AWEA Debunks Colorado Anti-Wind Study Funded by Fossil Lobby

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AWEA recently learned[1] that the Independent Petroleum Association of Mountain States, a lobbying group representing the oil and natural gas industries, has paid for and will soon release a study claiming that wind energy does not reduce pollution. In fact, U.S. Department of Energy data show that adding wind energy to the grid leads to clear reductions in carbon dioxide and other emissions, as well as reductions in coal and natural gas use.

While the details of this study, which apparently is based on Colorado, have not yet been made public, the facts are clear: U.S. Department of Energy (DOE) data conclusively show emissions reductions in Colorado as more wind power was brought online, and refutes any such attempt to claim that adding wind energy in Colorado has not significantly reduced fuel use or emissions of carbon dioxide and other pollutants at the state's power plants. DOE data and analysis for other parts of the country similarly demonstrate that wind power reduces both emissions levels and fuel use.

The Facts

Colorado:

The use of renewable energy, mostly wind, lowered overall CO2 emissions from power plants in the state: Specifically, DOE data tells us that renewable generation grew from providing 2.5% of Colorado's electricity in 2007 to 6.1% of the state's electricity in 2008, an increase in share of 3.6% that was almost perfectly matched by a 4.4% decrease in power plant CO2 emissions from 2007 to 2008.[2] After accounting for the fact that Colorado's electricity production decreased slightly (by 0.8%) from 2007 to 2008, the fact that output from other sources of electricity supply was nearly unchanged, and that wind energy accounts for nearly all of Colorado's renewable generation, it is conclusively clear that the increasing use of wind energy was directly responsible for this decline in emissions.

Wind power also lowered emissions of other pollutants: Emissions of the smog-forming and health-harming pollutants nitrogen oxide and sulfur dioxide declined by an even larger 6% as wind energy was added from 2007 to 2008. Thus, the total annual emissions reductions amount to 1.9 million metric tons of carbon dioxide, and 4,000 metric tons each of sulfur dioxide and nitrogen oxide.[3]

(more)

[1] "Study: Some coal plants generate more emissions due to added wind capacity," SNL Interactive, March 23, 2010.
[2] http://www.eia.doe.gov/cneaf/electricity/st_profiles/sept05co.xls, http://www.eia.doe.gov/cneaf/electricity/st_profiles/sept07co.xls
[3] http://www.eia.doe.gov/cneaf/electricity/st_profiles/sept07co.xls

Wind power reduced fossil fuel use in Colorado's power plants: DOE data also shows that coal and natural gas use by Colorado's power plants declined by similar amounts as wind energy was added. 571,000 fewer tons of coal were burned in 2008 than in 2007 (a decline of 3%), yielding savings of over $14 million.[4] Electric sector natural gas use declined by over 17 billion cubic feet from 2007 to 2008 (a decline of 14%). That amount of natural gas would have cost nearly $120 million.[5]

Nationally:

Other regions of the country have found similar emissions reductions and fuel savings from adding wind energy.

A study by the grid operator in **Texas** concluded that adding 3,000 MW of wind energy on the state's grid would reduce CO2 emissions by about 5.5 million tons per year, sulfur dioxide emissions by about 4,000 tons per year, and nitrogen oxide emissions by about 2,000 tons per year.[6] In regions where a large share of electricity comes from coal power, the emissions savings of wind energy can be even larger. A DOE analysis found that **Indiana** could reduce CO2 emissions by 3.1 million tons per year by adding 1,000 MW of wind power.[7]

Similarly, a study by the National Renewable Energy Laboratory (NREL) released in January 2010 found drastic reductions in both fossil fuel use and carbon dioxide emissions as wind energy is added to the grid. The Eastern Wind Integration and Transmission Study (EWITS) used in-depth power system modeling to examine the impacts of integrating 20% or 30% wind power into the **Eastern U.S. power grid**. The EWITS study found that carbon dioxide emissions would decrease by more than 25% in the 20% wind energy scenario and 37% in the 30% wind energy scenario, compared to a scenario in which our current generation mix was used to meet increasing electricity demand. The study also found that wind energy will drastically reduce coal generation, which declined by around 23% from the business-as-usual case to the 20% wind cases, and by 35% in the 30% wind case.[8] These results were corroborated by the DOE's 2008 technical report, "20% Wind Energy by 2030," which also found that obtaining 20% of the **nation's** electricity from wind energy would reduce carbon dioxide emissions by 25%.[9]

When a study paid for by the fossil fuel industry is directly contradicted by government data and numerous government studies, we'll leave it up to the reader to decide which is more credible.

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[4] http://www.eia.doe.gov/cneaf/coal/page/acr/table26.html, http://www.eia.doe.gov/cneaf/electricity/st_profiles/sept06co.xls
[5] http://tonto.eia.doe.gov/dnav/ng/ng_cons_sum_dcu_SCO_a.htm, http://www.eia.doe.gov/cneaf/electricity/st_profiles/sept06co.xls
[6] http://www.ercot.com/news/presentations/2006/ATTCH_A_CREZ_Analysis_Report.pdf
[7] http://www.windpoweringamerica.gov/pdfs/economic_development/2008/in_wind_benefits_factsheet.pdf
[8] http://www.nrel.gov/wind/systemsintegration/ewits.html
[9] http://www1.eere.energy.gov/windandhydro/wind_2030.html