

**Testimony of Jon Sakoda  
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**Clean Technology Manufacturing Competitiveness:  
The Role of Tax Incentives**

**Senate Finance Committee  
Subcommittee on Energy, Natural Resources, and Infrastructure**

**Thursday, May 20, 2010**

**Introduction**

Chairman Bingaman, Ranking Member Bunning, and Members of the Committee -- thank you very much for inviting me to be here today. It is truly an honor.

I appear before you here today as a partner of New Enterprise Associates and as a member of the Cleantech Advisory Council for the National Venture Capital Association (NVCA). NEA is by assets under management, the largest US venture capital firm with ~\$11 billion under management. Through our 30 years of history we've funded over 650 companies and have had over 160 of them go public. Our 50 largest companies have created over \$65 billion in revenues and have created hundreds of thousands of jobs in this country. Today we have a global footprint, with offices in India and China and roughly 20% of our committed capital targeted at emerging markets.

In the past, the venture capital industry has played a pivotal role in inspiring industries such as biotechnology, computing, medical devices, semiconductors, telecommunications, and the Internet. According to the NVCA, US VC-backed company revenue has equated to more than 22 percent of US GDP and over the past 3 years alone VC-backed companies have accounted for 3 times the growth rate in job creation than the private sector taken as a whole.

Today, the energy technology industry represents one of the most compelling investment opportunities in the history of venture capital. We are one of the most active investors in the sector, and today we have more than 30 portfolio companies here in the US that have raised a total of \$2 billion in capital. Our enthusiasm for this emerging sector is shared by the vast majority of VC firms, with more than half of the NVCA's over 400 members expected to increase their allocation to the sector this year.

Our portfolio includes investments in sectors such as Solar, Wind, Nuclear, Advanced Batteries, Smart Grids, Electric Vehicles, and Energy Efficient Building Material. Many of our entrepreneurs are commercializing technologies developed in universities and national laboratories leveraging the historic investment of federal funds, and have created companies with innovation from great institutions such as Stanford, MIT, the University of Texas, NREL, NASA, and the Los Alamos National Laboratory. Energy technology is a complex industry, but the goals of our entrepreneurs are simple: create companies that enable us to make or save energy -- better, faster, cheaper, and cleaner, than anyone else in the world.

## **The Loss of US Clean Energy Manufacturing: A Solar Case Study**

The US has long been the home of great innovation, and in spite of increasing global competition, is still the world leader in fundamental breakthrough energy technology. But over the past decade, the US has lost its leadership to China, Japan, and Germany in clean energy manufacturing, and is challenged and threatened by emerging economies such as India, South Korea, Malaysia, and the Philippines. These nations have outpaced the US in recruiting, incenting, and developing domestic manufacturing of solar, wind, and battery technology. We are not the market leader in producing and supplying this high growth industry, and have ceded our historic leadership in manufacturing of these key technologies to other nations.

As one example, the US's market share for solar manufacturing has fallen from 45 percent in the mid 1990's to roughly 5 percent today. In the past decade alone, the two best US solar technology companies in the world, First Solar and Sunpower, were recruited overseas to Germany, Malaysia, and the Philippines. Today these companies have developed the majority of their manufacturing overseas, creating jobs and economic growth primarily in other nations.

Prior to the Recovery Act, this paradigm of developing innovative technology in the US, and exporting manufacturing to foreign nations has been driven primarily by a significant imbalance between US and foreign tax policies and incentives. As is shown in the attached table, low labor cost has not been the most important variable in the equation -- upfront manufacturer's incentives, long term tax holidays, and end market incentives have been frequently as important, if not more important variables influencing US companies as to where they should establish their manufacturing facilities. Incentives from foreign nations have often totaled as much as 40 or 50% of the cost of a new manufacturing project. Without competitive incentives for companies to stay in the US, this nation's best manufacturers have had no choice but to look overseas to remain competitive in their industries. The result has been a loss of both direct and indirect jobs, a loss of intellectual property, and a loss of economic growth here in the US for one of the fastest growing global industries of the 21<sup>st</sup> century.

In describing this trend, I must remind the Committee that venture capitalists and entrepreneurs are by definition optimists. I believe the US can be a leader in clean energy manufacturing, and have witnessed this first hand. We are not giving up on the American entrepreneur, and I hope you won't either.

## **Restoring US Clean Energy Competitiveness: Section 48C Success**

I am grateful to this Committee and the current Administration for recognizing the need to level the playing field for US clean energy manufacturers. With the help of the tax policies and incentives put forth in the Recovery Act, this nation's best energy technology companies are expanding their domestic capacity, re-opening and retro-fitting closed factories, re-hiring and re-training new workers, and rebuilding local economies depressed by the "Great Recession".

One of the most important policies in restoring American competitiveness in clean energy manufacturing is the Section 48C Advanced Manufacturing Tax Credit, providing a 30% tax credit for investments in facilities that manufacture clean energy products such as solar panels and wind turbines. This program awarded \$2.3 billion in tax credits to over 100 companies in 43 states, and was oversubscribed with requests for over \$8 billion in projects. Four of our most

promising companies were awarded the credit and were able to expand manufacturing here in the US, creating jobs thanks to your efforts in the Recovery Act.

