Center for American Progress Action Fund

The Green Bank Is Essential for a Clean-Energy Strategy

The new institution will lower energy costs, create jobs, reduce carbon emissions, and protect our national security

By Jake Caldwell August 2009

Introduction

The United States must build and deliver clean energy *today* to create jobs, lower energy costs, and strengthen our economy. The establishment of a federally owned, independent, not for profit Green Bank—formally called the Clean Energy Deployment Administration, or CEDA, in legislation now before the Senate—will spur private-sector investment in innovation and American ingenuity to help end our dependence on oil, and help diversify our nation's sources of energy to lower prices over the long term while also confronting global warming. The Green Bank will improve our global economic competitiveness, too, by making the United States a worldwide leader in the manufacture and deployment of clean-energy technology.

The creation of a Green Bank will encourage a long overdue integrated and strategic approach to clean-energy innovation, efficiency, and deployment in the United States. In combination with Senate action on clean energy—legislation that provides incentives for the research, development, and deployment of clean-energy technologies, and a market-based pollution-reduction program that reduces greenhouse gas emissions and reinforces a predictable price signal on carbon—the Green Bank will open credit markets, motivate private business to invest again, and create good, clean-energy jobs here at home.

In partnership with the private sector, the Green Bank will enable innovative, commercially viable clean-energy technologies in such areas as wind, solar, geothermal, advanced biomass, increased efficiency, and transmission infrastructure—all to be deployed on a large scale. The construction and actual deployment of these clean-energy technology projects is vital to a clean-energy future.

What's more, clean energy delivers long-term job growth and holds tremendous new job-creation potential, particularly in the manufacturing sector. A recent report from the Center for American Progress and the University of Massachusetts Political Economy Research Institute notes that $150 billion per year in clean-energy investment can generate a net increase of 1.7 million jobs.[1]

In short, the Green Bank can encourage the rapid deployment of clean energy and ensure that lower energy costs are passed on to consumers. In addition, the Green Bank can act as a bulwark against higher energy costs associated with volatile fossil fuel prices.

Costs and benefits of the Green Bank

A Green Bank funded at $7.5 billion could fund generation of 60 to 80 gigawatts of clean energy over a period of 20 years, or 3 to 4 GW annually.[2] The result: Our national security will be enhanced by reducing our dependence on foreign oil. A fully capitalized Green Bank at $50 billion could:

- Provide enough electricity to power approximately 22.9 million cars per year
- Decrease gasoline consumption by an incremental 12.6 billion gallons per year
- Decrease oil consumption by an incremental 642 million barrels per year, or 1.8 million barrels per day[3]

In the past, Congress has encouraged private-sector equity investments in wind, solar, and other clean technologies through tax credits. Equity investments are important, but the deployment of major clean-energy projects will also require significant loans and low-cost debt financing. The Green Bank will marshal a variety of well-established financial tools and incentives to enable the federal government to enlist the private sector to increase the amount of debt capital available at lower rates to clean-energy projects. A Green Bank can vastly expand the tools available to lenders by providing direct support, such as direct loans, letters of credit, and loan guarantees, and indirect support, like authority to issue bonds, purchase debt securities, and other financial products.

In a clean-energy project, the Green Bank can potentially reduce the cost of debt by half—to about 4.5 percent in today's credit markets from around 8.5 percent without federal support. As the cost of debt is reduced, projects can still provide a 15 percent return on equity and meet debt coverage ratios without an increase in electricity rates. The upshot: By lowering the cost of debt, the Green Bank allows utilities to provide the same levels of electricity from clean-energy sources without passing on any additional costs to the consumer.[4]

The result will jumpstart business investment, increase capital at reduced loan rates, lower energy prices to consumers, and spur the construction and operation of more clean-energy technology and energy-efficiency projects throughout the country.

Jumpstarting private-sector investments in clean energy

A Green Bank is essential because many clean-energy technologies face several unique obstacles along the path to large-scale deployment and then to the delivery of clean energy in our homes. Traditional banks and commercial lenders are reluctant to loan to many of these clean-energy projects with limited track records in the marketplace.

And many existing off-the-shelf clean energy and efficiency technologies are abandoned due to a lack of funding as they attempt to be deployed at larger scale.

Indeed, renewable energy investment dropped precipitously in the first quarter of 2009, the period for which complete data are available, to $500 million compared to $2 billion in the fourth quarter of 2008 and $5 billion in the first quarter of 2008.

In order to maximize the leverage of private capital, the Green Bank should have at its disposal a wide range of direct and indirect support tools and incentives to encourage loans to facilitate deployment of clean-energy technology. These direct and indirect incentives tend to reduce the risk to lenders so they are encouraged, in turn, to offer better loan rates to potential clean energy and energy efficiency projects.

Under current Senate clean-energy legislation, the Green Bank will be capitalized with $10 billion. This capital can be leveraged at the standard 10-1 ratio to provide loan guarantees in support of $100 billion in private-sector investment in clean energy. The private sector can also provide an additional $100 billion in equity. As a result, a $10 billion capitalization of the Green Bank translates into $200 billion available for in clean-energy investments.

The surge in capital will allow clean-energy projects to be deployed at the operational and commercial level in a shorter timeframe than is standard today. As clean-energy and efficiency technology is deployed at a larger scale, valuable experience and cost savings will be gained, and more and more clean energy will be delivered to American homes at lower prices in every region of the country. The United States will reclaim its rightful place as a global leader in clean-energy technology.

