



## The Green New Deal: Energizing the U.S. Economy

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- President Barack Obama, inspired by President Roosevelt before him, is responding to the global economic crisis by promoting job growth, but with a twist: using green energy investments, or a Green New Deal.
- The green economy is the future. The first country to mass-produce cost-competitive wind turbines, solar panels and electric vehicles will dominate global markets for those technologies and reap the job-creation benefits.
- Of the \$787 billion stimulus, about 15%, or approximately \$120 billion, is directed toward clean energy and creating “green jobs”.
- The green economic recovery is an unprecedented endeavor. Will it work? Indications are yes. Green investment favors job growth since programs that reduce energy costs to the economy as a whole can lead to net employment gains.
- One of the most unique - and valuable - elements of green job creation is the speed with which workers who have been most affected by the economic downturn could get back to work.

When U.S. President Barack Obama took the Oath of Office on January 20, he inherited what many are calling the weakest American economy since the Great Depression. High hopes before the crash for a major push by the Obama administration to revolutionize U.S. energy and climate policy grew dim. But just like President Roosevelt before him, who used the Great Depression to usher in The New Deal, President Obama recognized that a crisis is also an opportunity. Unwilling to put his energy

platform on hold until the economy improved, he instead made energy the *centerpiece* of his economic recovery plan. In one audacious move, President Obama launched what some are calling the “Green New Deal.”

One hundred days into his new administration, President Obama has made "spending to promote renewable energy technologies that will generate jobs and an effort to shift the nation to a low-carbon economy" a key priority.<sup>2</sup>

To be sure, the economic challenge is daunting and the numbers are sobering. Since October 2008, approximately 3.3 million U.S. jobs have been lost, raising the unemployment rate to 8.5% by the end of March 2009<sup>3</sup>. Home foreclosures have hit their highest levels in 50 years and major financial institutions are struggling. Top this off with the downturn of the U.S. auto industry and President Obama has got quite a load on his presidential plate.

None of this has stopped Obama from pursuing his campaign promises to address global warming and oil dependence, and rightly so. Firstly, these challenges cannot wait, and secondly the solutions to our energy problems can help fix the economy. As Administrator for the U.S. Environmental Protection Agency (EPA) Lisa Jackson explained, “Through the President’s stimulus package, ‘green’ initiatives will play a significant role in powering economic recovery . . . this is the perfect example of economic growth and environmental protection working hand in hand to the benefit of all Americans.”<sup>4</sup>

Investments in renewable and alternative fuels, public transportation and a healthy environment will ultimately lead to sustainability and improvements in the economy. Why? Because the green economy is the future. The first country to mass-produce cost-competitive wind turbines, solar panels and electric vehicles will dominate the global market for those technologies and reap the job-creation benefits. Dirty fossil fuels like coal, oil and natural gas may be cheaper than renewables today, but the writing is on the wall—these are the fuels of the past.

There is no clearer evidence of President Obama’s beliefs on the relationship between the economy and energy than the American Recovery and Reinvestment Act (more commonly referred to as the “stimulus”). Signed into law on February 17, the \$787 billion stimulus is the single largest government-spending bill in U.S. history. The bill was intended to revive the U.S. economy in the wake of the severe economic downturn through federal

spending and investment in everything from education and welfare to infrastructure and unemployment benefits. Through massive investment, the federal government hopes to spur the growth of new jobs and employment opportunities. The President has promised that this plan will create or save 3-4 million jobs for American workers.

The stimulus has a distinctly “green” focus. Of the \$787 billion total, approximately \$120 billion in the form of direct spending and tax credits is directed to projects in the areas of clean and renewable energy, energy efficiency, green transportation and environmental improvement.

As a result of this newfound attention to the “green” economy, talk of “green jobs” has become a term of both popular interest and confusion. Of those 3-4 million jobs President Obama trumpets for his stimulus bill, he says that nearly 500,000 fit the category of being a “green” job. This objective is entirely consistent with promises made by Obama while on the campaign trail, in which he repeatedly pledged, once in office, to spend \$150 billion over 10 years to create 5 million new green-collar jobs.<sup>5</sup> From the looks of the stimulus, it appears that the President is well on his way to achieving that campaign promise. But what a “green job” actually is, and how one defines it, is not nearly as obvious as the optimism surrounding it.

