

## Department of Energy Loan Guarantee Program: Renewable and Energy Efficiency Loan Guarantees



The Department of Energy loan guarantee program that backed Solyndra, a solar panel manufacturer which went bankrupt on August 31, 2011 is continuing to show serious signs of trouble. Two other taxpayer-backed projects—Beacon Power Corporation and Abound Solar Manufacturing, LLC—have also gone bankrupt and reports of other loan guarantee recipients that are showing signs of financial trouble are trickling in. These projects were funded through the Department of Energy’s Title XVII Loan Guarantee program, which had two sections: 1705 and 1703. Most renewable projects were considered under section 1705 which was primarily for renewables although additional funding remains available for renewable and energy efficiency projects through the 1703 program. Taxpayers for Common Sense has long been a critic of the entire loan guarantee program. Below is information on the renewable portions of the program, along with brief information about the projects that have received backing from the program.



### **1705 Program**

The American Recovery and Reinvestment Act of 2009 (ARRA), better known as the stimulus, created a new program of loan guarantees under the Department of Energy’s Title XVII Loan Guarantee Program, known as 1705. Designed to pay for loan guarantees for renewable and energy efficiency projects, the program’s funding expired on September 30, 2011 after handing out approximately \$16 billion in loan guarantees to 28 different projects.

Unlike the original 1703 program that was passed in 2005, 1705’s loan guarantees did not require companies applying for a loan guarantee to self-pay the credit subsidy cost but rather had Congress pay it through appropriated funds. The credit subsidy cost is a percentage of the loan guarantee that is paid up front to cover the risk of default and is calculated by the Congressional Budget Office.

Initially, the 1705 program was appropriated \$6 billion by Congress to cover the credit subsidy costs. Assuming every company required a 10% upfront credit subsidy payment, that funding was enough to back \$60 billion worth of projects. During the 111<sup>th</sup> Congress, appropriations were on several occasions diverted from the 1705 program to other, unrelated programs, and the 1705 program was ultimately left with approximately \$2.4 billion in credit subsidy payments.

There are many problems with the structure of the DOE loan guarantee program. The program’s loan guarantees can provide financing for up to 80% of the cost of the project, making the federal government the only real entity taking risk for many of these projects. Further, the final rule promulgated by the Department of Energy opened the program to subordinating taxpayers in the event of a default. This means, as occurred with Solyndra, that federal taxpayers are not necessarily first in line to get their money back from whatever funds can be salvaged during bankruptcy proceedings. These problems are on top of a program that has startlingly little transparency, has been poorly managed, and underestimates the potential costs the program could ultimately place on the taxpayer.

The 1705 section of Title XVII is the only section that has any finalized loan guarantees out the door. The 1703 program has several conditionally committed loans, including a loan for an \$8.3 billion nuclear power plant, but so far those loan guarantees have not been finalized.

## **1703 Program**

When the program was first authorized in 2005, it only provided loan guarantees under Section 1703 which has loan authority for nuclear, advanced coal, uranium, and renewable and energy efficiency technologies. Approximately \$34 billion has been authorized for self-pay loan guarantees and the authority has no expiration date.

## **Defaulted Companies**

**Solyndra Inc.** was a solar panel manufacturer that received the first Department of Energy (DOE) loan guarantee in September 2009. First the DOE restructured their loan guarantee in early 2011 when Solyndra didn't have the funds to start paying their loan off on their agreed schedule. Then the DOE allowed Solyndra to accept \$75 million worth of new capital that would jump in line in front of taxpayers in the event of a default. On August 31<sup>st</sup> 2011, the company filed for bankruptcy after spending \$528 million of its \$535 million loan guarantee. Today, the company is under investigation by the FBI and House Energy and Commerce Committee. It is currently unclear how much of the loan guarantee taxpayers will ultimately lose.