The Green Bank creates clean-energy jobs

As a nation, we can and must do better at nurturing and growing our clean-energy sector and clean-energy jobs, because competitors in other countries are already filling the void. A Green Bank will ensure the United States is a job leader in the clean-energy technology growth industry of the future.

Clean energy has the potential to create significant jobs in the manufacturing sector. A Green Bank will provide low-cost capital to help build clean-energy manufacturing

facilities, create long-term jobs in the United States, and deliver clean energy at lower cost to consumers. As noted above, a recent Center for American Progress-University of Massachusetts Political Economy Research Institute report demonstrates that $150 billion per year in clean-energy investment can generate a net increase of 1.7 million jobs.

A significant portion of these jobs will occur in the struggling construction and manufacturing sectors. Moreover, the CAP-PERI report also notes that clean-energy investments generate roughly three times more jobs than an equivalent amount of money spent on jobs related to carbon-based fuels.[5]

A Green Bank can ensure the clean-energy manufacturing sector is able to overcome several challenges, including securing access to capital when prospective lenders are reluctant to provide financing to manufacturers producing clean-energy technology. Frequently, clean-energy businesses are small, innovative, and highly specialized. They often have limited collateral and revenue and face cost uncertainties, as supply and demand for finished product fluctuates. The Green Bank can provide stability and incentives to leverage private capital, raise the comfort level of prospective lenders, and allow manufacturers to meet their goals and set us firmly on the path to long term job growth and a clean-energy economy.

The Green Bank can lower carbon emissions to reduce global warming

The establishment of a Green Bank will provide a coordinated, strategic approach to clean-energy innovation and energy efficiency in the United States, enhance federal government and private-sector complementary efforts to reduce carbon emissions, and deliver clean energy to American homes in as short a timeframe as possible.

The establishment of an independent Green Bank, governed by a board of directors and comprising additional members with clean-energy and energy-efficiency financial expertise, will make a significant contribution to the nation's overall energy innovation strategy and project funding decisions. Importantly, the Green Bank will not place the federal government in the role of picking winners and losers in specific clean technologies. Rather, the Green Bank would establish broad, overarching performance-based goals such as the deployment of clean energy that diversifies our energy supply, and reduces or sequesters greenhouse gases.

The Green Bank will work in an integrated manner with clean-energy and climate-change legislation that promotes clean energy, energy efficiency, limits on global warming, clean-energy jobs, and transition investment to ensure U.S. competitiveness. The Green Bank has the potential to reduce carbon emissions by an estimated 22 to 59 million metric tons a year, which would be the equivalent of:

- Taking between 5 million and 13 million cars off the road every year
- Neutralizing the carbon emissions of between 15 and 39 power plants every year[6]

The Green Bank also can help meet the demand created by a national renewable electricity standard, and it will encourage the deployment of a smart grid and modernized transmission to ensure supply comes from optimal locations throughout the country. In addition, energy-efficiency projects financed by the Green Bank would include any project that results in a net reduction in energy use required to achieve the same level of service prior to their application. Such projects would include smart-grid technologies and energy-efficiency gains in existing buildings and new construction.

Smaller projects could be aggregated so as to attract more financing in an area where it has been difficult to secure financing in the past. As noted above, credit support from the Green Bank includes a wide-ranging toolbox (including direct loans, letters of credit, and loan guarantees) that will assist states, localities, and the private sector in rolling out innovative mechanisms to finance building energy efficiency retrofits at scale. This includes municipal bonds, utility loans with on-bill repayment, and increasing commercial loans for retrofits, as the Green Bank effectively lowers the uncertainty and technological risk associated with a lack of historic performance data.

All of these goals would be interwoven into expedited funding decisions as projects were evaluated for viability and creditworthiness by a professional and experienced staff. In sum, the Green Bank will provide the means to allow us to meet our most ambitious carbon reduction targets while promoting clean-energy jobs to ensure U.S. industry and workers will be leaders in the clean energy technology future.

Endnotes

1 Robert Pollin, James Heintz, and Heidi Garrett-Peltier, "The Economic Benefits of Investing in Clean Energy" (Washington: Center for American Progress-University of Massachusetts Political Economy Research Institute, 2009), available at http://www.americanprogress.org/issues/2009/06/clean_energy.html

2 Coalition for the Green Bank, "The Green Bank Investment" (2009).

3 Coalition for the Green Bank, "The Green Bank as Critical Element to Energy Independence" (2009).

4 Coalition for the Green Bank "Lower Cost of Debt Provided by the Green Bank" (2009).

5 Robert Pollin, James Heintz, and Heidi Garrett-Peltier, "The Economic Benefits of Investing in Clean Energy" (Washington: Center for American Progress-University of Massachusetts Political Economy Research Institute, 2009), available at http://www.americanprogress.org/issues/2009/06/clean_energy.html

6 Calculations relied upon equivalency matrices (Rosenfeld 2001) to determine yearly CO_2 emissions for cars (4.4 million metric tons/1 million cars) and a typical power plant (1.5 million metric tons/1 power plant). Alliance predictions for Green Bank carbon reduction potential converted from short tons to metric tonnes in order to ensure compatibility with the Rosenfeld figures. Specifically, the Green Bank could reduce emissions by an estimated 22 million to 59 million metric tons a year.