

# Wind power is a complete disaster

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**By Michael J. Trebilcock**

**T**here is no evidence that industrial wind power is likely to have a significant impact on carbon emissions. The European experience is instructive. Denmark, the world's most wind-intensive nation, with more than 6,000 turbines generating 19% of its electricity, has yet to close a single fossil-fuel plant. It requires 50% more coal-generated electricity to cover wind power's unpredictability, and pollution and carbon dioxide emissions have risen (by 36% in 2006 alone).

Flemming Nissen, the head of development at West Danish generating company ELSAM (one of Denmark's largest energy utilities) tells us that "wind turbines do not reduce carbon dioxide emissions." The German experience is no different. Der Spiegel reports that "Germany's CO2 emissions haven't been reduced by even a single gram," and additional coal- and gas-fired plants have been constructed to ensure reliable delivery.

Indeed, recent academic research shows that wind power may actually increase greenhouse gas emissions in some cases, depending on the carbon-intensity of back-up generation required because of its intermittent character. On the negative side of the environmental ledger are adverse impacts of industrial wind turbines on birdlife and other forms of wildlife, farm animals, wetlands and viewsheds.

Industrial wind power is not a viable economic alternative to other energy conservation options. Again, the Danish experience is instructive. Its electricity generation costs are the highest in Europe (15¢/kwh compared to Ontario's current rate of about 6¢). Niels Gram of the Danish Federation of Industries says, "windmills are a mistake and economically make no sense." Aase Madsen, the Chair of Energy Policy in the Danish Parliament, calls it "a terribly expensive disaster."

The U.S. Energy Information Administration reported in 2008, on a dollar per MWh basis, the U.S. government subsidizes wind at \$23.34 — compared to reliable energy sources: natural gas at 25¢; coal at 44¢; hydro at 67¢; and nuclear at \$1.59, leading to what some U.S. commentators call "a huge corporate welfare feeding frenzy." The Wall Street Journal advises that "wind generation is the prime example of what can go wrong when the government decides to pick winners."

The Economist magazine notes in a recent editorial, "Wasting Money on Climate Change," that each tonne of emissions avoided due to subsidies to renewable energy such as wind power would cost somewhere between \$69 and \$137, whereas under a cap-and-trade scheme the price would be less than \$15.

Either a carbon tax or a cap-and-trade system creates incentives for consumers and

producers on a myriad of margins to reduce energy use and emissions that, as these numbers show, completely overwhelm subsidies to renewables in terms of cost effectiveness.

The Ontario Power Authority advises that wind producers will be paid 13.5¢/kwh (more than twice what consumers are currently paying), even without accounting for the additional costs of interconnection, transmission and back-up generation. As the European experience confirms, this will inevitably lead to a dramatic increase in electricity costs with consequent detrimental effects on business and employment. From this perspective, the government's promise of 55,000 new jobs is a cruel delusion.

A recent detailed analysis (focusing mainly on Spain) finds that for every job created by state-funded support of renewables, particularly wind energy, 2.2 jobs are lost. Each wind industry job created cost almost \$2-million in subsidies. Why will the Ontario experience be different?

In debates over climate change, and in particular subsidies to renewable energy, there are two kinds of green. First there are some environmental greens who view the problem as so urgent that all measures that may have some impact on greenhouse gas emissions, whatever their cost or their impact on the economy and employment, should be undertaken immediately.

Then there are the fiscal greens, who, being cool to carbon taxes and cap-and-trade systems that make polluters pay, favour massive public subsidies to themselves for renewable energy projects, whatever their relative impact on greenhouse gas emissions. These two groups are motivated by different kinds of green. The only point of convergence between them is their support for massive subsidies to renewable energy (such as wind turbines).

This unholy alliance of these two kinds of greens (doomsdayers and rent seekers) makes for very effective, if opportunistic, politics (as reflected in the Ontario government's Green Energy Act), just as it makes for lousy public policy: Politicians attempt to pick winners at our expense in a fast-moving technological landscape, instead of creating a socially efficient set of incentives to which we can all respond.

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