Energy Facts

A Clean Energy Economy for Missouri: Building Rural Communities Through Renewable Resources Development

Missouri is rich in natural resources, including wind, fertile land and water and its economy boasts a large agricultural sector. But the global economic downturn is being felt across the state, and Missouri is facing an unprecedented set of economic and energy challenges. The Missouri economy lost more than 50,000 manufacturing jobs in recent years, even before the current economic downturn began in fall 2008.

Missouri's enormous, untapped capacity for renewable energy production creates an unprecedented set of opportunities for long-term economic growth. Missouri's rural economy is in a unique position to benefit from comprehensive clean energy and climate legislation currently under debate in Washington. A comprehensive clean energy and climate bill will boost farm income by creating new markets for carbon offsets—credits given for reducing greenhouse gas (GHG) emissions in sectors like agriculture and forestry—and clean energy, bringing new revenues to Missouri and helping its rural communities capture the jobs of the 21st century. Instead of importing energy from across the globe, Missouri could become a national exporter of homegrown energy to other states.

More Jobs, Cleaner Energy, Stronger Rural Communities in Missouri

Under a national policy to curb GHG pollutants and rapidly develop renewable energy resources, Missouri businesses can tap lucrative opportunities in clean energy development, including wind power, sustainable, low-carbon biofuels and bioenergy, biogas and energy efficiency. Missouri farmers will benefit from multiple new revenue sources, including land leases for wind turbines, sales of biomass feedstocks and energy to local utility companies, as well as carbon offsets generation. Taking advantage of these opportunities would create tens of thousands of new jobs in Missouri and give a big economic boost to rural communities across the state.

New Income for Missouri Farmers from Reducing Pollution

Comprehensive clean energy and climate legislation will establish national limits on GHG pollutants and create a new market for carbon offsets with environmental safeguards in place to ensure offset credits maintain a high value. Because agriculture and forestry are exempt from emissions limits, Missouri farmers, ranchers, and foresters can generate new income by selling high-quality offsets, earned by reducing their direct emissions or enhancing carbon sequestration in soils and trees. In 2015, Missouri has the potential to produce offsets totaling 6.4 million metric tons (MMt) of CO_2e from projects in agriculture, landfill gas, and forestry, bringing in revenue of roughly $42 million. In 2030, these totals would increase to 9.2 $MMtCO_2e$ and revenue of roughly $102 million.[1]

For more information, please contact

Sasha Lyutse at 212-727-4603 or

Pierre Bull at 212-727-4606.

NRDC
THE EARTH'S BEST DEFENSE

www.nrdc.org/policy

March 2010

Energy Facts

A Clean Energy Economy for Missouri: Building Rural Communities Through Renewable Resources Development

Missouri Opportunities in Clean Energy[2]			
Energy Source	**Potential Output**	**Impact on Energy Production**	**Economic Benefits**
Wind Power	52 million MWh annually	63% of all electricity would be wind-powered	25 moderate-scale wind facilities would provide 550 permanent jobs, $15 million in property tax, and $75 million in ongoing economic benefits The average Missouri farm could have 3-4 wind turbines and receive $18-24,000 in annual land lease payments
Biofuels	500 million gallons of fuel from existing crop residues	15% of all the gasoline used in Missouri each year would be replaced with biofuels	10 biofuel plants that produce 50 million gallons of ethanol annually would create 1,530 long-term jobs, $190 million in annual employment benefits, and $5.6 million in total property taxes The average corn farmer could earn $13,000 in annual gross income from existing waste biomass alone
Biogas	Single swine operation with more than 2,000 head = 2.7 billion cubic feet of methane	177,000 MWh of electricity	$12 million worth of homegrown power each year

[1] Based on University of Illinois, Yale University and University of California EAGLE analysis of the American Clean Energy and Security Act (ACES, H.R. 2454); see: http://www.e2.org/jsp/controller?docName=jobs

[2] For more information, see A *Clean Energy Economy for Missouri*: http://www.nrdc.org/energy/cleanmo/files/cleanmo.pdf

[3] Based on a report by the American Wind Energy Association; See: http://www.awea.org/faq/wwt_potential.html

[4] "Component Manufacturing: Missouri's Future in the Renewable Energy Industry," REPP, 7/08 by George Sterzinger.

Clean Energy and Climate Legislation Will Strengthen Missouri's Rural Economy

Transitioning to a low-carbon economy will set the stage for economic growth and job creation in rural communities across Missouri. Comprehensive climate and clean energy legislation will allow Missouri to capitalize on its potential to build a strong, long-term economy on the foundation of its abundant renewable resources and become a national leader in producing the clean energy that America needs.

For more information about state renewable energy opportunities, visit NRDC's interactive map at http://www.nrdc.org/energy/renewables/default.asp

Missouri Renewable Energy Facts

- Missouri ranks in the top 20 states for wind energy potential[3], with more than 2,500 square miles of land with commercial-grade wind resources, a power potential equal to 63 percent of the state's electricity use.
- A recent study identified 785 firms in Missouri with the capability to manufacture components of renewable power plants, ranking the state thirteenth among all states in the amount of manufacturing activity that would be created by burgeoning demand for renewable energy[4].
- Missouri is ideally positioned to become a center of next generation biofuels production. If produced sustainably, existing usable crop residues could produce roughly 500 million gallons of transportation fuel each year, equal to roughly 15 percent of all the gasoline annually used in the state. Essential to harvesting these benefits, however, is putting a price on carbon—including biomass energy. Without a market signal to drive innovation towards better performing, low-carbon biofuels, next generation fuels will remain a distant promise.
- The same crop residues that can be converted to liquid biofuels can be used for direct heat and electricity production in biomass-fired power plants. Farms across much of Missouri are close enough to an existing coal-fired plant to cost-effectively supply biomass feedstock for co-firing with coal.
- Missouri is in the top five hog producing states, with 259 swine operations of more than 2,000 head. Missouri has the opportunity to meet on-farm needs for natural gas and electricity, and earn offset credits for cutting methane emissions, by expanding use of biodigesters to produce biogas recaptured from animal waste. Biogas production would be profitable at more than 200 large-scale livestock operations in 60 Missouri counties.

NRDC
THE EARTH'S BEST DEFENSE