Energy Facts

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

Indiana's advanced network of rail lines, interstate highways, and waterways has made it "the Crossroads of America". But the global economic downturn has hit hard in communities throughout the state, including those in rural areas where one in five Hoosiers live, with the loss of almost 200,000 jobs since the start of 2008[1].

Indiana'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 Indiana and helping its rural communities capture the jobs of the 21st century. Instead of importing the vast majority of its energy, Indiana can become a national leader in renewable energy production, job creation and exports of homegrown energy to other states.

More Jobs, Cleaner Energy, Stronger Rural Communities

Under a national policy to curb GHG pollutants and rapidly develop renewable resources, Indiana businesses can tap lucrative opportunities in clean energy production, including wind power, sustainable, low-carbon biofuels and bioenergy, biogas and energy efficiency. Indiana's farm operators 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 Indiana and give a big economic boost to rural communities across the state.

New Income for Indiana 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 these limits, Indiana farmers, ranchers, and foresters can generate new income by selling high-quality carbon offsets, earned by reducing their direct emissions or enhancing carbon sequestration in soils and trees. In 2015, Indiana has the potential to produce offsets totaling 4.8 million metric tons (MMt) of CO_2e from projects in agriculture, landfill gas, and forestry, bringing in revenue of $30 million. In 2030, these totals would increase to 6.4 $MMtCO_2e$ and revenue of $73 million.[2]

For more information, please contact

Sasha Lyutse at 212-727-4603 or

Pierre Bull at 212-727-4606.

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Indiana Opportunities in Clean Energy and Energy Efficiency[3]

Energy Source	Potential Output	Impact on Energy Production	Carbon Reduced	Economic Benefits
Wind Power	4,500 MW = 13.8 million MWh of electricity per year	12.5% of all electricity would be wind powered	13.1 million metric tons	1,260 permanent jobs, $200 million per year in economic impact
Biofuels	770 million gals per year just from existing crop residues	28% of all gasoline would be replaced with "grassoline"	6.7 million metric tons	$14,500 in annual revenue to average corn farm
Biopower	Replace 10% of coal = 10.5 million MWh per year	9.5% of all electricity would be biopowered	10 million metric tons	3,600 permanent jobs
Biogas	2.2 billion cubic feet of methane just from swine operations	145,000 MWh of electricity per year	Equivalent to 600,000 metric tons of CO_2	$10 million worth of homegrown energy each year
Energy Efficiency	Energy efficiency resource standard of 15% electricity savings and 10% natural gas savings by 2020	Annual electricity savings of 13.7 million MWh, gas savings of 230 million therms	13.6 million metric tons	5,350 net jobs created, $3.6 billion net energy savings

1 See: http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?series_id=LASST18000005&data_tool=XGtable

2 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

3 For more information, see *A Clean Energy Economy for Indiana*: http://www.nrdc.org/energy/cleanin/files/in.pdf

4 http://www.peri.umass.edu/fileadmin/pdf/other_publication_types/green_economics/green_prosperity/Green_Prosperity.pdf. Also see http://www.pewcenteronthestates.org/uploadedFiles/Clean_Economy_Report_Web.pdf

5 http://www.repp.org/articles/BGA_Repp.pdf and http://www.hecweb.org/File/Indiana_as_a_Manufacturing_Hub_for_Renewable_Energy-HEC-Feb_2009.pdf

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

Transitioning to a low-carbon economy will set the stage for economic growth and job creation in rural communities across Indiana. Comprehensive climate and energy legislation would allow Indiana to capitalize on its potential to build a strong, long-term economy on the foundation of its abundant renewable resources and centralized location as a manufacturing hub, and become a national leader in producing and exporting 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

Indiana Renewable Energy Facts

- A recent study found that clean energy jobs in Indiana grew by almost 18 percent over the 10 years ending in 2007, a period when overall employment in Indiana fell by 1 percent[4].
- Indiana's underutilized industrial capacity and central location make it a prime site for the manufacture of components for renewable energy production facilities. A recent study ranked Indiana second in the nation in per capita potential manufacturing job creation from renewable resources[5].
- Almost one-third of Indiana has commercially viable wind resources.
- Indiana is ideally positioned to become a center of next generation biofuels production. If produced sustainably, existing usable crop and timber residues could produce roughly 770 million gallons of transportation fuels each year, equivalent to 28 percent of all gasoline used in the state. The same residues can be used for direct heat and electricity production in biomass-fired power plants. 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.
- Indiana has the opportunity to meet on-farm needs for natural gas and electricity and earn offset credits for cutting methane emissions, by expanding production of biogas recaptured from animal waste. Biogas production is currently feasible at 234 Indiana large-scale swine operations in 34 counties, and potentially at livestock operations in 67 counties as technology improves.

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