

TESTIMONY OF
RHONE RESCH, PRESIDENT & CEO
SOLAR ENERGY INDUSTRIES ASSOCIATION
BEFORE THE
HOUSE COMMITTEE ON WAYS & MEANS
HEARING ON ENERGY TAX INCENTIVES DRIVING THE GREEN
JOB ECONOMY
APRIL 14, 2010



Solar Energy Industries Association
575 7th Street NW, Suite 400
Washington, DC 20004
(202) 682-0556
www.seia.org

Mr. Chairman and Members of the Committee,

Thank you for the opportunity to submit this written testimony on jobs and renewable energy capacity potential from the Treasury Grant Program or an equivalent legislative solution within the tax code, the Solar Manufacturing Jobs Creation Act, and the solar investment tax credit.

I. Introduction

The Solar Energy Industries Association (SEIA) is the national trade association for the solar energy industry and represents over 1000 member companies at all points in the value chain – from financiers to project developers, component manufacturers to solar installers. Established in 1974, SEIA works to make solar energy a mainstream and significant energy source in the United States by expanding markets, strengthening the industry, and educating the public on the benefits of solar energy.

Today, we would like to highlight three critically important issues to the solar industry that address the commercial, manufacturing, and residential markets. They are the Treasury Grant Program, the Manufacturing Investment Tax Credit, and the Residential Bonus Investment Tax Credit, respectively. These three areas of the U.S. solar industry are creating thousands of jobs today, even in difficult economic times, but they are poised to make the U.S. – with the right policies – the renewable energy leader in the world.

II. State of the Solar Industry Today

Solar energy is the cleanest and most abundant renewable energy source available. And the U.S. has some of the richest solar resources in the world. Today's technology allows us to capture this power in several ways, turning the sun's rays into electricity for homes and commercial entities, as well as capturing the heat from the sun for use in water heating, space heating, and also space cooling applications.

Despite the economic turmoil of this past year, the U.S. solar energy industry has managed to maintain growth — both in new installations and employment. Total domestic solar energy capacity at the end of 2009 stands at 25,952 megawatts (MW) & megawatts-thermal (MWth), up 5 percent from 2008. Total electrical capacity has climbed past 2,000 MW, which is enough to serve over 350,000 homes, and total thermal capacity has reached nearly 24,000 MWth.¹

While annual installations grew only 5 percent, a shift towards residential photovoltaic (PV) helped overall industry revenue climb roughly 36 percent. PV installations experienced a 33 percent growth, and solar water heating a ten percent growth. Three new concentrating solar power (CSP) plants came online after a one-year pause in installations and the utility-scale project pipeline has now surged to 17 gigawatts, promising continued growth.¹

¹ SEIA U.S. Solar Industry Year In Review 2009 www.seia.org

Prices for PV modules in 2009 continued to significantly decline for the second year in a row. Prices have fallen to \$1.85-\$2.25 per watt from \$3.50-\$4.00 per watt in mid-2008, a drop of over 40 percent.² With module prices accounting for up to half of the installed cost of a PV system, these prices are beginning to put downward pressure on system prices. The average installed cost fell roughly 10 percent from 2008 to 2009. With new innovations in the installation process, increasing economies of scale and innovative equipment increasing energy yields, the cost reductions are expected to continue. In short: PV is becoming an increasingly attractive and secure investment.

Another sign of continued optimism in solar energy: venture capitalists invested more in solar technologies than any other clean tech in 2009. In total, \$1.4 billion in venture capital flowed to solar companies in 2009. For an industry that had a total U.S. volume of roughly \$4 billion, this signals huge optimism about near-term growth.³

Overall employment in the solar industry increased by 10,000 people from 2008 to 2009. In addition, the growth in economic activity from the industry and its employees supported an additional 7,000 induced jobs for a total economic impact of 17,000 new jobs in 2009. In total, the solar industry and its supply chain now support roughly 46,000 jobs in the U.S. With growth expected to continue this year, that number is likely to surpass 60,000 by the end of 2010.²

All of this is fantastic news for Americans, but it is not nearly enough. The United States is forecast to be the world's largest market for solar technology but today we lag behind countries that have made an investment in solar energy. Germany had a cumulative installed capacity of 8,877 MW of solar electric capacity at the end of 2009, Spain had 3,595 MW, and Japan 2,628 MW, leaving the United States in fourth place with 2,108 MW.² If we look at the cumulative capacity on a watt per capita basis, the U.S. ranks ninth behind Germany, Spain, the Czech Republic, Belgium, Japan, Italy, Korea, and France. As President Obama stated in his 2010 State of the Union Address, "I do not accept second place for the United States of America."⁴

More can and more should be done if the United States is to remain competitive with these other nations. The right policies and incentives are needed to allow for this to happen.

