

Testimony of John D. Podesta
Vice President Biden's Middle Class Task Force
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Thank you, Mr. Vice President and members of the task force for inviting me to speak about the opportunity to rebuild America's economy and strengthen the middle class on the foundation of low-carbon energy. Today we have an unparalleled opportunity to create good jobs even as we respond to pressing energy and environmental challenges. At the Center for American Progress, we call this the "energy opportunity." The greening of America is the next big thing that will drive the growth of our economy.

In this testimony, I will address three central points.

First, establishing a plan for long-term sustainable growth and a sound middle class means taking energy efficiency and clean, low-carbon technology to scale and deploying it quickly and broadly across the economy. Answering this challenge will require new infrastructure, new buildings, new business models, and new skills for American workers. We can use these new streams of investment to build a strong and growing middle class. But this level of market transformation will require smart policies that shift incentives for businesses, and leverage new streams of private capital to accomplish green outcomes.

Second, we can learn many important national lessons for national efforts on how to create green jobs by observing what is already working at the local level. Today there are numerous examples of how clean energy is already serving as a tool for community revitalization, economic development, and workforce investment in towns and cities around the country.

Third, I will seek to answer the critical question, "How can we get started today?" How can we use existing tools, and leverage investments in clean energy within the economic recovery package, to these bring pilot projects to a national scale?

For this, I draw on local models and propose the following recommendations:

1. Use recovery funds for energy efficiency to establish ongoing state revolving loan fund and credit enhancements that invest in real projects, but also capture energy savings to establish an ongoing, "evergreen" funding source for energy-efficiency retrofits on a large scale.
2. Integrate workforce concerns into all clean-energy policies.
3. Create a network of cities with innovative programs to inform federal policy.
4. Set up a formal mechanism for coordination across the federal government.
5. Act quickly to shape the recovery over the next three months and a report back

Moving to clean energy will drive new investment and opportunity.

The mounting energy and climate challenges are an extraordinary opportunity to revitalize our economy—and lay the foundation for long-term sustainable growth—through investments in clean, renewable, low-carbon energy sources. Indeed, just as the information technology and communications revolutions of the 80s and 90s drove a previous generation of investment and prosperity, so too the transformation of our antiquated energy infrastructure on the platforms of efficiency and reduced carbon emissions represents *the* great potential driver of American innovation, economic growth, and job creation in coming decades.

The United States must lead this revolution. We are building a new energy economy in which highly efficient vehicles will dominate the roadways, service stations will pump large quantities of low-carbon alternative fuels, incandescent light bulbs will be entirely replaced by compact fluorescents, and all buildings will employ day lighting, solar heating and cooling, as well as highly efficient appliances and air conditioning. In this economy, utility companies will increase their profits when customers save energy and draw more than a quarter of their feedstock from renewable sources of energy; coal-fired power plants will be built to capture CO₂ and pump it through a national network of pipelines for geologic storage; and businesses of all kinds will have to factor the cost of carbon into their bottom-line calculations and aggressively pursue low-energy options.

Capturing this energy opportunity will require major investments in our infrastructure. Some of this will come in the form of public spending, and the clean-energy components of the American Recovery and Reinvestment Act constitute a strong down payment of public funds. But the majority of new investments will be from private sources of capital, if properly directed. But smart public policy is first needed to change the rules of the game: fixing broken markets, disincentivizing waste and pollution, and supporting clean and efficient energy use.

The good news is that green investments create more jobs per unit of energy and dollar invested than investments in traditional fossil-fuel technologies. Clean energy and energy efficiency are more labor-intensive. At a time when we are sending hundreds of billions of dollars overseas each year to pay for imported oil, worsening both our trade deficit and our national security, redirecting money previously spent on imported fuel, pollution, or wasted energy towards skilled labor, modern infrastructure, and high-tech manufacturing makes good economic sense.

Green investments also have higher local and domestic content. By their very nature, money spent on building retrofits, renewable energy infrastructure, and public transportation is heavily concentrated in goods and services that will stay within the U.S. economy, thereby boosting local economic growth and creating local jobs. Currently, about 22 percent of total household expenditures flow to the purchase of imported goods; however, only 9 percent of green infrastructure investments in energy go toward the purchase of imports, resulting in much greater domestic economic benefits.

As a result, green investments have a high multiplier effect. Jobs and spending that stay in local economies boosts supply chains for a variety of goods and services, inducing job creation in the retail and service sectors. By expanding domestic infrastructure, clean-tech manufacturing, and efficient construction, green investment increases benefits for local markets and the national economy.