**Beacon Power Corporation**, an energy storage company in Stephentown, NY, became the second loan guarantee recipient to file for bankruptcy after Solyndra. On August 9<sup>th</sup> 2010, Beacon Power received a \$43 million loan guarantee from the DOE to finance the construction of its 20 megawatt 'flywheel' energy storage plant.<sup>1</sup> Currently, Beacon Power is still operating with an accumulated deficit of \$229 million and its 65 employees are taking a 20% pay cut to retain their jobs.<sup>2</sup>

On February 3<sup>rd</sup> 2012, Rockland Capital, an energy-focused private equity firm, made a \$30 million bid to purchase the remaining assets of Beacon Power Corporation.<sup>3,4</sup> Pending final approval from the Federal Energy Regulatory Commission, Rockland will also adopt a \$25 million promissory note to the federal government. In general, DOE officials say federal taxpayers will lose roughly 30 percent of the initial \$43 million investment.<sup>5</sup>

**Abound Solar Manufacturing, LLC**, a solar manufacturing company based in Longmont, Colorado, recently became the third loan guarantee recipient to file for bankruptcy. On December 9<sup>th</sup> 2010, Abound was awarded a \$400 million loan guarantee for the construction of two solar panel manufacturing facilities in Colorado and Indiana.<sup>6</sup> Of the \$400 million loan guarantee, Abound had drawn down \$68 million when the company ceased all operations on June 28<sup>th</sup> 2012 and soon after filed for bankruptcy on July 2<sup>nd</sup> 2012.<sup>7,8</sup> It is currently unclear how much federal funds taxpayers will ultimately lose at this point.

## **Withdrawn Companies**

**Poet, LLC**, one of the largest biofuel producers in the country, received a \$105 million loan guarantee under the 1705 program in September 2011 to build a proposed 25 million gallon cellulosic ethanol plant in Emmetsburg, Iowa. On January 23<sup>rd</sup> 2012, POET announced they would withdraw from the federal loan guarantee program. Instead of receiving the \$105 million federal loan guarantee, POET plans to partner with Royal DSM, a life and material sciences company, to further develop cellulosic ethanol.<sup>9</sup>

**SAGE Electrochromics Inc.**, an energy-efficiency window glass developer based out of Faribault, Minnesota, received a conditional commitment for a \$72 million loan guarantee under the 1703 program in March 2010 to support the construction and operation of a new manufacturing facility.<sup>10</sup> SAGE aimed to begin construction in 2009 however in 2012 SAGE withdrew from the loan guarantee program to seek private capital from Saint-Gobain.<sup>11</sup>

## **1705 Loan Guarantee Recipients**

### **First Wind Energy**

*Loan Guarantee Amount: \$117 million*

First Wind Energy received their loan guarantee in July 2010 for the Kahuku Wind Power plant in Kahuku, Hawaii. This power plant is one of nine projects the company is operating across the country.

### **Nevada Geothermal Power Company**

*Loan Guarantee Amount: \$98.5 million*

Nevada Geothermal Power Company, a geothermal electric company founded in 1995, is headquartered in Vancouver, Canada, and received a partial loan guarantee in September 2010. The project will complete explorative drilling and demonstrate commercial geothermal viability in the U.S.

### **Caithness Energy**

*Loan Guarantee Amount: \$1.3 billion*

Founded in 1964, this geothermal, wind, natural gas, and solar company intends to build an 845 megawatt wind facility in eastern Oregon with the loan guarantee they received back in October 2010.

### **Abengoa**

*Loan Guarantee Amount: \$1.446 billion (Solana), \$1.2 billion (Mojave), and \$132.4 million (Bioenergy and Biomass)*

Abengoa, a company founded in 1984 and headquartered in Seville, Spain, has received three separate loan guarantees from the Department of Energy through different subsidiaries, two for solar projects and one for a bioenergy project. The first was received in December 2010 for their Solana solar generation project near Gila Bend, Arizona. The second loan guarantee from August 2011 will build a cellulosic ethanol plant in Hugoton, Kansas. Their third loan guarantee from September 2011 will build a 250 megawatt Solar Collector Assembly built in San Bernardino County in California.

