Center for American Progress

Invest in America's Clean Energy Future

Congress Should Embrace the DOE Loan Guarantee Program

Richard Caperton March 2011

The United States stands at a crossroads between two clean energy futures.

In one future scenario several dozen companies will develop clean energy projects in more than 30 states. These projects will create thousands of jobs in manufacturing, technology research, construction, and operations. They will put America back to work and help us meet President Barack Obama's goal of "winning the future." They also will help maintain America's status as the world's scientific leader, ensure our future global competitiveness, and protect our national security—all while reducing harmful pollution from fossil-fuel-based energy that's dirtying our air and water.

But in the other scenario—the one the House of Representatives is embracing in their budget proposal of February 17—we lose our technological edge to other countries, valuable jobs, and new energy infrastructure that could make this country stronger and more secure.

The House budget takes us down this dark path by dramatically cutting funding for the Department of Energy's loan guarantee program. This program provides an essential financing tool for bringing emerging technologies to market scale. If the budget passes with these cuts, all the projects currently within the application process will be in jeopardy along with any future energy projects.

The loan guarantee program is one of the government's best tools to finance "first commercialization," a critical point of the innovation lifecycle. This is the point when a technology goes from a demonstration scale to initial widespread use in a commercial market setting. Companies have different financing needs as they move from doing basic research to demonstrating their technology and finally to commercializing their product at scale. The government plays a different role at each of these stages, offering more or less support depending on the technology's market readiness.

For instance, this week the nation's clean technology leaders are convening in Washington, D.C., to celebrate the Advanced Research Projects Administration—Energy program, or ARPA-E. This program, modeled after the successful DARPA program

best known for bringing us the Internet, is but one of DOE's tools to finance early-stage research. The loan guarantee program kicks in at a later stage of technology development by helping companies raise larger sums of capital needed to grow at commercial scale.

Most early-stage and midstage winning technologies will not be successful at commercial scale without loan guarantees—at least not in the United States. And if they aren't successful, they won't create the jobs and technology advances that help our domestic economy thrive.

This brief reviews how the DOE's loan guarantee program works, why the House GOP budget cuts would seriously hurt the program, and why that would be very bad for creating jobs, boosting our competitiveness, ensuring our national security by ceding our leadership in clean energy technologies, and addressing climate change.

How DOE's loan guarantee program works

The DOE loan guarantee program was created as part of the Energy Policy Act of 2005. The program leverages federal dollars by allowing the Department of Energy to guarantee the debt of privately owned clean energy developers and manufacturing companies instead of investing directly into these companies through grants or tax subsidies.

In other words, the government makes a guarantee to the private lender—say a commercial bank, insurance company, or even the Federal Financing Bank—that if a project developer or manufacturing company is not able to pay back its loan to the lender, the government will step in and repay the outstanding balance.

The loan guarantee is critical to financing clean energy projects because private investors are either unable to fund projects that require this much capital—this is the case with many venture capitalists—or are unwilling to lend money to projects that use innovative technology that has not been fully proven at commercial scale—as is the case with most banks.

The government takes on the risk that some borrowers might not fully pay back the loan when it issues a loan guarantee. The government accounts for this risk by estimating how much it will likely have to pay out for the guarantee in the future and then putting that much money in a special account to cover losses. These expected payments are known as the "credit subsidy cost," which is often stated as a percentage of the size of the loan that's guaranteed.

The American Recovery and Reinvestment Act, or ARRA, made a noteworthy commitment to deploying U.S. commercial clean energy technology by originally appropriating $6 billion to cover the credit subsidy cost for loan guarantees for renewable energy, advanced biofuels, and upgrades to our nation's transmission system.

This did not mean, however, that the program only could guarantee $6 billion in loans. It instead offers the program the ability to guarantee loans for anywhere from $40 billion to $120 billion depending on the types of projects in the portfolio. That's because while each project is unique, an average project has a credit subsidy cost in the range of 5 percent to 15 percent of the total value of the loan guarantee.

Moreover, program rules state that only part of a project's cost can be covered by a guarantee. This means that project developers have to raise significant amounts of outside capital, which is not guaranteed against loss by DOE. The equity amount is usually about one-third of the total project cost, meaning that developers will need to find as much as $15 billion to $40 billion in private capital.

The loan guarantee program is a perfect example of how a relatively small government appropriation can foster a huge total investment—more than $100 billion—in critical technologies. Indeed, the program has already seen tremendous success. DOE has already finalized loan guarantees for the world's largest wind farm and one of the world's largest solar thermal plants. It also has issued conditional commitments for the world's largest photovoltaic solar project and a biodiesel project that will nearly triple the amount of renewable diesel produced in the United States. All told, DOE has finalized or issued conditional commitments for more than $26 billion in loan guarantees.