We must ensure that green jobs are good jobs.

Let me make clear that green jobs can absolutely be good jobs, and building a clean energy economy is a tremendous opportunity for smart economic development that rebuilds the middle class, but this is neither automatic nor inevitable. The characteristics of the economy that we re-create in each generation are the product of many important policy choices we make along the way.

The middle class is not an accident. It is the direct result of wise decisions to set up rules that protect workers and strengthen communities, preserve health and safety, invest in skills and training, and ensure a living wage. Simply because the federal government will invest billions of dollars to create green jobs, does not guarantee that these will necessarily be family-supporting jobs with decent wages and benefits.

In fact, far too often federal spending leads to low-quality jobs. According to a new Center for American Progress report, “Making Contracting Work for the United States,”¹ too many companies that receive federal contracts treat their workers poorly and fail to pay adequate wages or benefits. Federal prevailing wage standards are often below the poverty line and more than 4 million federally contracted workers are low-wage earners with no benefits. Thus, the contracts attached to federal spending have a very real impact on the lives of workers and the larger economic system we create.

What a green jobs strategy offers, however, is a very substantial and predictable stream of new investment in the foundation of our economy, new demand for goods and services, and new revenues and cost savings that can finance economic development. CAP has demonstrated in another study on the impacts of a “Green Recovery,”² that investments in energy efficiency and renewable energy, because they are more local and more labor intensive, produce four times more jobs at all wages and three times more jobs earning over \$16 [per] hour, than traditional energy investments. Yet making sure that these investments produce real careers cannot be left to chance. Investment must be accompanied by standards, accountability, and a strategy to generate good, sustainable, middle class jobs.

Therefore, to truly realize this potential, a policy framework for promoting clean and renewable energy should focus on increasing per-capita income, building career ladders, expanding domestic supply chains for new clean-energy technologies and services, protecting the ability to form unions and bargain collectively, and encouraging standards for job quality, local hiring, and family-supporting wages and benefits.

When public money is involved, as in the case of the stimulus package, labor provisions

can be applied to federally-supported contracting. Clear criteria are extremely helpful in ensuring the integrity of the labor market, of the contractors that bid on this work, and the quality of the jobs they create. Standards can be employed in these contracts to ensure that public investments create lasting public value, quality economic development, and good wages and benefits. These measures can include requirements for greater transparency, better oversight and enforcement of the law, and promotion of improved job standards.

To encourage a race to the top and ensure that government contracting leads to high-quality work for taxpayers and good jobs for workers, contracting agencies should promote improved job standards by adopting a system that gives special consideration to contractors who meet or exceed a good-job standard.

This good job standard could include:

- Family supporting wages.
- Access to health and retirement benefits to provide a secure middle class.
- Qualified apprenticeship programs with a record of compliance with apprenticeship-hiring provisions to create sustained long-term job creation.
- Joint labor-management partnerships to develop workers' skills.
- Employer-based training, including on-the-job training and skill upgrading to create a climate of lifelong learning.

Improving working conditions and holding companies accountable for how they treat workers not only helps create good jobs and upholds the federal government's role as a model employer but also benefits taxpayers by eliminating hidden welfare costs, improving the quality of services, and preventing wasteful and abusive contracts.

With private sector investments, the pathway to good jobs lies in expanding training opportunities, promoting competition on the basis of value added production, a similar attention to adherence laws and standards, and encouraging innovation and productivity gains. A strategy for green recovery meets all of these criteria well. Whether we look at public or private investment, it is clear that building a green, low-carbon economy is positioned to provide the next great wave of investment in jobs and infrastructure, and we must be vigilant to ensure that we use this opportunity to strengthen and expand the American middle class.

Green jobs in the building sector are key to recovery and growth.

Weatherization and building efficiency retrofits serve the triple benefit of mitigating global warming emissions, reducing energy bills, and creating good, local jobs. The building sector alone accounts for nearly half of all energy consumed in the United States, and over one-third of direct energy-related greenhouse gas emissions.³ Some estimates put the potential annual savings from improved U.S. building efficiency at more than \$200 billion.⁴ Meanwhile, families of low and moderate means spend a disproportionate amount of their income on home energy bills, and often reside in some of the most inefficient housing stock in the nation. And, with efficiency savings of 20-30

percent or higher, obtainable through relatively easy and proven interventions—improved insulation, lighting, and HVAC controls—and payback periods of less than five years, the opportunity is enormous and is literally standing right before us.