² SEIA U.S. Solar Industry Year In Review 2009 www.seia.org

³ Greentech Media <http://www.greentechmedia.com/articles/read/green-vc-total-second-best-year-ever/>

⁴ Remarks by the President in State of the Union Address. U.S. Capitol, Jan. 27, 2010
<http://www.whitehouse.gov/the-press-office/remarks-president-state-union-address>

III. The Commercial Market

a) The Treasury Grant Program

For the commercial market, the Treasury Grant Program is one policy that has already made a difference. The Treasury Grant Program was enacted in February 2009 as part of the American Recovery and Reinvestment Act of 2009, under Section 1603, in response to the reduced availability of tax equity. Prior to the financial crisis, many renewable energy projects relied upon third party tax equity investors to monetize the value of federal renewable energy incentives. The economic downturn dramatically reduced the availability of tax equity, severely limiting the financing available for renewable energy projects. The Treasury Grant Program allows for the owner of commercial solar property to receive a 30 percent grant, in lieu of taking the 30 percent solar Investment Tax Credit (ITC). Applicants are eligible for the Treasury grant only if they commence construction on projects by December 31, 2010 and complete construction by December 31, 2016.

As of the end of February 2010, the 30 percent Treasury Grant Program has supported the deployment of 303 solar energy systems, or 283 solar electric systems and 20 solar thermal systems. Since the guidance for the grant program was released in July of 2009, the manufacture and construction of these systems has supported roughly 10,100 jobs- including direct, indirect, and induced.⁵

Although the economy has started to recover, the tax equity market is still struggling- a condition likely to persist through 2012. Due to global economic conditions, a big gap persists between the total amount of financing renewable energy developers need and the actual money available. Large scale solar projects require large amounts of tax equity, which render many deals impossible in today's tax equity market.

Congress passed the Recovery Act in January of 2009, and intended to provide a two-year window for renewable energy projects to utilize the Treasury Grant Program. However, guidance and application procedures for the program did not become available until July 2009, cutting valuable months off the program.

Therefore, we strongly urge Congress to extend the Treasury Grant Program's "commence construction" deadline until December 31, 2012 - a 2 year extension of the program or pass an equivalent legislative solution within the tax code.

⁵ http://seia.org/galleries/FactSheets/Factsheet_TGP.pdf

The Treasury Grant Program is working. Every dollar invested in the program goes directly to stimulate renewable energy investment, avoiding expensive tax equity transactions. Furthermore, many utility-scale solar energy projects rely on DOE loan guarantees to secure financing. Based on DOE's Loan Guarantee history many of these loans may not be closed in order to "commence construction" by the end of this year, threatening those projects' eligibility for the Treasury grant. Unless there is certainty that the grant program will be extended, many project developers will stop hiring and stop spending money on development costs.

But by extending the Treasury Grant Program now, projects that plan to commence construction this year will be provided certainty. In addition, an extension will allow the next wave of renewable energy projects planned for 2011 to move forward, creating thousands of jobs this year.

Let me reiterate the importance of this program. The wind, geothermal, hydro, and solar industries are all in agreement that an extension of this program is the number one job-creation policy priority.

Preliminary studies done by the Lawrence Berkeley Laboratory on the program showed that the program has been heavily used by renewable project developers. 64% of the eligible wind power capacity and 100% of the eligible geothermal capacity built in 2009 had either elected, or planned to elect the cash grant; these two technologies were awarded 92% of the funding distributed before March 1 of this year. The same goes for solar developers.⁶

The report also shows that the grant program provides a number of indirect benefits that can provide significant economic value to projects. These include full relief from the alternative minimum tax, elimination of PTC haircuts caused by the use of other government grants or subsidized energy financing, the ability to pursue leasing as a viable financing option, compatibility with behind the meter projects, relief from passive credit limitations, and a reduction in performance risk.

Most impressively, the study reports that 4,250 megawatts of clean power came on line thanks to the program in the first six months alone, and that these projects will create more than 143,000 jobs by the end of this year.^{6,7} We estimate this equates to an additional 86,000 jobs by 2012 in the solar sector alone.⁷

We ask Congress to extend the Treasury Grant Program for two years, so the commercial renewable energy sector in the United States will continue to expand.