### What is a “green” job?

Perhaps the biggest point of confusion when it comes to defining “green jobs” is trying to figure out what kinds of jobs are “green”. Are green jobs reserved for PhDs and scientists building solar panels or making biofuels from algae? Are they limited to areas of the workforce that are strictly pro-environment (i.e. recycling facilities and climate change advocacy groups)? Who is eligible for a green job?

There is no single definition for a “green” job. There are, however, certain *qualities* about green jobs that have been agreed upon by scholars, policy analysts and employers alike. Raquel Pinderhughes of San Francisco State University

sees the use of green jobs as a “catch-all term for people doing any kind of work, whether mental or manual, which relates to improvements in environmental quality.”<sup>6</sup> The United Nations Environmental Programme (UNEP) provides a more specific definition, citing green jobs as “work in agricultural, manufacturing, research and development (R&D), administrative, and service activities that contribute substantially to preserving or restoring environmental quality.”<sup>7</sup> Perhaps most simplistic is the definition provided by Robert Pollin of the Political Economy Research Institute, who views green jobs as being the result of “investing in things that will promote a clean environment [and] fight global warming.”<sup>8</sup>

Others describe green jobs not only in terms of their type of work, but also in what kind of job they ought to be. In its 2008 report *Green Jobs: Working for People and the Environment*, the Worldwatch Institute made a point that in addition to their “environmental credentials”, green jobs “also need to be decent jobs- with regards to wages, career prospects, job security, occupational health and safety, and workers rights.”<sup>9</sup> These qualities are consistent with the UNEP’s view of green jobs, which is that “people’s livelihoods and sense of dignity are bound up tightly with their jobs. A job that is exploitative, harmful, fails to pay a living wage, and thus condemns workers to a life of poverty can hardly be hailed as green.”<sup>10</sup>

Therefore, in answering the question “what kinds of jobs are green?” it appears that it is the *qualities* of a given job (having a positive impact on the environment and being good jobs) that are the most important factors. This is perhaps a bit difficult for people to understand, as our current thinking about jobs generally require us to place them into some specifically-defined job category or hierarchy: blue collar or white collar<sup>11</sup>; private or public sector; industrial or technological; small business or corporations; and so forth. Green jobs can exist across all sectors of the economy and can present job opportunities across all levels of skill and education.

For example, even more popular than the notion of creating “green jobs” is the idea of creating “green-collar jobs”, a subset of green jobs that refers to “manual labor job opportunities in a green economy that would be open to low-skilled workers.”<sup>12</sup> During the 2008 presidential campaign, the three major candidates- Barack Obama, Hillary Clinton and John McCain- made the prospect of creating green-collar jobs a highlight in their stump speeches, especially in areas of the U.S. that are traditionally “blue collar”. “Green-collar” jobs have a unique appeal because they invoke the idea that they are more readily available to more people- that “green” jobs aren’t just for the highly educated and connected. Green collar jobs have an essential role to play in a U.S. green economy, for so much of U.S. job creation continues to depend upon manufacturing and labor-intensive industry. Hence, one can safely conclude that, while there are going to be jobs for the solar panel scientists, there will also be jobs for construction workers, truck drivers, receptionists, administrators, and so on.

Perhaps one of the most unique (and valuable) elements of green job creation is the speed with which workers who have been most affected by the economic downturn can get back to work. A recent report from the University of Massachusetts-Amherst pointed out that “hundreds of thousands of workers in the U.S. already possess the vast majority of skills and occupations necessary to reduce global warming and make the shift to a clean energy economy.”<sup>13</sup>

As anyone who has tried to change job fields knows, transferable skill sets are key. “For instance, constructing wind farms creates jobs for sheet metal workers, machinists and truck drivers, among many others. Increasing the energy efficiency of buildings through retrofitting relies on roofers, insulators and electricians, to name a few.”<sup>14</sup> In all, the report predicts six key areas that will experience an easy transition from “pollution-based” manufacturing to green industry: retrofitting buildings, mass transit, fuel-efficient automob-

es, wind power, solar power, and cellulosic biomass fuels. This is especially good news to states and regions in the U.S. that are historically manufacturing centers, as they already have the infrastructure and workforce ready to become green centers tomorrow.

