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SOLYNDRA AND THE PERILS OF GREEN INDUSTRIAL POLICY

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The Obama administration has made providing taxpayer dollars for so-called "green jobs" a top policy priority. In his 2011 State of the Union address, the president maintained that government subsidies for "clean energy technology…will strengthen our security, protect our planet, and create countless new jobs for our people."[1] The financial failure of a number of specific firms which received Department of Energy loan guarantees, however, has raised the question of whether the policy itself is effective or sustainable.

The tangled tale of Solyndra, a startup company that thought it could make solar panels and sell them profitably, ably illustrates the perils of "industrial policy," a shorthand phrase for government's attempts to decide which new industries or startups to support with federal money, loan guarantees, or tax benefits. The Fremont, California-based solar company declared bankruptcy in September 2011 after receiving a total of $528 million in federal loans.

It's not just Solyndra that has gone bankrupt. Abound Solar, a solar panel manufacturer based in Colorado that received funds from the federal government, filed for bankruptcy on July 2, citing aggressive pricing actions from Chinese solar panel companies as the principal cause.

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Abound received a $400 million loan guarantee, and spent about $70 million before the Department of Energy (DOE) halted its credit. The company plans to suspend operations and dismiss 125 employees.

In August 2010, Beacon Power Corporation received a $43 million loan guarantee from the DOE to build a $69 million, 20-megawatt flywheel energy storage plant in New York. After receiving $39 million of the loan, the company filed for bankruptcy in October 2011 and was subsequently bought by a private equity firm.

Nevada Geothermal, a struggling company heading into financial trouble, received a $98.5 million loan guarantee in September 2010. According to its interim financial statements, Nevada Geothermal has "incurred net losses over the past several years, accumulated a deficit of $98.9 million, has substantial debts and currently does not generate positive cash flow from operations after debt service costs." With a net loss of $11 million for the nine-month period ending on March 31, 2012, it is likely that the company will be unable to repay its loans. Financial statements issued by the board of directors state, "Consequently, material uncertainties exist which cast significant doubt upon the Company's ability to continue as a going concern," raising questions as to why the DOE did not do a more thorough examination of the company's viability during the loan guarantee investigation process.

Ener1, a manufacturer of rechargeable batteries for the transportation, utility grid, and industrial electronics markets, declared bankruptcy on January 26, 2012. The company filed for Chapter 11 bankruptcy after spending $55 million of a $118.5 million DOE grant. With a 48 percent investment in Think Holdings, AS, a Norwegian electric vehicle manufacturer, Ener1 suffered from decreasing demand for high-priced battery electric vehicles. According to interim chief executive officer Alex Sorokin in the petition, Ener1 also faced fierce competition from battery makers in China and South Korea which have lower costs on manufacturing base, labor, and raw materials.

Range Fuels, a company attempting to convert forest waste into bio-fuels, failed to prove the feasibility of employing the technology in a cost-effective way. It first received a grant of $76 million from the DOE for a plant producing 40 million gallons of wood-based ethanol per year. The company received another $80 million loan guarantee from the Department of Agriculture in January 2009. These grants did not prevent Range Fuels from failure. The plant closed in January 2010, and the company filed for bankruptcy in September 2011.

Both Republican and Democratic administrations have practiced a "green" industrial policy by supporting ventures that promised to pursue renewable, non-carbon-based energy production or energy conservation.

The DOE's authority to issue loan guarantees for innovative, clean energy technologies, the Energy Policy Act of 2005, was passed by a Republican House and Senate and signed into law by George W. Bush. Under the law, Congress authorized the issuance of $4 billion in loan guarantees in 2007, and $47 billion in 2009 with the objective of encouraging the development of new technologies. [2] [3]

However, no DOE loan guarantees were made during the Bush administration. The DOE wanted to make a loan to Solyndra, but career officials at the Office of Management and Budget (OMB) did not approve it, on the grounds that the project was not financially sound.

The Section 1705 Loan Program was created by the 2009 American Reinvestment and Recovery Act, which amended the Energy Policy Act of 2005.[4] The 2009 stimulus bill gave the DOE an additional $3.95 billion for loan guarantees.[5]

The Obama White House followed up by encouraging the DOE to issue loan guarantees for what the Department and the White House regarded as clean energy projects; however, these projects turned out not to be commercially viable. The loans themselves were

made through the Federal Financing Bank (FFB), a bookkeeping arm of the Treasury Department, and so the money was lent at below-market interest rates.

Solyndra: A Failure, Like Others

Solyndra was founded in California in May of 2005 by Christian Gronet to produce inexpensive, electricity generating solar panels. Its panels consisted of 40 cylinders coated with solar cells.[6] A competing technology consisted of flat panels, made of polysilicon. Polysilicon was expensive, and, according to Solyndra, more costly to install on a building's roof than their own cylindrical panels.

