industry now employs any job you could imagine, from finance and legal development to the semiconductor and traditional construction," says Allen.

The diversification of the job market is a sign of market maturation, Allen points out. There are now a lot of people from the traditional power asset markets

because solar makes a lot of business sense now, he adds. There are also a lot of engineers who used to work in traditional energy generation sources who have transferred to the solar industry. "Skills people have developed in traditional power development transfer easily to the solar industry," says Allen. What's more, engineering firms are adding electrical and structural engineers just to support the growth of their solar divisions. As the market ages, jobs in the operation and maintenance of solar systems will become more important, adds Allen: "I think this will be a whole new part of the solar economy that expands in the future."

Solar manufacturing jobs are also on the rise, despite Solyndra's widely scrutinized US-manufacturing facility bankruptcy. In 2010 and 2011, 27 new US solar manufacturing facilities have begun operation among a diverse number of states across the country, such as Michigan, Mississippi, Pennsylvania, Ohio, Tennessee and Arizona, says Resch. It is important that Solyndra's failure doesn't overshadow the industry's accomplishments, he adds.

As the solar market continues to expand into different states across the US, more and more Americans will work in the solar industry. The solar market could be adding 10 GW annually in the US by 2015, forecasts Resch, but in order to get there, the solar industry needs to show that it is creating jobs. If solar employers have a positive job story, they need to let everyone know about it, says Luecke. "Successfully advocating for clean energy policies depends on how clearly and accurately we can get across the solar jobs message," she points out. The message is clear: solar jobs in the US are real and growing fast.

Reid Smith, Lisa Cohn



Rooftop system installed at PSE&G's Central Electric Division headquarters in New Jersey. According to SEIA, the solar market could be adding 10 GW annually in the US by 2015.

Photo: Solis

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