



Repowering America with Clean, Homegrown Energy

"We have the opportunity now to create jobs all across this country in all 50 states to repower America, to redesign how we use energy and think about how we are increasing efficiency to make our economy stronger, make us more safe, reduce our dependence on foreign oil and make us competitive for decades to come -- even as we save the planet."

- U.S. President-elect Barack Obama, 12-9-2008

The challenge is the economy; the opportunity is clean energy. Environment America recommends that President-elect Obama and the new Congress enact a green economic recovery plan that makes critical investments in clean energy and green infrastructure to help rebuild the American economy and protect our environment.

Putting America on the path to a new clean energy economy means more secure energy in the long term, less global warming pollution, fewer asthma attacks from air pollution, more clean lakes and rivers for drinking water, swimming and fishing, and more good jobs right here at home. By funding ready-to-go projects, we can put Americans to work in good jobs and deliver the economic boost the country needs.

Investment and long-term commitment to renewable energy such as wind and solar will play a crucial role in repowering America with clean, homegrown energy. **We recommend at least \$62.3 billion in investment in renewable energy and green job training. These renewable energy investments will create or sustain more than 1.9 million jobs and increase renewable energy production.**

Electricity generation contributes more than a third of U.S. global warming pollution. We have the potential to power the entire country many times over with clean sources such as wind and solar. By making smart investments now, expanding incentives for renewable energy, shifting our own government toward renewable energy, funding advanced research and development of new renewable energy technologies, and passing a renewable electricity standard, we can set a course to repower America with 100 percent clean electricity.

Our recommended investments would reduce global warming emissions in the electricity sector by at least 423.6 million tons a year by 2020, equivalent to taking more than 77.5 million cars off the road.

Specific Renewable Energy Investment Recommendations:

Amend the renewable energy production and investment tax credits, and accelerated depreciation, by making them refundable. Because of the current economic recession, these tax credits have become unusable because most companies that would use them are making no profit and have no tax liability. The Renewable Energy Production tax credit should be refundable for the duration of the credit for projects placed in service in 2008 and 2009, and the Investment Tax Credit made refundable for the next three years. The monetary cap for solar-thermal should be removed.

- This simple fix would cost no more than already authorized and would create and sustain 254,000 quality jobs in engineering, installation, construction and maintenance. This would provide

immediate reductions in global warming pollution by replacing or preventing both peak load and base load fossil fuel plants. This past year, new wind generation alone, impossible without the Production Tax Credit, was more than five times new coal generation. These new installations will prevent 6.15 million tons of global warming pollution per year.

Invest in renewable energy on government property. The federal government can drive hundreds of thousands of jobs by installing renewable energy on government property.

- A \$10 billion investment resulting in 4,000 megawatts of solar power would drive more than 350,000 jobs and prevent nearly 4.9 million tons of global warming emissions per year, equivalent to taking nearly 900,000 cars off the road.

Adopt a solar manufacturing credit. This program would level the international solar manufacturing playing field by offering accelerated depreciation and a 30 percent refundable tax credit for the purchase of solar manufacturing equipment.

- This investment could create 315,000 well-paying jobs. This credit will help to drive down the cost of solar technologies, and as such raise the competitiveness of solar power as well as reducing the global warming pollution created from shipping and lax overseas regulation. Upon reaching 5,000 MW of manufacturing capacity America would be constructing enough solar technologies each year to offset 6 million tons of CO₂ annually.

Increase Clean Renewable Energy Bonds (CREB) funding for state and local governments and consumer-owned utilities to jump-start renewable energy projects and break ground on projects as fast as possible.

- A \$5 billion investment would create 60,000 jobs in engineering, manufacturing, construction, installation and management, and ensure the ability of state and local governments and co-ops to finance innovative renewable energy projects despite the recession and reduce their carbon footprint.

Extend the renewable energy Production Tax Credit (PTC) for 5 years. The PTC is currently 2.1 cents per kilowatt hour of large renewable energy. Extending this incentive would increase long term planning as well as construction of larger-scale projects.

- A \$30 billion investment over 10 years would create at least 70,000 jobs and \$70 billion in private investment. This would also ensure the continued rapid growth of the largest renewable energy industries. A 2007 report from the American Solar Energy Society estimates that with continued growth wind power alone could lower emissions of global warming pollution by 150 million tons by the year 2020, avoiding nearly 33 percent of expected carbon dioxide emission increases in the electric sector. This will likely not be possible without extension of the PTC.

Fund the Green Jobs Act. This program gives grants to national and state training programs (including community colleges and union apprenticeship programs) to prepare skilled workers for green-collar jobs. Some portion of these funds must be dedicated specifically to providing “pathways out of poverty” for low-income workers.

- A \$500 million investment over two years in green jobs worker training for 70,000 workers will ensure that the American workforce, our most renewable resource, is trained and ready to fill the millions of jobs being created and sustained by clean energy industries. These programs will help to wean our country off of dirty fossil fuels such as coal and oil.

Create a national renewable electricity standard (RES) calling for at least 25 percent of the nation's electricity to come from renewable energy by 2020, with a near term target of 10 percent renewable contribution by 2010, and regular increases mandated every two years thereafter.

- An RES would create at least 185,000 jobs and spur more than \$300 billion in investment in renewable energy development and would avoid 223 million metric tons of global warming emissions a year by 2020. That is the same as taking 36.4 million cars off the road.

Put solar panels on 10 million roofs. The federal government should establish a goal of installing solar energy systems on 10 million roofs in the United States by 2012. A program administered by the Department of Treasury would provide a per watt rebate for both residential and commercial systems up to 5 MW in size.