By November 2008, Solyndra had raised $450 million from investors and was applying for a loan guarantee from the DOE under the Energy Policy Act of 2005. But the loan was turned down in January 2009 in the waning days of the Bush administration, on the grounds that "there is presently not an independent market study addressing long term prospects for this company" and "there is concern regarding the scale-up of production assumed in the plan for Fab 2," a second factory.[7]

On January 13, 2009, Lachlan Seward, director of the loan program at the DOE, wrote, "After canvassing the Committee it was the unanimous decision not to engage in further discussions with Solyndra at this time."[8] Lachlan was referring to the DOE Credit Committee, which was composed of DOE officials.

When President Obama took office days later, the DOE's tone changed. In a March 10, 2009, e-mail to an unnamed official, a senior adviser to Energy Secretary Steven Chu wrote, "The solar co [sic] board approved the terms of the loan guarantee last night, setting us up for the first loan guarantee conditional commitment for the president's visit to California on the 19th."[9] As events soon revealed, March 19, 2009, was a wildly premature target date for a presidential visit. In fact, President Obama didn't visit Solyndra until May 2010.

E-mails dated 2009 depict White House and DOE officials rushing to sign off on the project so that Vice President Joe Biden could appear at the Fremont plant in September 2009 to trumpet the administration's support for green jobs. There was confusion about who would go and when, as well as a palpable sense of urgency. Within the OMB—historically the most fiscally conservative agency in any administration—there was anxiety about premature planning and precedent.

On March 10, 2009, an OMB official whose name was blacked out by the administration before the e-mails were released to Congress wrote, "DOE is trying to deliver the first loan guarantee within 60 days from inauguration (the prior administration could not get it done in four years). This deal is NOT [sic] ready for prime time."[10]

Another OMB official wrote on August 27, 2009, "As long as we make it crystal clear to DOE that this is only in the interest of time, and that there's no precedent set, then I'm okay with it. But we also need to make sure that they don't jam us on later deals so there isn't time to negotiate those, too."[11]

On August 31, 2009, an unidentified OMB official wrote to Terrell McSweeny, domestic policy adviser to Vice President Biden, saying "We have ended up in the situation of having to do rushed approvals on a couple of occasions (and we are worried about Solyndra at the end of this week). We would prefer to have sufficient time to do our due diligence reviews and have the approval set the date for the announcement rather than the other way around."[12] Regardless of these concerns, the loan was approved on September 3, and Biden announced it via satellite at Solyndra's plant on September 4.

Solyndra's bankruptcy has been attributed to factors beyond its control, such as falling prices for polysilicon products and lower costs and pricing in China. But documents filed by Solyndra with the Securities and Exchange Commission (SEC) in

September 2009, after Biden's visit and ahead of an initial public offering that failed in June 2010, show that the company was fully aware of all the risks.

PricewaterhouseCoopers, Solyndra's auditors, also expressed public concern about the company. Reuters reported, "PricewaterhouseCoopers LLP said Solyndra's recurring operating losses, negative cash flows, $532.3 million stockholder deficit and other factors 'raise substantial doubt about its ability to continue as a going concern.'" The combination of its deficit, operating losses, and negative cash flow raised doubts as to its ability to survive.[13]

Solyndra itself, in its public filing (S-1) at the SEC in September 2009, dutifully offered 22 pages of reasons why it might fail. In case anyone missed the point, the report included a table of financial and operating data for 2006–2009, showing six different measures of gross and net losses—not one positive outcome.

On May 24, 2010, Valerie Jarrett, senior adviser to the president, forwarded a Cleantech Blog post by Philip Smith to Ron Klain, chief of staff to Vice President Biden. The post outlined the doubts of Pricewaterhouse Coopers, Solyndra's auditors, about the company. It stated, "On a pure business analysis you have to agree with the auditors—they are not a going concern."[14] Jarrett said to Klain in an e-mail, "As you know, a Going Concern letter is not good. Thoughts?"[15]

Although Jarrett and Klain knew that Solyndra would go under, two days later, on May 26, 2010, the president visited the newly built Solyndra manufacturing plant in Fremont, California, and declared, "It is here that companies like Solyndra are leading the way toward a brighter, more prosperous future …. We can see the positive impacts right here at Solyndra."

Putting Private Debt before Government Debt

Fast-forward to January 2011, when Solyndra's cylindrical panels were not competitive. The price of the polysilicon used by its rivals on their flat panels, the product competing with Solyndra, had fallen from about $375 a kilogram in 2009 to around $60, making flat panels far more attractive. First Solar, a U.S. maker of flat panels, could generate solar power for 75 cents a watt, compared to $4 for Solyndra.

