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Putting Wind on Trial

By David Schnare

4/4/2011 – Why would a putative environmental law center choose to put wind on trial? As director of the law center (the American Tradition Institute Environmental Law Center) prosecuting the State of Colorado, arguing that the State’s renewable energy mandates, ostensibly requiring wind energy, are unconstitutional, I have been asked this question by colleagues, by the news media, and by family members.

So, why did we do it? We are putting wind on trial because we are an environmental law center. We are committed to using the law to promote environmental quality. Assuredly, we have other purposes too. For example, we advocate economic liberty – a traditional American value. But in this case, the only value we need to have as a public interest law center is an interest in the environment.

And why publish this essay in a Virginia policy publication when, after all, we are suing Colorado? In part, because while 31 states have mandatory renewable energy standards, 30 of which we believe are unconstitutional, the rest of the states, including Virginia, have voluntary standards that the public has been led to believe make sense. Because Virginia seems to be going down the “all of the above, including wind energy” path, Virginians also need to understand how Colorado made its mistakes – in part to make sure Virginia doesn’t do so as well. And, I live in Virginia, so I admit, it’s personal to me.

Hard facts have emerged from the noise of environmental activism, from the hush of subsidy-driven self-interested energy company green-washing and from the increasingly grumpy offices of the state public utility commissions.

Wind is not affordable and it is not clean.

Let’s dispense with the cost issue first, in part because without economic success we can’t afford environmental improvements, and because economics helps frame this policy issue. By 2020, at least 20 percent of the energy Colorado rate-payers are supposed to be purchasing is supposed to be renewable energy. The cost of renewable energy will be over \$700 million, nearly 23 percent of the total retail electricity sales, as calculated using the fuzzy math of the public utility commission. To get the benefit of wind and solar energy, Coloradans will pay nearly \$500 per year per ratepayer for wind, a large portion of which is more than if their electricity companies were allowed to simply use coal and natural gas. That is a very conservative estimate. Our own studies show the number is more than double that amount. We estimate that over the decade from now until 2020, these ratepayers will each have to spend an additional \$12,000 above the cost of fossil fuel energy.

These aren't hidden costs. They already show up on the electricity bill and they come out of the take-home pay of Colorado workers.

And there will be fewer employed workers too. Well-documented facts indicate a state loses two jobs for every job it creates when investing in wind energy. Our study of the Colorado renewables mandate shows the state's workforce will shrink by about 18,000 jobs and perhaps as many as 30,000 jobs by 2020, and due to increased electricity costs, annual wages will fall by about \$1,200 per worker – this on top of the \$500 to \$1,000 increase in home electricity bills.

Nearly 600,000 Coloradans live in poverty and over 200,000 are out of work. Half of Colorado families make less than \$71,000 in income, and 12 percent make less than \$22,000. The cost of the renewable energy mandate is not affordable to many hundreds of thousands of Coloradans. So what do all these dollars buy? Where's the environmental benefit?

That's the problem. There aren't any environmental benefits from wind energy in Colorado.

Yes, you read it correctly. Wind power causes more pollution than it prevents.

I am not writing about the adverse human health effects of living in the shadow of wind mills. I'm not writing about all the birds and bats they kill. I'm not writing about the oil leaks at the base of the towers that, in some ecosystems, propagate downwind ecological harm. Let's leave that for another day.

Wind energy on the electrical grid causes fossil fuel generators to operate in ways for which they were never designed, forcing them to cycle up and down to fill in for when the wind blows down and up. The result is that these coal and gas generators emit more air pollution than they would if allowed to simply run in a steady, even manner, as they would if windmills were not connected to the grid.

How bad is it? As a brief reminder, the two most significant pollutants regulated under the federal Clean Air Act, and emitted by fossil fuel electricity generation units, are sulfur dioxide (SO₂) which causes acid rain and nitrogen oxides (NO_x) which causes smog. With wind on the grid Colorado gets more of each.

Looking only at the incremental increase in pollution, subtracting out the emissions avoided by wind energy, the result is that due to wind generation, SO₂ and NO_x emissions are significantly higher (approximately 23 percent and approximately 27 percent, respectively) than they would have been if the coal plants had not been cycled to compensate for wind generation. And, these figures are not from old, dirty coal plants. The plants already have all the pollution controls a new plant requires. Indeed, the annual increases in SO₂ appear to be larger than allowed under their permits and larger than allowed under the basic requirements of the Clean Air Act, and thus should probably require the facilities to obtain new permits (and pay some fines in the process).

But that's not all.

Concerns about global warming stand behind all the hoopla of renewable energy mandates, so, how many tons of greenhouse gases (carbon dioxide) does Colorado wind eliminate?

Well – none. Rather, CO2 emissions increased by about 2 percent more than if the erratic variability of wind had not caused the fossil-fueled plants to be cycled.

As a scientist, I had to ask, could these increases in pollution actually be true? After all, the many models and extrapolations and forecasts and estimates – they all said pollution would go down. Well, OK, not all of them, but most of them did.

But they were predictions based on assumptions that, upon honest inspection, were found lacking. Hard data, real observations – these are the stuff of science and engineering. Once we had hard data in hand, the facts became clear. Wind is dirtier than coal and natural gas. Soon to be published additional engineering studies confirm the initial research.

So, what is a fellow to do? I've been an environmental scientist for 37 years and I've been suing companies to stop air pollution for nearly a dozen years. I don't see any reason to stop now, just because it is politically incorrect. Wind is scientifically incorrect. It is environmentally incorrect. It is economically incorrect. In a court of public opinion wind may find a way to look good, but in a court of law, the facts will out and reason ought to prevail. The ATI Environmental Law Center represents the public interest and that interest demands putting wind on trial.

ATI filed its complaint in federal court today. Copies of that complaint and associated materials will be available on [the ATI website](#) immediately after we file.

Virginia's environmental policy makers should find this legal challenge of great interest as they look to the future and our Commonwealth's energy needs.

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