### **AES Corporation**

*Loan Guarantee Amount: \$17 million*

This Arlington-based company that operates on 5 different continents will use the loan guarantee it received in August 2010 to build a 20 megawatt energy storage facility in Johnson City, New York.

### **LS Power**

*Loan Guarantee Amount: \$343 million*

Funding from this February 2011 loan guarantee will build a transmission line from Ely to Las Vegas, Nevada, carrying approximately 2,000 megawatts of electricity. Founded in 2001, LS Power Associates develops, owns, operates, and manages power generation projects in the United States.

### **U.S. Geothermal**

*Loan Guarantee Amount: \$96.8 million*

This nine year old company received its loan guarantee in February 2011 to finance construction for a geothermal power plant in Neal Hot Springs, Oregon.

### **BrightSource Energy**

*Loan Guarantee Amount: \$1.6 billion*

The California-based Ivanpah solar facility financed with this loan guarantee issued in April 2011 will generate 383 megawatts.

### **NRG Energy**

*Loan Guarantee Amount: \$967 million (Agua Caliente), \$1.237 billion (California Valley Solar Ranch)*  
NRG Energy, a wholesale power generation company founded in 1989 and headquartered in Princeton, New Jersey, has acquired two loan guarantees through agreements with other companies that applied for and received loan guarantees. The first, acquired from First Solar in August 2011, is the Agua Caliente project that will build a 290 megawatt photovoltaic solar facility in Yuma County, Arizona. The second, acquired from SunPower Corporation in September 2011, is the California Valley Solar Ranch project and funds 250 megawatt photovoltaic solar generation plant in San Luis Obispo, California.

### **Record Hill Wind**

*Loan Guarantee Amount: \$102 million*

This 50.6 megawatt wind project will be located in Roxbury, Maine. Record Hill Wind was founded in four years ago in 2007 and received their loan guarantee in August of 2011.

### **SoloPower**

*Loan Guarantee Amount: \$197 million*

This August 2011 loan guarantee will fund a retrofit of a thin film solar cell facility in Wilsonville, Oregon.

### **NextEra Energy Resources**

*Loan Guarantee Amount: \$852 million (Genesis Solar), \$1.46 billion (Desert Sunlight)*

NextEra has two partial guarantees, one of which they acquired from First Solar in September 2011. The first partial guarantee is for the Genesis Solar project and it will support a 250 megawatt solar generation plant in Riverside Valley, California. The second partial guarantee for the Desert Sunlight project will build a 550 megawatt photovoltaic solar power project near Desert Center, California. NextEra was founded in 1985 and produces and supplies electricity by operating wind, natural gas, oil, solar, hydroelectric, and nuclear power plants.

### **1366 Technologies, Inc.**

*Loan Guarantee Amount: \$150 million*

This four year-old manufacturing company will use the funds from its September 2011 loan guarantee to scale up its Direct Wafer manufacturing capabilities, building a second facility to manufacture silicon wafers, one component part of solar cells.

### **Cogentrix Energy**

*Loan Guarantee Amount: \$90.6 million*

Founded in 1983, the September 2011 loan guarantee for a subsidiary, Cogentrix of Alamosa, LL, is for a 30 megawatt high concentration photovoltaic plant in Alamosa, Colorado.

### **Ormat Technologies**

*Loan Guarantee Amount: \$350 million*

Their partial guarantee from the Department of Energy will build a 121 megawatt geothermal power facility in Tuscarora, Nevada. The company was originally founded back in 1965 and received its loan guarantee in September 2011.

### **Brookfield Renewable Power and Freshet Wind Energy**

*Loan Guarantee Amount: \$168.9 million*

Brookfield Renewable Power, founded 112 years ago, partnered with Freshet Wind energy on the Granite Reliable Power project, which received funding with a September 2011 partial loan guarantee. The project is for a 99 megawatt wind farm in Coos, New Hampshire.

### **SolarReserve**

*Loan Guarantee Amount: \$737 million*

Building a 110 megawatt solar power generating facility in Nye County, Nevada, the Crescent Dunes project will build a molten salt concentrated solar power tower. The loan guarantee was issued in September 2011 to this four year-old company.