### America's Green Recovery—will it work?

While the American public generally supports green jobs and investment in an environmentally conscious economy, the green economic recovery is nonetheless an unprecedented endeavor. As such, the big question everyone is asking is what a green economic recovery will look like. Of course, we have the promises of the President on job creation and economic growth, but how will this actually happen, and will it work?

In recent months, several U.S. non-governmental think tanks and leading economists have attempted to build models of economic recovery plans similar to the final stimulus bill to predict green job growth. One such model, presented in a report by a leading U.S. progressive think tank, the Center for American Progress (CAP), explained how expanded federal investment in a “green recovery program” can lead to three sources of job creation: direct, indirect, and induced jobs effects. The model proposed a hypothetical \$100 billion fiscal expansion program, comprised of \$50 billion in tax credits to private businesses and homeowners for retrofits and renewable energy endeavors, \$4 billion for federal loan guarantees and \$46 billion in direct spending across six areas of green investment- retrofitting buildings to improve energy efficiency; expanding mass transit and freight rail; “smart” grids; wind power; solar power; and next-generation biofuels. The model then illustrated how investment in green industry produced multiplier effects in other job sectors at a rate incomparable to investment in any other kind of industry (namely, the oil industry or on household consumption in the form of federal tax rebates).

Using examples to demonstrate the evolution of green jobs sectors, the CAP report explains the

three effects as follows: The direct effects are jobs created in areas such as construction or manufacturing, which include retrofitting buildings for energy efficiency, or building and selling wind turbines. Indirect effects include service jobs, which evolve to supply intermediate goods for building retrofits or wind turbines, such as lumber or steel. Then, there are the induced effects, jobs in retail and wholesale that are created for workers in construction, manufacturing and service industries who go on to spend their money on other goods in the economy.<sup>15</sup> In total, the \$100 billion green recovery plan yielded a total of nearly 2 million jobs created directly, indirectly and induced. This number was drawn in comparison to two other models in which \$100 billion was spent on either new investments in the oil industry or on household consumption, yielding, at their maximums, 542,000 jobs and 1.7 million jobs, respectively. Therefore, spending on green recovery programs yielded the greatest output in terms of job creation.<sup>16</sup>

The CAP model is not alone in its conclusion on the massive potential for job creation and growth based upon investment in green industry. In a February report, The World Resources Institute determined that “on average, for every \$1 billion dollars invested in our green recovery scenarios create 30,100 jobs and save the economy \$450 million per year in energy costs”. This is in contrast to \$1 billion invested in traditional industries, such as non-green infrastructure projects, or in temporary tax cut initiatives, with job growth potentials of only 25,200 and 7,000 jobs per year, respectively.<sup>17</sup>

### Less is More

The primary reason green investment is so favorable for job growth is that ultimately programs that reduce energy costs to the economy as a whole lead to net employment gains. There are two related reasons for this conclusion. The first is that current U.S. dependence on oil and natural gas in energy-intensive sectors, such as power generation and transportation fuels, are relatively less labor-intensive and more import-dependent than other

sectors of the U.S. economy. They are also more costly, both to the providers and consumers of such goods. By transitioning to an economy with industries using cleaner domestic fuels, this not only creates jobs, but also redirects expenditures from energy to other types of goods and services, thereby boosting the economy through job creation. Thus an energy-efficient economy has the dual effect of allowing people to spend their money on things other than energy and creates long-term, sustainable jobs in the process. Furthermore, the emphasis on domestically-produced alternative and renewable energy sources opens a whole new sector for job creation that is not subject to outsourcing, as promised by President Obama on the campaign trail.

A careful analysis of the stimulus bill reveals that the pieces are in place to produce significant green job growth and multiplier effects. In green job training alone, Congress allocated \$600 million that is anticipated to provide training resources to a minimum of 70,000 workers for jobs in renewable energy and energy efficiency.<sup>18</sup> Meeting the goals of the Weatherization Assistance Program, which received \$5 billion in stimulus funding, will require the creation of 375,000 new jobs to retrofit over a million homes. (If we follow the wisdom posited by WRI, the energy savings from those million homes will likely be spent elsewhere in the economy, thereby creating more jobs and further stimulating the economy). The clean transportation initiatives, such as building high-speed rail and improving public transportation, will also require a significant workforce of nearly 300,000 jobs.<sup>19</sup> These are only a handful of the many green investment programs in the stimulus package, and it appears that by these numbers President Obama may have been too modest in his goal of 500,000 green jobs.

