



PHILADELPHIA, PENNSYLVANIA

Green Prosperity and Poverty Reduction

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Low-income households in the Philadelphia, Pennsylvania metropolitan area could receive significant benefits from clean-energy investment in the region. These potential benefits would include a substantial expansion in job opportunities, especially for people with high school degrees or less; rising wages; reduced home heating and utility costs; and improved access and convenience for public transportation. All of these benefits would be in addition to the environmental gains achieved through large-scale investments in energy efficiency and renewable energy (see Table 1).

These benefits will be encouraged by the clean-energy features of the American Recovery and Reinvestment Act, the February 2009 Obama stimulus program. They will also be supported by the American Clean Energy and Security Act, now being considered in Congress. Among the features of this pending bill are measures to ensure that low-income households will not be affected by possible future oil, gas, and coal price increases tied to the legislation.

Below, we look at the potential impact on the Philadelphia metropolitan area of an economy-wide \$150 billion shift in spending from fossil fuels to clean energy. Based on the area's current population and the size of its economy, that would bring about roughly \$2.1 billion in clean-energy investments in the Philadelphia area, or one percent of all economic activity in 2008.

In the Philadelphia metropolitan area, investment in a clean-energy economy would produce 21,386 jobs, over 11,000 for workers with high school degrees or less, and cut unemployment by over one percentage point.

EMPLOYMENT

A \$2.1 billion investment in clean energy in the Philadelphia metropolitan area would create a net expansion of 21,386 jobs there, based on the area's labor market in 2008 (see Table 2). This would be enough to reduce unemployment in the area by 1.1 percentage points, from 5.4 to 4.3 percent as of 2008. A reduction in unemployment of this amount could, in turn, lead to a rise in the average wage for workers in the area of over two percent.

The impact would be particularly strong for workers with lower levels of education. In Table 3, we categorize the jobs that would be added by investing in clean energy according to three categories: 'college degree jobs,' requiring at least a B.A. degree; 'some college jobs,' requiring some college but not a B.A.; and 'high school or less jobs.' This last category includes jobs that tend to offer decent opportunities for advancement and higher wages over time, such as jobs in construction, manufacturing and transportation. These jobs are in contrast to 'high school or less' jobs in hotels, restaurants, and personal service industries, where opportunities for advancement are much lower.

As Table 3 shows, this shift of \$2.1 billion from fossil fuels to clean energy will produce almost 12,000 new 'high school or less' jobs (roughly half of all jobs generated by clean-energy investments in the Philadelphia metropolitan area), including almost 9,000 of those jobs that tend to offer opportunities for rising earnings over time.

TABLE 1. BENEFITS FROM A CLEAN-ENERGY INVESTMENT PROGRAM FOR LOW-INCOME HOUSEHOLDS

1) New jobs created	<ul style="list-style-type: none"> • 21,386 new jobs overall • 11,426 jobs for workers with high school degrees or less
2) Falling unemployment produces rising wages	<ul style="list-style-type: none"> • Earnings could rise 2.2% for low-income workers as unemployment in the Philadelphia metropolitan area falls by 1.1 percentage points
3) Benefits of retrofitting buildings	<ul style="list-style-type: none"> • Retrofits could reduce living costs by up to 4%
4) Improved public transportation	<ul style="list-style-type: none"> • Discounting public transit fares between 25 and 50% could reduce living costs by 1 to 2% • Households that forego the use of one car could reduce living costs by about 10%

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BUILDING RETROFITS

The Philadelphia metropolitan area has a relatively old housing stock and a cold climate. This means significant opportunities exist for achieving energy savings for low-income people through building retrofits. Specifically, energy costs for the existing housing stock could fall enough for homeowners and renters to achieve energy savings in the range of four percent of their overall incomes.

In the Philadelphia metropolitan area, homeowners and renters could save up to 4% of their income by investing in retrofits, and 1-2% of their living costs through discounted public transit fares..

For the 69 percent of area residents who own their homes, retrofits (such as replacing windows or upgrading insulation) could be facilitated by organizations such as banks, utilities or non-profit community groups who could provide financing and management, thereby relieving individuals of the need to take the initiative and bear the up-front costs of arranging retrofits of their homes. For the 31 percent of households who rent, policies will need to ensure that renters, not just landlords, receive benefits from energy efficiency investments. Renters who pay utility bills directly would see their bills fall in proportion to the overall energy savings, sharing the benefit with their landlords. Renters in subsidized housing, who typically do not pay for their utilities directly, should see their fixed rents reduced proportionally to the reduction in energy costs.

PUBLIC TRANSPORTATION

The Philadelphia metropolitan area currently has an extensive and well utilized public transportation system; in Philadelphia itself, 26 percent of workers commute by public transportation. A clean-energy investment agenda could therefore be used most effectively to reduce fares on the public transportation options already in place. Low-income riders could save about one to two percent of their incomes if they receive discounts on their public transit fares of between 25 and 50 percent. Any improvements to the Philadelphia area's public transportation system that enable households to forgo the use of one car could reduce their living costs by roughly 10 percent.

TABLE 2. NET EMPLOYMENT EXPANSION THROUGH \$2.1 BILLION SHIFT FROM FOSSIL FUELS TO CLEAN ENERGY (BASED ON 2008 LABOR MARKET)

Job creation	21,386 jobs
Unemployment rate before clean-energy investments	5.4%
Unemployment rate after clean-energy investments	4.3%

source: 2004-2008 Current Population Survey; Bureau of Labor Statistics 2008, IMPLAN.

TABLE 3. BREAKDOWN OF NET JOB EXPANSION BY FORMAL EDUCATION CREDENTIALS

College degree jobs • B.A. or above • \$25.70 average wage	5,590 (26.1% of clean-energy jobs)
Some college jobs • some college but not B.A. • \$15.80 average wage	4,371 (20.4% of clean-energy jobs)
High school or less jobs • high school degree or less • \$13.30 average wage	11,426 (53.4% of clean-energy jobs)
High school or less jobs with decent earnings potential • \$15.70 average wage	8,993 (42.1% of clean-energy jobs)

source: 2004-2008 Current Population Survey; IMPLAN.

The full report from which the data in this fact sheet are drawn can be found at www.peri.umass.edu.

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