Yet if energy efficiency retrofits offer such obvious environmental and economic benefits, why have they been so slow to materialize? The answer lies in a host of market failures, including poor information, lack of capital or access to capital, split incentives—between building owner and energy consumer—limited tenancy or ownership, costs of disruption, general risk aversion, disaggregation, and risk of creditor default.⁵ Finding fixes to these failures has proven difficult, especially in complicated and heterogeneous energy markets.

A handful of innovative programs are being tested at the municipal level, a number of States have weatherization projects beyond what Federal dollars support, and some regulated utilities run their own weatherization operations. However, none of these efforts are at the scale that we need them to be, and only bold and coordinated action by the federal government can help move the country past the current impasse.

According to the U.S. Housing Survey, in 2007 there were over 138 million U.S. housing units. More than half of these dwelling units were constructed before modern energy codes existed, and over 75 percent of them require significant energy upgrades. Sixty percent of residential households report having winter drafts and 62-percent complain of uneven heating and cooling. This offers a huge opportunity to rebuild, and in so doing, put America back to work in good jobs, cut energy bills, and protect the climate.

Today federal and state weatherization programs retrofit about 150,000 low-income homes each year. President Obama has called for the weatherization of one million homes a year. This represents a massive scaling of our current efforts and that is welcome. But it is essential to note that even this is far too unambitious in the face of the challenges at hand. Solving global warming demands that we move faster to reduce energy use in our buildings, and the new jobs involved are vital to addressing the nation's high levels of unemployment.

Consider that even at 1 million homes per year, we would be touching less than 1 percent of our current housing stock. At this rate, it would take more than 100 years to capture the “low-hanging fruit” of improving the energy and environmental performance of our nation's existing housing stock. One-hundred years is an unacceptable time frame to complete this urgent task. How can we ramp up to serve an even more ambitious goal of a 10-percent annual penetration rate or higher?

We can build on existing models to use what is already working in communities.

To rapidly get energy efficiency to scale, we must look to the numerous innovative and successful small-scale programs already in place. These efforts can provide the key building blocks that will be required for a national system that speeds the transition to a low-carbon economy by rebuilding communities, putting people back to work, and

weatherizing homes on a large scale.

To improve energy efficiency by 30 percent or more in millions of homes will require that we transform the entire market and drive change fast and at scale. Federal programs to weatherize low-income homes or retrofit public buildings are very important, but they don't begin to tap the potential of energy efficiency to transform our economy. What we need is nothing short of deep and structural market transformation in how we use energy, starting with our buildings.

We can identify the building blocks for a national strategy by looking at what is already working on the ground today. These models include:

(Cambridge, MA) Reducing up front payments from consumers:

A great example of changing the market to make residential energy efficiency easy, is the Cambridge Energy Alliance in Massachusetts. They have developed a one-stop program to provide services that make it simple for all home owners in the city to access energy efficiency without facing large up front costs. These services range from home energy audits, to partnerships with energy service companies that perform home energy efficiency retrofits, to simple billing mechanisms for recovering costs. The alliance has partnered with lenders to provide flexible financing options to city residents, businesses, or institutions, while offering a quick and easy approval process; a range of payback periods; low- and moderate-income loan programs; and project financing. By consolidating services in a one-stop shop, the Alliance reduces transaction costs and makes it easier for consumers to participate.

(Babylon, NY) Creating a dedicated source of funds and simple repayment:

The residential housing retrofit program in Babylon, New York—a mid-sized middle-class community on Long Island—demonstrates well how public resources can be used effectively to establish new markets for energy efficiency where none existed. The city recognized that they had two tools that the market needed: access to a dedicated source of capital, and the ability to establish a simple and reliable repayment mechanism. The city uses an existing revolving loan fund, originally created for solid waste disposal, to offer low-cost loans to residents to retrofit their homes with no-out-of-pocket payments. They are then able to bundle these jobs, and provide a single point of access for approved contractors to then provide services to multiple houses at a time. Babylon's far-sighted city leaders also recognized that they had an under-used authority in their ability to assess a "benefits assessment" on properties allowing them to set up automatic billing to repay the loan, tied to the title of the house instead of the credit of the homeowner. Automatic repayment also drives down the risk and therefore the cost of the financing, by linking to existing repayment authorities. In theory, a revolving loan fund like the one used in Babylon, NY could not only be used to directly finance construction projects, but it could also be used as a resource to underwrite energy service companies or lenders who finance retrofits, providing even greater leverage, using public capital to crowd in new private

investment.