One Section 48C recipient, Suniva, was able to expand its solar manufacturing from 33 MW to 170 MW in Norcross, Georgia, hiring an additional 60 workers, and creating more than 100 construction jobs in an economically depressed suburb of Atlanta. Many of Suniva's full time employees were either veterans or laid-off auto workers who have now subsequently been retrained in solar manufacturing. This company, whose technology originated at the first DOE Center for Excellence in PV at Georgia Tech, was recently named the Renewable Energy Exporter of the Year by the Export-Import bank, was recognized by President Obama and Secretary Chu, and today exports greater than 90% of its industry leading high efficiency solar cells overseas to Europe, China, and India. Their products power the first utility grid connected solar farm in India, a market which many speculate will be as large as 20 GW by 2020. Suniva has plans to expand to 400 MW in Saginaw, Michigan, a project which would create over 400 direct and over 1450 indirect and construction jobs over the life of the project. This is just one of many Section 48C success stories.

### **Supporting the Key Pillars of a Domestic Clean Energy Manufacturing Industry**

Growing a strong domestic clean energy manufacturing industry requires competitive supply and demand side incentives and policies. Recovery Act programs such as Section 48C and the DOE Loan Guarantee Program, competitive end market incentives such as the investment and production tax credits for wind and solar development, and compelling state incentives such as those put forward by Michigan and New Mexico, are making the US a more competitive and compelling nation for manufacturers. These pillars are the foundation of a growing US clean energy manufacturing industry. Already this year, you've seen one of China's largest solar manufacturers, Suntech, and one of Japan's largest solar manufacturers, Kyocera, announce plans to open or expand facilities here in the US. These are encouraging signs that the US has started to regain momentum lost over the past decade.

To continue to restore American competitiveness in this industry, we need to maintain consistency and support for these important incentives over the long term. I believe time is of the essence to re-open the Section 48C program through its expansion of an additional \$5 billion as called for by the Administration. Many promising companies have qualified applications to build facilities here in the US, and are patiently waiting for guidance on whether 48C will be expanded. Their plans currently call for expansion in the US, but these plans will ultimately be shifted abroad if the program is not re-opened this year. These companies want to stay in the US, but may not have a choice if 48C is not re-opened.

In closing, I feel compelled to dispel the myths that I hear all too frequently: that the US will never be competitive in manufacturing. I hear that our labor costs are too high. I hear that we lack innovation. I hear that our workers aren't skilled enough to compete. These are all myths, and they need to be dispelled. We are home to some of the best energy technologies in the world, we are home to some of the most skilled workers in the world, and we are taking the right steps to level the playing field and restore American competitiveness in this very important sector. We can compete. We must compete.

Thank you very much for inviting me to be here today. I look forward to your questions.

**Table A: Factors Influencing Choice of Solar Manufacturing Location**

	Germany	Japan	China	India	Malaysia	Philippines	USA
<b>Subsidized Manufacturing Incentives</b>	High	Medium	High	High	High	High	Low
<b>Subsidized End Markets</b>	High	High	High	High	Low	Low	Medium
<b>Labor Costs</b>	High	High	Low	Low	Low	Low	Medium
<b>Quality / Stability of Workforce</b>	High	High	Medium	Medium	Medium	Medium	High
<b>Transportation Infrastructure</b>	High	High	High	Poor	Medium	Medium	High
<b>Accessibility (supply, partners)</b>	High	High	High	Low	High	Low	High

## **Biography**

Jon is a Partner with New Enterprise Associates, a global venture capital firm focused on investments in energy, information technology, and healthcare with \$11 billion under management. Founded in 1978, NEA has invested in over 650 companies, of which over 160 have gone public and more than 250 have been successfully acquired. NEA stands out today as one of the most active investors in the energy technology industry, with a commitment of over \$2 billion to the sector. NEA's currently manages 30 energy portfolio companies that have collectively raised approximately \$2 billion in capital.

Jon joined NEA in 2006 and serves as a Director of Opower, a smart grid software provider to the nation's largest utilities, and Suniva, a leading manufacturer of high efficiency solar cells. Jon additionally manages NEA's investments in SunEdison, one of the largest solar utilities in the United States (acquired by MEMC in 2009), and Bandgap Engineering, a developer of advanced nanowires for energy generation and storage applications. Jon also serves on the National Venture Capital Association's Clean Technology Advisory Council where he advises on federal policies to promote investments in US-based energy technology companies.

Prior to joining NEA, Jon was an entrepreneur and co-founder of IMlogic, Inc. (acquired by Symantec Corporation) and served as its Chief Technology Officer and Vice President of Products. Prior to founding IMlogic, Jon worked at Goldman, Sachs & Co. where he focused on venture capital investments for their Private Equity Group. Jon earned his A.B. degree at Harvard University in Chemistry and lives in Washington, DC.