The House budget proposal kills clean energy projects by slashing loan guarantee funds

Government budget rescissions slowly ate into the ARRA's $6 billion to the loan guarantee program. Now just $2.5 billion remains available to cover credit subsidy costs for all projects within the program. But the new House budget proposal would essentially take back an additional $2 billion of this remaining pot on the grounds that the money has not yet been "obligated" to specific projects.

Equating "unobligated" with "unnecessary" makes no sense when talking about loan guarantees. Money for a loan guarantee is only "obligated" (a precise technical term) when private capital is raised and any outstanding business, technical, legal, or environmental issues are solved. Borrowers only receive loan guarantees after a rigorous financial and technical review process similar to what a private-sector lender would conduct. This is unlike tax credits or grants that go to every applicant who qualifies. This lengthy process is designed to protect taxpayers.

Guarantees whose funds have been "obligated" are now "closed" in DOE parlance. Fewer than 20 projects have closed to date and less than $500 million in funds has been "obligated." But a robust pipeline of projects is set to close by September 2011. Many projects were given "conditional commitments," which include specific terms and are

expected to eventually close. But funds set aside for "conditional commitments" have not been "obligated" in the technical budget sense.

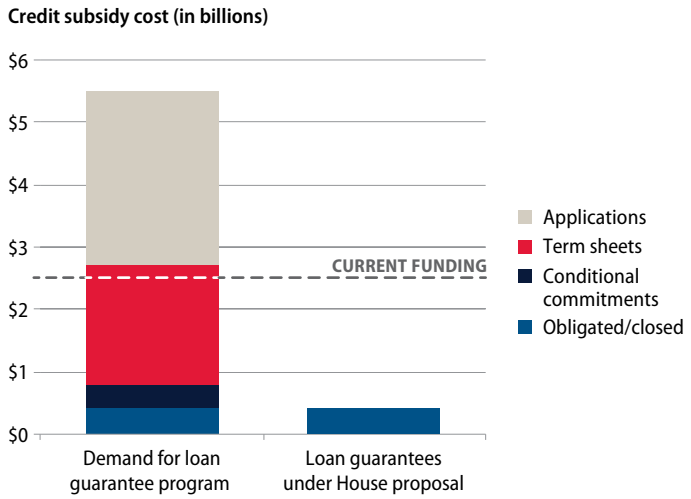
Then there are even more projects that received "term sheets," a preliminary offer for a loan guarantee. These require more due diligence before conditional commitments can be offered. Finally, some developers and manufacturers have applied for loan guarantees but not received formal term sheets. There will be more applicants in the future in addition to these projects. They will require more funding.

The chart shows that projects in the closed, conditional commitment, term sheet, and application stages will likely require more than $5.5 billion in credit subsidy costs.

Companies backing these projects applied under good faith from the U.S. government that there would be at least $2.5 billion in credit subsidy costs available. Eliminating the unobligated funds now would unfairly change the rules of the game and result in companies having wasted significant amounts of money, management time, and focus.

Each of these companies invested an average of $1 million to $2 million on application fees, environmental compliance, legal advice, project finance expertise, and, most importantly, reimbursing the DOE's review costs by the time they're in the due diligence phase. Private investors also have invested billions of dollars in these projects in addition to expenses related to the loan guarantee program under the assumption that they would have a fair chance at receiving a guarantee.

The House proposal does not meet demand for loan guarantees



Defunding the loan guarantee program would eliminate jobs and risks national security

