



The Economics of Clean Energy in Virginia

Jobs, Savings, Investment, Competitiveness, and the Costs of Inaction

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Jobs

- There were 16,907 clean-energy jobs and 1,446 clean-energy businesses in Virginia as of 2007. This only counts direct jobs and not the many indirect jobs in industries that support the clean energy economy.
- The number of clean-energy jobs in Virginia grew by 6 percent between 1998 and 2007.
- Virginia will see \$3.9 billion in new public and private investment due to programs and incentives under the American Recovery and Reinvestment Act and American Clean Energy and Security Act. These investments will lead to 44,668 net new clean-energy jobs in Virginia—even assuming some potential job losses in the fossil fuel sector as workers transition into the clean energy economy.
- Virginia needs these good-paying, private sector jobs—the state’s unemployment rate was at 6.5 percent as of August 2009.
- Green jobs in Virginia were distributed among the following sectors in 2008:
 - Conservation and pollution mitigation: 68.5 percent
 - Environmentally friendly production: 3.4 percent
 - Training and support: 10.4 percent
 - Energy efficiency: 12.6 percent
 - Clean energy: 5.1 percent

Consumer energy bill savings

- The average American family's annual spending on oil, gas, and electricity increased by \$1,100 under the Bush administration's energy policies. But American electricity and fuel bills would go down under the consumer protection provisions in the ACES bill.
- Emissions allowances allocated in the ACES bill for state efficiency programs alone will save Virginians \$1.1 billion between 2012 and 2020.
- The average household in Virginia will see a monthly savings of \$5.30 on their electricity bill by 2020 due to ACES' consumer protection and energy-efficiency provisions.
- Households in Virginia will also save \$16.17 on gasoline each month by 2020 due to lower oil prices and more fuel-efficient vehicles under ACES.

Investment and innovation

- The clean energy economy is already growing in Virginia. Private companies in Virginia invested \$70.8 million in clean energy from 2006 – 2008 through venture capital funds.
- An additional \$3.9 billion of public and private investment would flow into clean energy and energy efficiency in Virginia under the clean-energy investment provisions in the ACES bill and the ARRA stimulus package.
- Virginia's 1,446 clean-energy businesses patented 68 new clean-energy technologies in 2007 alone. Passing a strong clean-energy jobs bill this session is the best thing congress can do to unlock even more innovation and entrepreneurship across Virginia and the nation.
- H2Gen Innovations, a clean energy company in Alexandria, designs and manufactures hydrogen generators and gas purification systems.

American competitiveness and energy independence

- The people of Virginia spent more than \$13 billion on imported crude oil in 2007 alone—more than \$1,673 per person.
- Without comprehensive clean-energy reform, Virginia taxpayers will spend \$920 million more over the next 10 years to subsidize wealthy oil and gas companies, and this is on top of their already record profits.

Costs of inaction

- The CBO predicted in May 2009 that climate change would cause decreases in future U.S. gross domestic product of between 3 and 5 percent, and global GDP of as much as 10 percent by the end of the century.
- A June 2009 report from the National Oceanic and Atmospheric Administration found that inaction on global warming will cause significant harm to the Southeast. Sea level will rise by two feet or more, hurricane intensity will climb, cattle production will decline, and pavement and railways will buckle from temperature increases.
- Virginia's coast has been identified as the second most vulnerable region to global warming in the United States—surpassed only by New Orleans. Sea level rise and stronger hurricanes caused by climate change endanger Virginia's \$130 billion of coastal property. Twenty percent of Virginians live in coastal counties, and Allstate now refuses to take on the risk of insuring their threatened homes.
- Virginia farmers—who produce nearly \$2 billion for the state—will lose ground to droughts and agricultural pests. The EPA estimates that Virginia's agricultural yields will fall by 36 percent if temperatures rise beyond the tolerance levels of farmer's crops.