



The Apollo 5-Point Plan for Boosting U.S. Clean Energy Job Growth

\$60 billion investment creates or retains more than 1.2 million jobs

We enter the new year with daunting challenges ahead of us. While critical investments made by Congress and the administration have averted a full-blown depression, the U.S. economy remains plagued by high levels of unemployment. And, while global and domestic investment in clean energy has expanded, an even greater range of public and private investments in clean energy technologies, energy efficiency and clean transportation options are needed to stabilize the climate and rebuild the economy.

At the dawn of this economic crisis, the Apollo Alliance advanced the *New Apollo Program*, a comprehensive strategy for creating economic prosperity, energy security and climate stability. In the year following the release of the *New Apollo Program*, the American Recovery and Reinvestment Act of 2009 provided a down payment on the creation of the clean energy economy by investing more than \$100 billion in renewable energy development, transportation projects, energy efficiency and weatherization, technological research and workforce training and education. Significant progress is now being made toward passing comprehensive energy and climate legislation in Congress.

Today, as the U.S. copes with the worst global recession in more than 70 years, continually rising unemployment rates and millions of struggling American families, the need for short- *and* long-term job creation strategies has never been more acute. Meanwhile, other countries are forging ahead: China, Japan and South Korea are poised to out-compete the United States for dominance of clean energy markets by outspending the U.S. at least three-to-one on clean energy infrastructure and technology.ⁱ Challenged by the dual threats of economic instability and a global clean energy race leaving us behind, it is imperative to create jobs at scale and re-establish the U.S. as a leader in the global clean energy marketplace. In short, it is time to redouble our efforts.

To respond to this crisis, the Apollo Alliance proposes a package of investments that will create 1.2 million jobs, including over 400,000 jobs over the next two years, while moving us toward a future that ensures climate stability, energy security and broadly shared economic prosperity. These investments are part of the clean energy, good jobs economy envisioned in the *New Apollo Program* and supported by our coalition of business, labor, environment and social justice leaders.

We believe that immediate action to create jobs is necessary, and that over the long run it must be combined with comprehensive energy and climate policies that will spur continued public and private

investment in the clean technology sector. We also believe it is critical that investments in job creation be targeted toward the people and communities most impacted by the economic crisis.

To move our nation toward a prosperous 21st century, we must:

- 1. Drive short-term investment and job creation in efficiency and renewable energy in ways that will leverage private capital in the long term.** The American Recovery and Reinvestment Act made a significant down payment on our clean energy future, but to move forward, we must make additional investments in state and local deployment of energy efficiency and renewable energy products. We can do this by developing federal funding mechanisms that also expand private investment in efficiency and renewable programs and take successful programs to scale.

Proposals:

- Expand and improve innovative retrofit and conservation programs at the state and local level by amending the Qualified Energy Conservation Bond (QECB) program to increase the tax credit paid to bondholders from 70 to 100 percent of the federal qualified tax credit rate. The currently underutilized QECB program provides state and local governments access to \$3.2 billion in reduced-cost borrowing for a wide range of programs, including energy efficiency retrofits of public buildings, construction of mass transit facilities and residential or commercial building retrofit programs. Increasing the tax credit rate paid to bondholders from 70 to 100 percent would place QECBs on an equal footing with other tax credit bond programs authorized in the Recovery Act, such as the Qualified School Construction Bond program which has already resulted in more than 100 issuances, totaling over \$1 billion in investment.ⁱⁱ In addition, a sunset date on the bond program of June 30, 2011 should be set to drive short-term investment, encouraging state and local governments to bring the bonds to market within 18 months.

Cost: \$55 million annually, assuming the full \$3.2 billion in QECB bond allocations are utilized. The total cost to increase the tax credit rate to 100 percent would be approximately \$1 billion over 17 years.

Jobs: Up to 17,000, assuming the state/local governments issue one-half of the national bond cap for QECBs and that funds are spent in a similar manner to the Energy Efficiency Community Block Grant (EECBG) program.ⁱⁱⁱ The estimates are based on only one-half of the bond authorizations being used because it's probably unlikely that, even with the changes, the full bond cap would be used and in the next recommendation we suggest repurposing the unused funds to support the EE/RE investment fund.

- Leverage private funding to expand large-scale energy efficiency and renewable energy system installation. This can be achieved through the creation of a federal financing authority which stimulates private investment in installing energy efficiency and renewable energy systems in residential, commercial and industrial buildings, like that currently proposed in S.1574, the Clean Energy for Homes and Buildings Act. The financing authority should provide flexible forms of credit support to applicants who construct innovative energy efficiency and renewable installation financing models that leverage private investment and have the potential to become

self-sustaining. By providing an initial authorization of \$500 million, the fund would be able to begin operations in 2010, and then would be further capitalized by capturing the anticipated unused bond authorization from the QECB program after that program's sunset date passes.