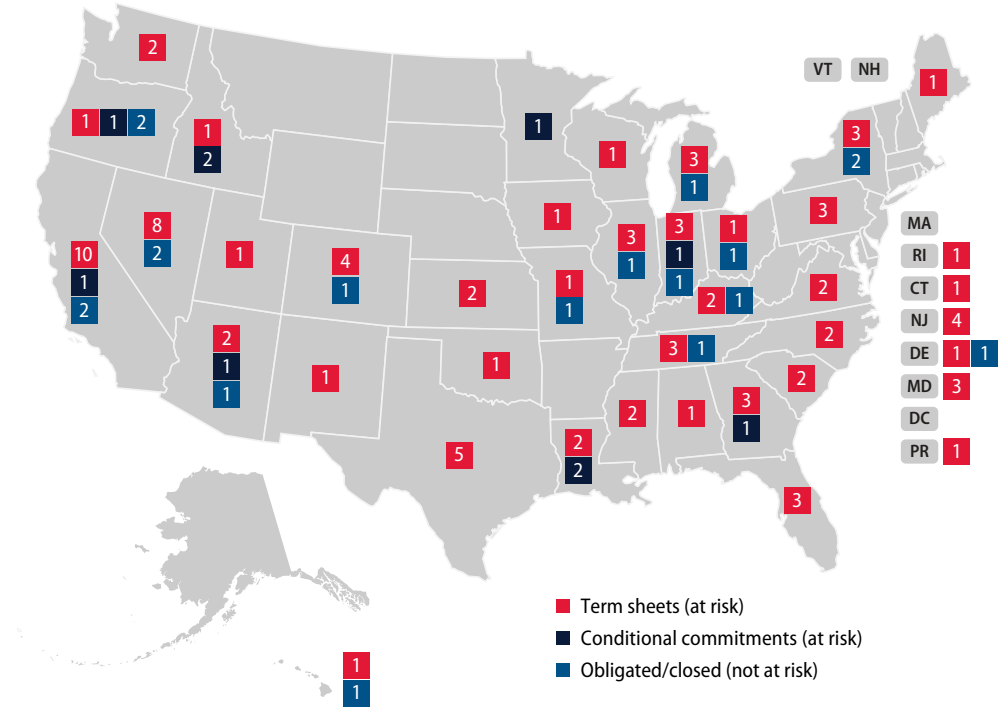
Even worse than wasting corporations' time and money, though, is that the House proposal would endanger leading-edge clean energy projects in more than 30 states. This puts America at a significant disadvantage in the race toward a clean energy future and harms our national security.

The map on page 5 shows finalized or "closed" projects in blue, projects with a conditional commitment in dark blue, and projects with a term sheet in red. Projects in dark blue and red are at risk and will not receive a loan guarantee under the House budget proposal.

The map demonstrates that the government's investment in the loan guarantee program is having a significant impact despite its slow start. It's at the cusp of transforming the global clean energy economy.

Clean energy projects at risk across the country

Number of projects at risk in each state



The Bush administration initiated the DOE loan program office from 2005 to 2008. The Obama administration scaled these efforts after taking over the office in 2009 and launched the loan guarantee program. Now DOE's loan program office has more than 175 employees and is one of the preeminent project finance teams in the world. In fact, it invested more in clean energy than any project finance team in the world outside of China in 2010 and more than the next eight biggest teams combined.

Building a team, educating applicants, and creating review processes took several years of hard work. But DOE's program is now fully staffed and creditworthy applicants are deep in the pipeline.

If Congress continues to take money away from the loan guarantee program, this unique government asset will disappear, its team will disband, and all of the learning, best practices, and systems will be forgotten. It would take at least four years to rebuild.

China and other countries are very aggressively offering financing terms to attract clean energy companies that are willing to relocate. These terms are so attractive in some cases that they are called "nonmarket," which means they are more generous than any government that cares about taxpayer protection could offer. These companies would typically prefer to stay in the United States because there are real benefits to having manufacturing, installation, and corporate headquarters located in the same country. Research from Harvard University shows that having these roles co-located helps increase profitability and innovation.

The loan guarantee program is the United States' best—albeit not equal—tool to compete with these international offers. But if the loan guarantee program disappears, many of these companies will move abroad to China, among others. They will now be located in Guangdong and Jiangsu provinces instead of in states that are new to the clean energy economy such as Mississippi, Alabama, and Georgia.

Fully fund the loan guarantee program moving forward

Senators and representatives who are focused on American competitiveness and creating jobs across America should be extremely concerned and disappointed about the House proposal to gut the DOE loan guarantee program. They should fight back against the House plan to rescind nonobligated funds.

But forward-thinking senators must also push to increase funding for the program in the 2012 budget. The chart above makes it clear that there is demand for more than $5.5 billion in credit subsidy costs but there will only be $2.5 billion in the program even if the House proposal is defeated. Congress needs to restore the funding they eliminated from the program over the past two years so the program will be fully functional.

Congressional leadership is especially critical because the president's budget proposal for 2012 only calls for $200 million in funding for the program. This is woefully inadequate and it's inconsistent with previous public promises to restore Cash for Clunkers ($2 billion) and state aid ($1.5 billion) rescissions from the program.

DOE has operated the program so far as competitive, merit based, and highly meticulous. Political interference plays a minimal role in the program because it has enough money to fund each creditworthy and qualified project that meets its stringent criteria.

If there isn't enough funding to meet demand going forward, most worthy projects will go unfunded or will simply not be pursued from the outset. DOE would then be forced to make decisions on criteria that aren't financial such as spreading funding evenly across the country. It will be put in the undesirable position of "picking winners."

Senators and representatives must protect and fully fund the DOE loan guarantee program. The government needs to say they are "open for business" for the best late-stage commercial projects and DOE needs to be able to focus on funding these projects to create jobs, build a clean energy economy, and protect our national security.

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