(Delaware) Treating energy efficiency as a resource in utility planning:

But energy efficiency should not just be the responsibility of individual homeowners acting on their own conscience. Improving energy efficiency can actually be treated as a resource in utility planning. When regulators or power companies try to forecast increasing needs for electricity in the future, they can plan to meet that rising demand by building new power plants or they can actively pursue energy efficiency to reduce energy use. Either way they bring supply and demand into balance. In many parts of the country this has been accomplished by “decoupling” the profits of utilities from the amount of power they produce. The State of Delaware has taken an innovative and important approach, launching a Sustainable Energy Utility, or SEU to function as an electric utility that would bid for the right to “generate” future electricity not by building new power plants but by retrofitting large numbers of homes with energy-efficient technology or distributed renewable energy such as solar panels, so that power is simply never needed. The SEU in turn creates demand for green construction workers and provides a point of entry for contractors to find the homes of future customers.

(Los Angeles) Using demand for energy efficiency to build the labor market for green jobs: In the city of Los Angeles Mayor Villaraigosa has demonstrated that greater value can be created by coordinating investments than by simply pursuing policy goals in isolation, as is conventionally done. When the mayor and city council announced that they would undertake a major program of green retrofits of public buildings, the effort was specifically linked to the administration of the local workforce investment program, to provide a resource for direct job training in the construction trades. These efforts were joined by labor unions through their apprenticeship program, to provide not only training, but a sustained pipeline of new work, and a pathway into long-term job placement and career development. Los Angeles saw that their clean-energy retrofit policy, though motivated by environmental and health concerns, could serve as a form of economic development, driving the creation of good jobs. Because they recognized that it represented a stream of public capital investment that could be used to achieve broader public purposes, they were able to pursue much smarter and more highly leveraged policies, generating a far greater public return on their investment.

Together, these on-the-ground programs demonstrate that with smart policy and coordination it is possible to overcome market barriers to the adoption of energy efficiency and to realize real consumer cost savings while cutting pollution and creating jobs. Key policies and concerns that contribute to these strong programs include:

- Policy-driven demand for clean energy and efficiency gains.
- Sustainable financing mechanisms to support project-level investments.
- Strategies for upfront capital investment with no out-of-pocket payments.

- Simple self-regulating mechanisms for repayment through energy cost savings.
- Accountability for verifiable energy savings and of data collection.
- Building trusted intermediaries to bundle contracts and aggregate jobs at scale.
- Strong workforce intermediaries, including provision of wraparound services.
- Maximizing job creation by focusing on cost-effective investments.
- Moving beyond shovel-ready projects to address systemic market barriers.

Taken together these pilot efforts demonstrate that smart policy can help overcome barriers and make green jobs in energy retrofits a growing sector of the market for construction employment and part of a larger economic development strategy. Yet these efforts also expose the limits of our current decentralized and ad hoc approach to energy efficiency, when applied to the task of rapidly accelerating a broad national transition to clean energy. Each of these efforts was developed in isolation, tailored to local conditions and unique policy environments, and is highly dependent on the efforts of visionary leaders. Now what is needed is a national strategy that draws on the core lessons of these projects but employs the substantial resources of the federal government in the task of bringing efficiency to scale.

We need a national strategy for green jobs and efficiency in economic recovery.

Unprecedented investments in clean energy are a central element of the American Recovery and Reinvestment Act. The bill includes \$71 billion for clean-energy programs—more than three times the current spending for these same programs—and adds \$20 billion in clean-energy tax incentives. These investments are crucial down payments on the transition to the clean-energy economy.

But spending this money wisely will be critical. *First*, the administration must show focus in directing its agencies to leverage the stimulus money to create the most jobs and reap the largest environmental gains possible. *Second*, wise expenditure will require transparency and accountability to ensure results.

Finally, these stimulative investments must be followed by long-term policies that can incubate new clean-energy industries and jobs by designing new rules, transforming markets, and shaping investment flows. Stimulus direct spending is only a first step.