⁶Bolinger, Mark. *Preliminary Evaluation of the Impact of the Section 1603 Treasury Grant Program on Renewable Energy Deployment in 2009*. April 2010 <http://eetd.lbl.gov/ea/EMS/reports/lbni-3188e.pdf>

⁷ SEIA estimate.

b) H.R. 4599, the Renewable Energy Expansion Act

We would like to take this opportunity to state our support for H.R. 4599, the Renewable Energy Expansion Act. This legislation would assist in the financing of solar projects of all scale, would help deploy vast amounts of solar capacity, and create tens of thousands of jobs across the United States.

The United States is forecast to be the world's largest market for solar technology. However, the right incentives are needed to achieve this huge potential. This bill would provide an effective tax mechanism for solar projects that works regardless of the tax equity market, which is still recovering from the economic recession. The bill recognizes the importance of long term financial planning, which is crucial for driving investment to renewable energies such as solar. The bill also recognizes the importance of the current Sec. 1603 Treasury Grant Program established under the American Recovery and Reinvestment Act by allowing the consumer to opt for either the grant program or this new policy mechanism, before the grant program sunset date.

By including the Renewable Energy Expansion Act in forthcoming energy jobs or tax bills, the industry projects both dramatic job growth and deployment of solar technology.

III. Domestic Manufacturing – The Solar Manufacturing Jobs Creation Act

As the commercial market grows, and more and more states enact Renewable Portfolio Standards, the demand for renewable energy will expand. However, without manufacturing incentives, much of this demand is likely to be met through imports since other nations have created a more favorable environment for investment. The U.S. has lost the lead in PV manufacturing that it held up until 1997, when the U.S. accounted for more than 40% of global solar photovoltaic production. In 2008, the U.S. produced only 5% of the world's solar cells, losing out to countries such as Germany and Spain.⁸ Both China and India made headlines this past year when they independently announced plans to expand their solar power capacities to 20,000 MW each by 2020.⁹ If these plans move forward, Asia will become a major demand center for solar energy equipment after several years of expanding manufacturing capacity.

The Recovery Act of 2009 included a competitive 30% tax credit capped at \$2.3 billion in total tax expenditures for advanced energy manufacturing projects, creating the new code "Section 48C". More than 500 final applications were received for this manufacturing investment tax credit. Out of the 500,

⁸ http://www.seia.org/galleries/FactSheets/Factsheet_MITC.pdf

⁹ <http://www.reuters.com/article/idUSDEL104230> and <http://www.tradingmarkets.com/.site/news/Stock%20News/2627697/>

183 projects received an allocation. 31 percent, or 58 of these projects were solar projects. The allocation for 57 of these solar projects totaled \$960 million, or 45% of the total allocation.¹⁰ 26 SEIA Members received an allocation from the manufacturing tax credit.

Now that the \$2.3 billion cap is exhausted, the program is due to sunset. However, the Administration has proposed an additional \$5 billion in funding for this Section 48C credit. SEIA supports this additional funding for the Section 48C manufacturing investment tax credit.

The Recovery Act did its job and jump-started domestic solar manufacturing. However, the Section 48C credit isn't enough to support long-term growth in solar manufacturing.

SEIA supports legislation crafted by Representatives Thompson, Camp, Doggett, and Tiberi and Senators Menendez and Stabenow. The Solar Manufacturing Jobs Creation Act¹¹, H.R. 4085 and S. 2755, would add equipment used to manufacture solar energy generating property to the eligible property list of the existing Section 48 commercial solar investment tax credit (ITC). Current law provides a 30% tax credit for solar energy generating property placed in service in the U.S. before January 1, 2017. This legislation would allow a 30% credit for investments in equipment placed in service in U.S. manufacturing facilities before January 1, 2017. The Solar Manufacturing Jobs Creation Act would also make manufacturing equipment eligible for the Treasury Grant program for property placed in service before January 1, 2011; as well as for property placed in service after January 1, 2011 if pursuant to a written binding contract which was entered into before that date.

The Solar Manufacturing Jobs Creation Act and the \$5 billion to the existing Section 48C credit will support a strong domestic solar manufacturing base and maximize renewable energy employment. New U.S. solar manufacturing facilities could begin construction soon after date of enactment with the 30 percent credit definitively in their financial calculations. Firms would have an incentive to make their investments early in order to capitalize on the grant program, greatly increasing the amount of investment and new jobs in the near-term.

We ask the Committee to support the Solar Manufacturing Jobs Creation Act.