Still, when Solyndra came calling, the DOE insisted on throwing good money after bad, to the frustration of an unnamed OMB official. He wrote, on January 31, 2011, "If Solyndra defaults down the road, the optics will be arguably worse later than they would be today."[16] He added that the public might forgive one mistake, due to the complexity of dealing with innovative companies, but not two mistakes.

Events would later show that the Obama administration made a bad bet. Despite an infusion of investor funds and a loan "restructuring" in February 2011 intended to raise additional funds, Solyndra filed for bankruptcy in September 2011 in the District of Delaware U.S. Bankruptcy Court, in Wilmington.

The company had used $460 million of the federal loans by February 2011 to build a second factory near Fremont, California, even though it had excess capacity at its first plant in Fremont.[17] With Solyndra's bankruptcy, the bulk of these funds are lost to taxpayers.

By January 2011, it was clear to many that Solyndra was going to fail. Still, the DOE helped shore it up by allowing it to draw on another $68 million in government loans. In addition, the department signed off on a restructuring agreement that allowed $385 million in government loans to take a back seat to $75 million in new investors' funds. In the restructuring, the $75 million from investors became senior to all government debt except $143 million.[18]

Due to the restructuring, the remaining $385 million in government loans, first issued in 2009, have equal status as bankruptcy claims with $175 million in original investor funds, and can be recovered only after the investors get back their $75 million and the

government gets back $143 million. This reduced the value of the $385 million by about a third because the government would not get back all its money—it would likely only get the $143 million.

Although objections were raised by the OMB and the Department of Justice (DOJ), the DOE paid no heed. On August 16, 2011, an unnamed official wrote in an e-mail to Mary Miller, assistant secretary for financial markets at the Treasury:

> The Title XVII statute and the DOE regulations both require that the guaranteed loan shall not be subordinate to any loan or other debt obligation.
>
> The DOE regulations state that DOE shall consult with OMB and Treasury before DOE grants any 'deviation' from the requirements of the regulations (to the extent such requirement is not specified by the statute) that would constitute a substantial change in the financial terms of the Loan Guarantee Agreement.
>
> But I will bet a quarter that the DOE lawyers have some kind of theory on how whatever restructuring they have done and whatever they are considering doing does not violate these requirements. Can't wait to hear it.[19]

In other words, besides Valerie Jarrett and Ron Klain, many others in government with an eye for detail knew that the Solyndra deal was illegal. Some said as much to Treasury officials. But by August 2011, the taxpayers' money was lent—and effectively gone when Solyndra declared bankruptcy. No other company wanted to buy Solyndra, so its core assets were auctioned for a mere $3.8 million, which represented less than 1 percent of the loan guaranteed by the DOE.[20]

Mimicking Failed Economies

Why is the government, under pressure from voters and credit rating agencies to reduce the budget deficit, issuing these loan guarantees at all?

Fear of competition from China is one answer. America is throwing billions of dollars at renewable energy, electric cars, and high-speed rail, projects that are too weak to attract private funding, out of concern that China is getting ahead of us and stealing our jobs.

On October 3, 2011, in a TV interview with ABC, President Obama said, "what we always understood was that not every single business is going to succeed in clean energy, but if we want to compete with China, which is pouring hundreds of billions of dollars into this space, if we want to compete with other countries that are heavily subsidizing the industries of the future, we've got to make sure that our guys here in the United States of America at least have a shot."[21]

Jonathan Silver, who was executive director of the loan programs office at the DOE until his resignation in October 2011, testified at the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce on September 14, 2011 that "no country has been as aggressive as China, which last year, alone, provided more than $30 billion in credit to the country's solar manufacturers through the government-controlled China Development Bank."[22]

But fears that China will vault ahead of the United States in this area are misguided. China is not using solar energy for its electricity production. As of 2008, 70 percent of China's energy came from coal. Wind and solar provide less than 2 percent of the power for China's electricity.[23] [24] China is producing solar panels and wind turbines to export to America and Europe, but it is not relying on these technologies for electricity production because they are a more costly way to generate electricity. Rather, it is importing our coal so it can produce inexpensive energy in its power plants. Another green energy project, China's high-speed rail investment, is on hold after a high-profile accident in Wenzhou in the Zhejiang province in the summer of 2011.[25]

The United States is more likely to best China by relying on market forces than by letting the

government attempt to pick winners. Loan guarantees are not a sign of confidence in markets but the exact opposite, and make no sense in these economic times, when corporations are flush with cash.

Renewable energy projects turn to the government for loan guarantees because their prospects are weak, and private investors and lenders do not want to fund them. If large gains were on the horizon, private firms would be vying for the opportunity to fund these projects. China and other countries might want to invest in projects that have no business logic, but American taxpayers deserve better.

Some of the new DOE loans may actually be repaid. But, as with those loans made to Solyndra, some will not. The Solyndra case demonstrates that government should not try to pick industrial winners.

ENDNOTES

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