Cost: \$500 million of initial capitalization. Assuming one-half of the total QECB bond allocations are unused at the end of the sunset period, an additional \$1.5 billion would be available to support the financing authority.

Jobs: 59,500 jobs based on an investment of \$500 million in 2010, and an additional 178,500 jobs created over five years, assuming that funds would be issued over a four-year period and that federal credit support would leverage private funds 10:1, creating total public and private investment of \$20 billion.^{iv}

2. **Make transit investments that create jobs and lay the groundwork for a 21st century transportation system.**

We must ensure that any transportation investments contained in a jobs package prioritize the rehabilitation and operation of existing roads, bridges, rail lines and transit systems. When done at scale, infrastructure investment packages focusing on road repair and rehabilitation have proven to create more jobs than investments in new road construction. To immediately create and retain jobs in the transportation sector, any jobs package should also provide operating support for distressed transit and intercity bus services. Further, we support the expansion of the Transportation Investment Generating Economic Recovery (TIGER) and Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) programs authorized by the American Recovery and Reinvestment Act.

Proposals:

- *Rebuild our nation's infrastructure by prioritizing transportation investments that rehabilitate existing infrastructure and restore and repair our roads and bridges, intercity rail, public transit and bicycle and pedestrian pathways.*

Cost: No additional fiscal impact.

Jobs: Dependent on the total investment in transportation contained in the jobs package. For each \$1 billion invested in road repair as compared to new highway construction, an additional 1,100 jobs are created.^v

- *Support public transit operations to retain jobs and keep workers connected with their jobs.* Provide \$2 billion in short-term grants to support the operations of public transit systems so that they can rehire or retain jobs for transit workers, while also sustaining existing services.

Cost: \$2 billion

Jobs: 82,000. According to the American Public Transit Association, investments in public transportation operations generate 41,000 jobs per billion invested.^{vi}

- Kick start the development and expansion of transit systems and fund needed infrastructure repair by providing \$10 billion in additional funding to the Transportation Investment Generating Economic Recovery (TIGER) program.

Cost: \$10 billion

Jobs: 172,500, assuming funds are split equally between highway resurfacing projects, which create approximately 10,500 person-years of employment, and public transit capital purchases, which generate approximately 24,000 jobs per billion dollars invested.^{vii viii}

- Green our public transit systems by expanding funding for the Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) program by \$1 billion. The TIGGER program provides federal funding for capital investments that reduce the energy consumption or greenhouse gas emissions of a public transportation system. Through November 20, 2009, transit agencies submitted over \$1 billion in requests for capital grants through the TIGGER program, but initial funding for the program authorized through the Recovery Act was limited to \$100 million.^{ix}

Cost: \$1 billion

Jobs: 24,000. According to the American Public Transit Association, investments in public transit capital generate over 24,000 jobs per billion dollars invested.^x

3. **Support American manufacturers in retooling and expanding their operations and position domestic clean energy manufacturers to compete in the global marketplace.** The investments made through the Recovery Act are creating new demand for clean energy products. To ensure that our nation's manufacturers have the resources needed to capture the market share for clean energy products and components and can compete in the global marketplace, we should immediately scale up support for the Manufacturing Extension Partnership program. In addition, we should enact the provisions of S.1617, the Investments in Manufacturing Progress and Clean Technology (IMPACT) Act, to provide critical capital for small- and medium-sized manufacturers to retool to produce clean energy technology products and become more energy efficient.

Proposals:

- Expand technical assistance to our nation's manufacturers by providing \$50 million in short-term support for the Hollings Manufacturing Extension Partnership (MEP) Program. Eliminating the current cost share requirement will allow these funds to rapidly reach small- and medium-sized manufacturers seeking new markets and opportunities to improve efficiency.

Cost: \$50 million

Jobs: Up to 18,950 manufacturing jobs created or saved. The current Manufacturing Extension Partnership program, with funding of approximately \$300 million (1/3 federal; 2/3 state), created and retained over 57,000 manufacturing jobs in 2008.^{xi}

- Build our domestic clean energy manufacturing base by authorizing \$30 billion to create state-based revolving loan funds to help small- and medium-sized manufacturers retool to produce clean energy component parts and become more energy efficient, as well as expanding long-term funding for the MEP program by \$1.5 billion in funding over five years, as proposed in S.1617, the Investments in Manufacturing Progress and Clean Technology (IMPACT) Act.

Cost: \$31.5 billion, including \$30 billion in grants to state governments to establish revolving loan funds and \$1.5 billion in additional funding for the Manufacturing Extension Partnership between 2010 and 2014.

