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Wind Energy: It's Not Cheap or Clean

Posted By [Nicolas Loris](#) On August 30, 2010 @ 2:00 pm In [Energy and Environment](#) | [15 Comments](#)

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Much of the justification for subsidies, tax credits, and mandates for increasing wind energy production in the U.S. is that it will create jobs and help cool our planet's fever. We've explained in detail [how subsidized green jobs destroy jobs elsewhere](#) ^[1], but it also turns out that increased wind power decreases carbon emissions much less than previously thought, and in some instances, could increase emissions.



The Manhattan Institute's Robert Bryce [explains why in his recent](#) ^[2]Wall Street Journal op-ed. First, wind power displaces power from natural gas more than it does coal, and coal combustion emits almost double what natural gas does.

Second, the intermittency of wind forces coal and gas-fired plants to operate inefficiently and actually increase emissions. Coal plants run most efficiently when continuously running, so the ramping up and down of conventional coal plants to make up for intermittent wind pumps out more carbon dioxide. Bryce [likens it to the efficiency of an automobile](#) ^[2]: "An automobile that operates at a constant speed—say, 55 miles per hour—will have better fuel efficiency, and emit less pollution per mile traveled, than one that is stuck in stop-and-go traffic."

This has proven to be the case in Colorado and Texas, two states that have adopted a renewable portfolio standard, which mandates that wind be included in the state's electricity supply. A [recent study](#) ^[3]commissioned by the Independent Petroleum Association of Mountain States looks at the power plant records from these two states and [finds](#) ^[3]:

Coal-fired power plants are designed to run most efficiently at stable rates and are not well-suited to accommodate the load variability imposed by the integration with wind generation. Cycling causes coal-fired power plants to operate less efficiently, and reduces the effectiveness of their environmental control equipment, which together drive up emissions. Paradoxically, using wind energy in such a way that it forces utilities to cycle their coal generation often results in greater SO₂, NO_x and CO₂ emissions than would have occurred if less wind energy were generated and coal generation was not cycled.

The study also finds that in Texas, [the use of wind saved only](#) ^[2]600 tons of carbon dioxide emissions in 2008 and found an increase of CO₂ by 1,000 tons in 2009.

So how much environmental benefit are we really getting? Let's pretend wind power will reduce emissions as much as the government says it will. Bryce points to carbon reduction estimates from the Energy Information Administration. A renewable electricity standard (RES) mandating that 25 percent of our energy be generated from renewables would reduce emissions by only 4.9 percent by 2030. To put this in perspective, Bryce reminds us that President Obama and Congress's target is to reduce carbon 80 percent by 2050.

If that didn't make you grind your teeth with frustration, this will: [According to climatologist Chip Knappenberger](#) ^[4], that 80 percent reduction would moderate temperatures by only hundredths of a degree in 2050 and no more than two-tenths of a degree at the end of the century. These temperature reductions are almost too small to measure. What do you think a 5 percent reduction in CO2 will produce?

None of this would matter if wind energy could compete without mandates and subsidies and provide consumers with cheap electricity. Higher electricity prices have rippling effects throughout the economy. More expensive electric bills force businesses to make production cuts and reduce labor.

According to a [new Heritage Foundation study](#) ^[5], if Congress implemented a 22.5 percent RES by 2025, household electricity prices would jump 36 percent and industry prices by 60 percent by 2035. There would be 1 million fewer people working on average with the RES in effect than if there were no RES. And as the mandated level of renewable use rises over time, so do the losses imposed on the economy. Summing up the impacts for 2012–2035 yields a total loss of \$5.2 trillion in GDP.

If wind can compete absent subsidies, mandates, or tax credits, then Americans will benefit from a more robust, competitive energy market. To suggest that windmills are the answer to our economic and alleged climate problems is nothing but blowing smoke to the American people.

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[1] how subsidized green jobs destroy jobs elsewhere:

<http://blog.heritage.org/2009/09/03/subsidized-green-jobs-destroy-jobs-elsewhere/>

[2] explains why in his recent :

<http://online.wsj.com/article/SB10001424052748703792704575366700528078676.html>

[3] recent study : <http://westernenergyalliance.org/>

[4] According to climatologist Chip Knappenberger:

<http://www.masterresource.org/2009/05/part-i-a-climate-analysis-of-the-waxman-markey-climate-bill%e2%80%94the-impacts-of-us-actions-alone/>

[5] new Heritage Foundation study:

<http://www.heritage.org/research/reports/2010/05/a-renewable-electricity-standard-what-it-will-really-cost-americans>

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