# Clean-Energy Investments Create Jobs in Michigan

By Robert Pollin, James Heintz, and Heidi Garrett-Peltier

Investments in a clean-energy economy will generate major employment benefits for Michigan and the rest of the U.S. economy. Our research finds that Michigan could see a net increase of about $4.8 billion in investment revenue and 54,000 jobs based on its share of a total of $150 billion in clean-energy investments annually across the country. This is even after assuming a reduction in fossil fuel spending equivalent to the increase in clean-energy investments.

Adding 54,000 jobs to the Michigan labor market in 2008 would have brought the state's unemployment rate down to 7.3 percent from its actual 2008 level of 8.4 percent.

## Clean energy creates jobs across the economy

Clean-energy investments create 16.7 jobs for every $1 million in spending. Spending on fossil fuels, by contrast, generates 5.3 jobs per $1 million in spending.

Most of the jobs created through clean-energy investments will be in the same areas that people work in today. Constructing wind farms creates jobs for sheet metal workers, machinists, and truck drivers. Increasing buildings' energy efficiency through retrofitting requires roofers, insulators, and building inspectors. Expanding mass transit systems employs civil engineers, electricians, and dispatchers.

Relative to spending on fossil fuels, clean-energy investments create 2.6 times more jobs for people with college degrees or above, 3 times more jobs for people with some college, and 3.6 times more jobs for people with high school degrees or less.

## Legislation encourages private investment

Most of the $150 billion per year in new clean energy investments would come from private businesses. The American Recovery and Reinvesment Act encourages private investors through a wide range of subsidies, incentives, and regulations. The American Clean Energy and Security Act—currently being debated in Congress—includes a range of measures that would substantially strengthen these clean-energy investment incentives for private businesses.

Policies such as the ACESA will have significant economic benefits in addition to their environmental contributions. Most importantly, a clean-energy investment program will be an engine for expanding employment opportunities in Michigan and throughout the country.

## Investment promotes efficiency and renewable energy

The largest share of clean-energy investments will go toward energy efficiency, including funds for building retrofits, public transportation, and a smart grid electrical transmission system. Important new investments will also be devoted to developing renewable energy sources, including wind, solar, biomass, and geothermal power.

The overall clean-energy investment program will provide a major boost to the construction and manufacturing sectors, in Michigan and throughout the United States.

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