IV. The Residential Market – Short-Term Bonus Tax Incentive

¹⁰ www.whitehouse.gov/sites/default/files/100108-48c-Selection-Final-With%2520Projects.xls+manufacturing+tax+credit+recipients&cd=7&hl=en&ct=clnk&gl=us&client=firefox-a

¹¹ http://www.seia.org/galleries/FactSheets/Factsheet_MITC.pdf

With the Treasury Grant Program to support the commercial market, and the Solar Manufacturing Jobs Creation Act to enable the demand for solar energy to be met, the residential market must not be overlooked.

Installations of residential PV systems doubled from 2008 to 2009 from 78 to 156 MW.¹² This achievement was made possible in part by the expansion of the Federal residential investment tax credit, or ITC. That expansion sufficiently improved small PV project economics to make it an attractive investment in previously marginal areas. If this federal investment tax credit were expanded to 50 percent in 2011 and 2012 for residential and commercial systems less than 20 kilowatts, SEIA estimates that up to 80,000 additional jobs -direct, indirect and induced- will be created in 2012 compared to current policy. It could also result in the deployment of an additional 1,000 megawatts (MW) of solar electric capacity and \$6 to \$7 billion in additional investment in the solar industry.¹³

This analysis focuses only on photovoltaic systems, but this policy change would also impact the demand for and employment in solar water heating (SWH) and small concentrating solar power projects (CSP). Providing these small systems with a 50 percent credit would likely have a large and positive impact on employment in those industries.

Considering only Federal incentives, the change from a 30 to 50 percent ITC would make solar less expensive than traditional electricity in cities across the country. Solar would achieve grid parity with 8 cities with a 50 percent ITC- including Las Vegas, New York City, San Diego, and Portland Maine- instead of only 1 city- Honolulu- with a 30 percent ITC.¹³

SEIA estimates that expanding the ITC to 50 percent for small systems would increase demand for small PV systems by roughly 400 MW in 2011 and 600 MW in 2012.¹³ This estimate is based on expected doubling in the baseline demand for residential systems in those two years and a shift from a conservative to an aggressive forecast for commercial systems.

Small systems, both residential and small commercial, are more labor intensive to install. As such, they will employ more people per dollar than larger systems. Given the estimated impact on demand for these systems, this policy change could help support over 80,000 additional jobs, as mentioned above.

We ask that Congress support a 50 percent bonus ITC for two years to bring jobs and investment to the residential solar sector.

V. Conclusion

In closing let me reiterate the key benefits of the solar industry and our three asks:

¹² SEIA U.S. Solar Industry Year In Review 2009 www.seia.org

¹³ http://www.seia.org/galleries/FactSheets/SEIA_50percent_ITC_analysis.pdf

1. Solar energy creates more jobs per megawatt of energy produced than any other form of energy, be it renewable energy or fossil fuel.
2. Solar energy is a reliable domestic source of energy and is much less vulnerable to supply disruptions from foreign actions, natural disasters, or grid instability.
3. Solar technologies generate energy during peak hours of demand, when energy is in short supply and most expensive.
4. Solar energy is the cleanest of all energy sources, producing electric and thermal energy with zero emissions and no waste products or other forms of pollution.

The Treasury Grant Program has already supported 303 new solar energy projects, and the manufacture and construction of 10,100 jobs. A Lawrence Berkeley Lab study reports that 4,250 MW of clean power came online thanks to the program, and will create more than 143,000 renewable energy jobs by the end of this year. A two year extension of the Treasury Grant Program's "commence construction" deadline until December 31, 2012 will encourage the growth of the commercial solar industry.

The Solar Manufacturing Jobs Creation Act would add equipment used to manufacture solar energy generating property to the eligible property list of the existing Section 48 commercial solar investment tax credit (ITC). A \$5 billion allocation to the existing Section 48C credit will continue to support a strong domestic solar manufacturing base, allowing the U.S. to compete with other strong solar manufacturing nations and will create solar jobs here in America.

A 50 percent Bonus Investment Tax Credit would result in up to 80,000 additional jobs in 2012 compared to current policy, as well as the deployment of an additional 1,000 megawatts (MW) of solar electric capacity, and \$6 to \$7 billion in additional investment in the solar industry.

We strongly urge the Committee to include these three asks in any forthcoming energy, jobs, or tax bills.

Again, thank you for allowing SEIA to submit this testimony. We look forward to working with the Committee to cultivate solar energy development in this country and realize the domestic jobs that the solar industry has been creating and will create in the years to come.