President Obama has called for the weatherization of 1 million homes. This rapid influx of capital has caused legitimate concern among some weatherization advocates that existing low-income Weatherization Assistance Programs could have difficulty absorbing these new resources. However, when compared to the work that remains to be done to solve our energy problems, even this goal is inadequate as it touches less than 1 percent of homes. Only a transformation of the residential construction market can fill this gap. We need to set the conditions for the entire building industry to be engaged in retrofitting homes and offices around the country at much higher levels than we imagine today. This can be a tremendous engine for creating green jobs.

The construction industry as a whole has imploded in recent years, with devastating consequences on working families in the building and construction trades, leaving many skilled workers unemployed. In 2006 fully 2.2 million people worked in the construction industry. Only two years later that number had fallen to just over 600,000 workers, and the forecasts look even worse for 2009. The result is a significant pool of skilled workers who are ready to do the jobs serving the new markets that could be created in a national program for pursuing energy efficiency.

The American Recovery and Reinvestment package provides essential resources for making investments in energy efficiency, which if coordinated in their implementation could actually be used to build the beginnings of a coherent national program that could take energy efficiency investment in the built environment to scale, driving large-scale energy efficiency retrofits, block by block, neighborhood by neighborhood, and city by city. Such a program must be designed to generate new markets, to support businesses in serving that increased demand, and to train workers to do the resulting jobs.

One possible mechanism for linking the tools of market transformation into a single national program for creating green jobs through energy efficiency is the Clean Energy Corps, or CEC proposed by the Center for American Progress with Green for All and a number of partners.

The CEC brings together two very important elements. First, it establishes an ongoing fund to finance weatherization and organize private-sector investment, and envisions mechanisms to recycle energy cost savings to pay down the capital investment in energy efficiency. Second, it connects this new market for the skills of workers to direct funding for job training to create a clear and well-structured mechanism for workforce investment. It also envisions another pathway for engaging the work of a clean-energy economy by providing connections to national service programs that could also provide transitional work and wraparound services to those who need help with job readiness, helping to make career ladders into middle-class occupations more accessible to those who face obstacles to economic advancement.

At the heart of the funding for the CEC we envision a \$14 billion capitalization to underwrite a \$50 billion public revolving loan fund—with tax exemption, credit guarantees, and the ability to package loans for sale to secondary markets—to make investments and leverage private money in the national building retrofit effort. The fund would be replenished both by its proceeds from projects approved for direct investment and through its sale of packaged loans via private investors.

This project would work across areas of government to develop a more seamless program for green-collar job training and increasing job access. Direct funding for workforce training would run through the Department of Labor to build green-collar jobs through various programs. The Green Jobs Act was funded at \$500 million, which is a solid down payment. Further funds would be delegated for the WIA Youth, Adult, and Dislocated Worker programs. States and local areas can form eligible CEC task forces and

partnerships and receive funding on a formula basis. Finally, the service component of the CEC would be administered by the Corporation for National and Community Service.

Other presenters before this task force will speak in greater depth about the importance of the recovery package and of its function in driving broad-based, clean-energy transformation. However, I would like to highlight here the opportunity to use the resources that have already been appropriated in the Recovery Act to generate a far greater community benefit and to create the lasting capacity to sustain this work beyond the stimulus period. Through smart implementation and thoughtful integration of several of the programs funded in the recovery bill, it will be possible to drive a national program to realize the potential of energy efficiency to create good green jobs.

Moving forward—Convening a national strategy

Mr. Vice President and members of this task force, I want to commend you for your vision and foresight in focusing on the very first efforts of the task on creating green jobs that strengthen the middle class even as they build a low-carbon economy. This event certainly will create important public awareness and real momentum on these issues. As we leave here today, however, I believe that we can do even more.

First, the American Recovery and Reinvestment Act includes key tools for funding energy efficiency investments that I want to draw your attention to and offer a suggestion on how they could be deployed not only to fund near-term construction projects, but also to put in place a mechanism for sustained funding of an expanded market for efficiency retrofits at scale.