*A green future is possible.*

It will be many months before meaningful green job growth from the stimulus can be seen, but there is certainly reason to be optimistic. Green jobs are diverse, creating opportunities for those

who have previously experienced obstacles in finding employment through green jobs training or for the new generation of green workers. They can also take existing infrastructure and an existing workforce with useable skill sets and immediately transition them to a new line of work. Green jobs provide security, as they are domestically focused and require long-term investments. And they are, by definition, *good* jobs. If people do, in fact, tie their livelihoods and sense of dignity to their jobs, as the UNEP claims, then the stimulus package and the hope for a green economy founded on green jobs may go a long way in raising both the economy and the struggling spirits of Americans.

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*The opinions expressed by the authors do not necessarily represent the position of the FES.*

Washington, DC: May 18, 2009

**Approximate spending on green programs in U.S. 2009 stimulus package**

<b>Total U.S. 2009 stimulus package</b>	<b>\$787 billion</b>
<b>Total stimulus allocations for green measures</b>	<b>Approximately \$120 billion or 15.2% of total stimulus</b>
Transportation nfrastructure	\$29 billion or 3.68% of total stimulus
Public transit	\$17.7 billion or 2.24% of total stimulus
Domestic manufacturing	\$2 billion or .25% of total stimulus
Renewable energy	\$6 billion or .76% of total stimulus
Alternative fuel vehicles	\$300 million or .038% of total stimulus
Research and development	\$410 million or .05% of total stimulus
Worker training programs	\$600 million or .07% of total stimulus
Tax credits & cuts for green measures	\$26.49 billion or 3.36% of total stimulus
Energy efficiency	\$26.134 billion or 3.32% of total stimulus
Smart grid (electric grid)	\$11 billion or 1.39% of total stimulus

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- <sup>3</sup> U.S. Department of Labor, Bureau of Labor Statistics. <http://www.bls.gov/news.release/pdf/empsit.pdf>
- <sup>4</sup> “U.S. EPA Makes Stimulus Plan Predictions”. *Storm Water Solutions*. 19 February 2009. <http://www.estormwater.com/U-S-EPA-Makes-Stimulus-Plan-Predictions-newsPiece17618>
- <sup>5</sup> Walsh, Bryan. “What is a Green-Collar Job, Exactly?”. *Time Magazine*. 26 May 2008. <http://www.time.com/time/health/article/0,8599,1809506,00.html>
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- <sup>7</sup> “Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World”. United Nations Environment Programme. September 2008. Pgs. 3-4.
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- <sup>9</sup> Renner, Michael, Sean Sweeney and Jill Kubit. “Green Jobs: Working for People and the Environment”. *Worldwatch Report* 177. Worldwatch Institute. Washington, D.C., 2008. Pg. 8.
- <sup>10</sup> “Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World”. United Nations Environment Programme. September 2008. Pgs. 3-4.
- <sup>11</sup> “Blue” and “White” collar are informal terms used in America to distinguish between socio-economic levels of the working class in society. “Blue” collar jobs are generally manual labor positions that are paid on an hourly basis, such as manufacturing, skilled trades, automotive, etc., whereas “white” collar jobs refer to salaried professionals or educated workers in office-based work environments.
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- <sup>14</sup> “Millions of U.S. Workers Stand to Gain from Green Industries”. *Alternet*. 9 June 2008. <http://www.alternet.org/environment/87231/>
- <sup>15</sup> “Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy”. Center for American Progress. September 2008. Pg. 9.
- <sup>16</sup> *Ibid.*, Pg. 10-11.
- <sup>17</sup> Houser, Trevor, et. al. “A Green Global Recovery? Assessing US Economic Stimulus and the Prospects for International Coordination”. *World Resources Institute*. PB09-3. February 2009. Pg. 5.
- <sup>18</sup> “Clean Energy and the Economic Recovery: Summary of Economic and Environmental Benefits of the American Recovery and Reinvestment Act”. *Environment America*.
- <sup>19</sup> *Ibid.*