- While likely a large investment, this program would create more than 500,000 jobs and avoid emissions of over 32.4 million tons of global warming pollution a year by 2020, equivalent to taking nearly 6 million cars off the road.

Invest in other renewable energy programs. Many innovative programs can be invested in to start making real impacts within two years. These programs include funding for advanced battery research, putting solar panels on public schools, creating Energy SmartPARKS, increasing funding for commercialization of new technologies, and extending federal power purchase agreements to 25 years.

- A \$16.8 billion investment for these programs would create over 130,000 jobs, provide educational opportunities for our children, and cut global warming pollution emissions in some of our most important places.

These proposals will help clean up our air and water, reduce global warming pollution, and create much-needed jobs while moving our economy towards 100 percent clean, renewable electricity. However, a plan as big and bold as this will be a target of the same powerful interests that have always opposed a new energy economy. For a cleaner, safer and stronger America, we call on President-elect Obama and the new Congress to keep it clean and pass a green recovery plan for a cleaner safer stronger America.

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Proposal Summary: Clean Energy

Project	Project Summary	Investment (millions)	Timeframe	Jobs Created or Sustained	Environmental/Energy Benefit
Production and Investment Tax Credit	Amending the Renewable Energy Production and Investment Tax Credits, and their accelerated depreciation, to make them fully refundable is necessary for this stimulus to be effective. With the current economic recession, most companies are unable to use the existing tax credits because they do not have tax liability. The monetary cap for solar-thermal should also be removed.		Immediate	254,000	This past year, with the help of the Production Tax Credit, wind power capacity alone increased by 5 times as much as coal. These new installations will save 6.15 million tons of CO2 per year. Fixing the PTC and ITC is imperative to continuing this growth.
Renewable Energy on Federal Property	The federal government can drive hundreds of thousands of jobs by installing renewable energy on government property.	\$10,000	3 months	350,000	4,000 MW of solar on government property would prevent nearly 4.9 million tons of CO2 emissions a year, equivalent to taking nearly 900 thousand cars off the road.
Solar Manufacturing Tax Credit	The Solar Manufacturing Tax Credit would level the international solar manufacturing playing field by offering accelerated depreciation and a 30% refundable tax credit for the purchase of solar manufacturing equipment.		12 months	315,000	Upon reaching 5,000 MW of manufacturing capacity America would be constructing enough solar technologies to offset 6 million tons of CO2 annually.
Clean Renewable Energy Bonds	Clean Renewable Energy Bonds can be used by state and local governments and consumer-owned utilities as funding to jump-start renewable energy projects.	\$5,000	12 months	60,000	
Renewable Energy Production Tax Credit*	Extending the 2.1 cents per kilowatt hour Production Tax Credit for large scale renewable projects would afford investors the certainty required for long term planning and allow the construction of larger-scale renewable projects.	\$30,000*	12 months	70,000	A 2007 report from the American Solar Energy Society estimates that wind power alone has the potential to lower emissions by 150 million tons of CO2 in the year 2020, avoiding nearly 33% of expected emission increases in the electric sector.
Green Jobs Act	The Green Jobs Act gives grants to national and state training programs (including community colleges and union apprenticeship programs) to train skilled workers for green jobs.	\$500	3 months		
National Renewable Electricity Standard	A national renewable electricity standard would require at least 25% of the nation's electricity to come from renewable sources such as wind, solar, biomass and geothermal, by 2020, with a near term target of 10% renewable energy by 2010, and regular increases mandated every two years thereafter.		3 months	185,000	A national renewable electricity standard would avoid 223 million metric tons of CO2 emissions a year by 2020. That is the same as taking 36.4 million cars off the road.
Solar on 10 Million Roofs	The federal government should establish a goal of installing solar energy systems on 10 million U.S. roofs by 2012 and providing a per watt rebate for both residential and commercial systems up to 5 MW in size in order to achieve it.		3 months	500,000	This program would avoid emissions of over 32.4 million tons of CO2 per year, equivalent to taking nearly 6 million cars off the road.
Federal Power Purchase Agreement Contract Expansion	Allowing agencies to enter into power purchase agreement contracts of 25 years for renewable energy will allow producers to secure a long term market for renewable energy, and thus promote new capacity. Power purchase agreements are currently limited to 10, years except for the military.		3 months		
Energy SmartPARKS	Energy SmartPARKS is a partnership between the National Park Service, the Department of the Interior and the Department of Energy that seeks to deploy renewable and efficient energy technologies throughout the national park system to showcase sustainable energy best practices and further the National Park Service's environmental leadership mission.	\$100	3 months	1,000	This program cuts transmission needs and emissions in pristine wilderness areas.
Solar Schools Initiative*	The Solar Schools Initiative would install solar roofs on every public high school within 5 years, creating nearly two gigawatts of new solar power for America's 19,000 public high schools.	\$16,400*	6 months	100,000	The Solar Schools Initiative will keep 1.15 million tons of CO2 out of the atmosphere every year.
Battery Research and Development Program in DOE	Battery research would help promote the commercialization of plug-in hybrid automobiles and other electric vehicles that would help move us away from oil.	\$100	6 months	1,000	Since most U.S. drivers travel fewer than 40 miles per day, a plug-in hybrid with a 40 mile range battery would be ideal for cutting carbon emissions from the transportation sector.
Manufacturing Extension Partnership	The manufacturing extension partnership provides critical regional support to manufacturing firms that are struggling to retool and retrain workers so they can take advantage of new clean energy opportunities.	\$200	12 months	30,000	
SUBTOTAL		\$62,300	(millions)		*indicates costs over several years.