### **Sempra Energy**

*Loan Guarantee Amount: \$337 million*

The Mesquite Solar 1 project received its September 2011 loan guarantee to build a 170 megawatt photovoltaic power plant in Maricopa County, Arizona. The company was originally founded in 1998.

### **Prologis**

*Loan Guarantee Amount: \$1.4 billion*

Founded in 1991, Prologis is an independent equity real estate investment trust. They will use their loan guarantee on "Project Amp," an initiative to install 752 megawatts of solar panels in 28 different states.

### **Exelon Corporation**

*Loan Guarantee Amount: \$646 million*

This utility services holding company generates electricity from nuclear, fossil, hydroelectric, and renewable energy sources. Their September 2011 loan guarantee for the Antelope project is for the deployment of inverters for voltage regulation.

## **1703 Loan Guarantee Applicants**

### **ADA Carbon Solutions**

*Loan Guarantee Amount: \$245 million*

This company, jointly owned by ADA Environmental Solutions and Energy Capital Partners and started in 2006, will build an activated carbon plant through a subsidiary, Red River Environmental Products, with their loan guarantee that was conditionally committed in December 2009.

*For more information, please visit [www.taxpayer.net](http://www.taxpayer.net)  
Or contact Autumn Hanna at (202) 546-8500 x112 or [autumn@taxpayer.net](mailto:autumn@taxpayer.net).  
August 2012*

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<sup>1</sup> *Beacon Power Corporation*. "2010 Annual Financial Report." 2011.

[http://files.shareholder.com/downloads/BCON/1492469759x0x479051/63504917-5293-4BB1-A951-65695A3A2E49/2010\\_Annual\\_Print\\_FINAL\\_BCON.pdf](http://files.shareholder.com/downloads/BCON/1492469759x0x479051/63504917-5293-4BB1-A951-65695A3A2E49/2010_Annual_Print_FINAL_BCON.pdf)

<sup>2</sup> *Ibid.*

<sup>3</sup> *Rockland Capital*. "Beacon Power Assets to Be Sold to Rockland Capital." February 2012.

<http://www.rocklandcapital.com/newsmedia.htm>

<sup>4</sup> *Associated Press*. "Judge OKs sale of Beacon Power to equity firm." February 7, 2012.

<http://online.wsj.com/article/AP310fc23d77ed4664a97864c135b1b117.html>

<sup>5</sup> *Ibid.*

<sup>6</sup> *Department of Energy*. "Department of Energy Closes \$400 Million Loan Guarantee for State of the Art Solar Manufacturing in Indiana and Colorado." December 14, 2010. <http://energy.gov/articles/department-energy-closes-400-million-loan-guarantee-state-art-solar-manufacturing-indiana>

<sup>7</sup> *Abound Solar*. "Abound Solar to Suspend Operations." June 28, 2012. <http://www.abound.com/abound%C2%AE-solar-suspend-operations>

<sup>8</sup> *Reuters*. "Abound Solar files to liquidate in bankruptcy." July 3, 2012. <http://in.reuters.com/article/2012/07/02/us-aboundsolar-bankruptcy-idINBRE86118020120702>

<sup>9</sup> Timothy Gardner, "Ethanol maker Poet declines U.S. government loan aid." *Reuters*. January 23, 2012. <http://www.reuters.com/article/2012/01/23/us-usa-ethanol-loanaid-idUSTRE80M20K20120123>

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<sup>10</sup> *Department of Energy*. "DOE Offers \$72 Million Conditional Loan Guarantee to SAGE Electrochromics." March 5, 2010.  
<http://energy.gov/articles/doe-offers-72-million-conditional-loan-guarantee-sage-electrochromics>

<sup>11</sup> *SAGE Electrochromics*. "SAGE Electrochromics to become wholly owned subsidiary of Saint-Gobain." May 9, 2012.  
<http://sageglass.com/about-sage/news/sage-electrochromics-to-become-wholly-owned-subsiary-of-saint-gobain/>