Jobs: 680,000 direct manufacturing jobs. The Apollo Alliance further estimates that the provisions in the IMPACT Act will create 1,972,000 indirect jobs.

4. **Drive investment and create jobs researching, developing and manufacturing the technologies and products demanded by the clean energy economy.** Any jobs package should establish a clean energy finance authority that provides the credit needed to support the development of a wide range of clean energy technologies, as well as the manufacture of clean energy products and components.

Proposals:

- Create the clean energy technologies of the future and spur private investment by establishing the Clean Energy Deployment Authority (CEDA). CEDA would be funded with \$10 billion in existing loan guarantee funds currently housed at the Department of Energy, and further capitalized with an additional \$10 billion to support the commercialization of clean energy technologies that will support long-term job creation.

Cost: \$13.6 billion, including \$3.6 billion of costs associated with the existing DOE loan guarantees, in addition to \$10 billion in new federal funding.

Jobs: Because the Clean Energy Deployment Authority would fund a wide variety of clean energy technologies, it is impossible to accurately predict total job creation stemming from CEDA. While a small number of jobs may be created in the short term, CEDA would primarily be a long-term job creation strategy.

5. **Put Americans back to work serving our communities.** Young people between the ages of 16 and 24 face the highest unemployment rates in the nation. To put young people back to work and prepare a new set of skilled workers to step in as retirements over the next decade quicken, we must ensure that any short-term investments provide opportunities for young people and dislocated and disadvantaged workers to build their skills while engaging in service by expanding support for national service programs.

Proposal:

- Create service job opportunities that build skills and put young people to work performing community service. We must fully fund the Serve America Act, which will expand support for national service programs such as AmeriCorps, VISTA, YouthBuild and the youth service and conservation corps. Investment in these programs would create year-long, full-time positions that allow participants to earn a stipend while performing service that benefits both communities and the environment.

Cost: \$625 million

Jobs: 31,250. According to the Corps Network, it costs approximately \$20,000 per person per year to engage one young person in national service.

ⁱ Rising Tigers, Sleeping Giants: Asian Nations Set to Dominate the Clean Energy Race by Out-Investing the United States (Breakthrough Institute, November 2009).

ⁱⁱ The Bond Buyer. QSCB Issuances as of November 20, 2009. www.bondbuyer.com/pdfs/QSCB.pdf

ⁱⁱⁱ Based on an estimate that every \$92,000 invested in the EECBG program supports one job. Garland, Jessica. *Energy Efficiency and Conservation Block Grant Program: How to use EECBG Estimated Expected Benefits Calculator.* (Department of Energy, June 2009).

www.eecbg.energy.gov/Downloads/EECBG_Benefits_Calculator_Overview_061809.pdf

^{iv} Based on an estimate that investments in building retrofits will create 11.9 direct jobs per million dollars invested. Pollin, Robert, et al. *The Economic Benefits of Investing in Clean Energy.* (Center for American Progress & PERI, June 2009).

^v Mattera, P. and LeRoy, G. *The Jobs are Back in Town: Urban Smart Growth and Construction Employment* (Good Jobs First, November 2003).

^{vi} Weisbord, G. and Reno, A. *The Economic Impacts of Public Transportation Investment.* (American Public Transportation Association, October 2009).

www.apta.com/resources/reportsandpublications/Documents/economic_impact_of_public_transportation_investment.pdf

^{vii} Every \$1 billion spent on federally-aided highway resurfacing projects create 10,421 person-years of construction jobs. Mattera, P. and LeRoy, G. *The Jobs are Back in Town: Urban Smart Growth and Construction Employment* (Good Jobs First, November 2003).

^{viii} Weisbord, G. and Reno, A. *The Economic Impacts of Public Transportation Investment.* (American Public Transportation Association, October 2009).

www.apta.com/resources/reportsandpublications/Documents/economic_impact_of_public_transportation_investment.pdf

^{ix} Preliminary Estimate of "Ready-To-Go" Public Transportation Investments. (American Public Transportation Association, November 2009).

^x Weisbord, G. and Reno, A. *The Economic Impacts of Public Transportation Investment.* (American Public Transportation Association, October 2009).

www.apta.com/resources/reportsandpublications/Documents/economic_impact_of_public_transportation_investment.pdf

^{xi} *Making a Difference for America's Manufacturers* (NIST MEP, 2008).

^{xii} *Congressional Budget Office Cost Estimate HR 2454: American Clean Energy and Security Act of 2009.* (Congressional Budget Office, June 2009). www.cbo.gov/ftpdocs/102xx/doc10262/hr2454.pdf