- ***Establishing an “evergreen” fund to finance efficiency outside the federal budget process.*** The Energy Efficiency and Conservation Block Grant program is funded at \$3.2 billion dollars in formula and competitive grants to state and local governments. An additional \$3.1 billion dollars in DOE-administered grants are to be awarded to state energy offices. The secretary of energy has considerable discretion as to how these funds are deployed. The Center for American Progress would like you to consider that states be encouraged to use a portion of these funds to establish state revolving loan funds for capital investment in energy efficiency projects. Similar funds administered by the Small Business Administration leverage \$10 of private investment for each \$1 of public capital. While this would drive new investment immediately, it would also create an ongoing mechanism to finance efficiency projects. Cities and states as partners in this effort could use existing authorities to recover a portion of the savings and replenish the fund. In this way a revolving loan fund would improve incentives for conservation, even as it drove immediate investment. In addition, states have a track record of successfully administering such funds for investment in infrastructure so the federal government would have confidence in the effectiveness of the program.
- ***Supporting broad integration of green jobs efforts in all energy policies.*** There

are many places in the recovery bill where job training programs are directly linked to energy investment. Most notably the package supports \$500 million for training in the Green Jobs Act for energy efficiency and renewable energy-related job training through state and local workforce investment programs, partnerships with union apprenticeships, and community partnerships. This funding is very important and should be safeguarded. Additional funds that support green job training are found throughout the package. A total of \$100 million is targeted for “smart grid”-related investments. The Workforce Investment Act Adult Worker program is also funded at \$500 million, and can be used for worker training, but also for “supportive services” including transportation, child care, housing, and other services that expand access to middle-class jobs. And \$5 billion is directed toward state Weatherization Assistance Programs, 20 percent of which can be used for training. Furthermore, national service funds provide a first rung on career ladders. The recovery package gives \$50 billion to YouthBuild to fund education and employment services and a green initiative for training in the building trades.

Partner with leading states and cities. Second, because many of these ideas have already been tested and implemented successfully on the ground, a core group of leading states and cities should be convened immediately to explore concretely how they can collaborate using stimulus funds not only to undertake the work of reconstruction, but allowing a portion of the funds to do double duty, expanding job training efforts, demonstrating innovative financing, crafting effective strategies for aggregating the work of retrofit projects, and bringing the industry to scale. I would propose to you Mr. Vice President that a group of 10 to 12 of the leading cities could be identified, brought together in a formal partnership, and offered technical support on a cross-cutting interagency basis. This would be undertaken with the express purpose of providing clear demonstrations of the most effective strategies for transforming markets for labor, energy, real estate, and finance. This partnership would also engage business, labor, community, and other key stakeholders in identifying lessons and designing a rigorous program for an eventual national system.

Coordinate federal activity. Third, we must move boldly to create mechanisms for coordinating this work across federal agencies and levels of government as we make these investments. I encourage you to establish a working group of senior agency staff to identify and track funding streams that contribute to a green recovery through workforce investment, building retrofits, and development of strong manufacturing supply chains. This should include DOE energy efficiency and renewable energy programs, HUD green building efforts, DOL’s Employment and Training Administration, Commerce’s Manufacturing Extension Partnership, and efforts led by Interior, Agriculture, Treasury, and GSA. Further, I urge you to build accountability for results on green jobs into the work of all federal agencies and with state partners on the full range of grants, loans, and federal incentives within the recovery package.

Move quickly. Finally, I encourage you to ask that this interagency coordinating mechanism be formed, partners convened, and implementation plans be developed within

three months to ensure that they have a chance of influencing the disposition of economic recovery funds, and to shape the design of long-term policies moving forward.

Today's hearing is a very important start—but it is only a start. The nation is at a critical turning point and decisions that you make in coming months will have long-lasting impacts on the shape of our recovery and the future of the country.

Thank you for the opportunity to testify and for your foresight in holding this important hearing.

Endnotes

¹ David Madland and Michael Paarlberg, "Making Contracting Work for the United States" (Washington, D.C.: Center for American Progress Action Fund, 2008), available at http://www.americanprogressaction.org/issues/2008/contracting_reform.html.

² Robert Pollin, Heidi Garrett-Peltier, James Heintz, and Helen Scharber, "Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy" (Washington, D.C.: Center for American Progress, September 2008), available at http://www.americanprogress.org/issues/2008/09/pdf/green_recovery.pdf.

³ Hal S. Knowles, III, "Realizing residential building greenhouse gas emissions reductions: The case for a web-based geospatial building performance and social marketing tool" (Gainesville, FL: University of Florida, 2008), available at <http://www.epa.gov/ttn/chief/conference/ei17/session5/knowles.pdf>.

⁴ Joel Rogers, "Seizing the Opportunity (for Climate, Jobs, and Equity) in Building Energy Efficiency" (Center on Wisconsin Strategy, 2007), available at <http://www.cows.org/pdf/rp-seizing-07.pdf>.

⁵ Ibid.