

Rush to renewables could increase electricity costs

Ontario puts priority on feeding high-priced wind power into grid

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The rush to plug green energy sources into Ontario's electricity system has produced an ad hoc approach to choosing generating systems "that will unnecessarily increase the cost of electricity," says the former head of the province's power planning agency.

Jan Carr was chief executive of the Ontario Power Authority from its inception in 2005 until September 2008.

In an article in this month's *Journal of Policy Engagement*, Carr questions whether the province's push for green technology such as wind turbines will really produce cleaner energy at a cost that makes sense. Instead, he says, Ontario should be assigning a price to carbon emissions.

Carr says the current system of rewarding "green" technologies with high prices is inconsistent, pointing to the different treatment of wind-powered and nuclear generation.

Both, Carr argues, are emissions-free. (Nuclear opponents argue there are hidden emissions in mining and refining uranium and that it produces radioactive waste).

But current policy pays wind producers a higher price than nuclear generators.

The system further interferes with the normal system of deciding which generators get to supply power to the grid, Carr says.

Normally, generating stations submit bids, indicating the price at which they're willing to supply power. The agency that operates the electricity system accepts the lowest bids first. As demand increases, it accepts higher and higher-priced bids.

But the current system may put a priority on feeding high-priced wind power into the system, even when lower-priced nuclear generation is available.



Ex-Ontario Power Authority head Jan Carr, standing on the upper mezzanine of the 100-year-old William Rankin Generating Station, takes issue with the province's ad hoc approach to choosing generating systems.

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"The result is a higher cost of electricity with no commensurate benefit such as a reduction in emissions," Carr says.

There's a second impact, he notes. Because wind power varies as the wind gusts and slackens, it has to be supplemented by other types of generation to keep a steady stream of power flowing. Nuclear power can't fill this role – it can't be adjusted up and down quickly. The available hydro-electric generation in the province is already factored into the existing system.

"The only remaining realistic option for keeping new electricity supply in moment-by-moment balance with customer requirements is natural-gas-fired generation," Carr writes.

In other words, more wind power means more gas-fired generators.

If the objective of boosting renewable energy supplies is to decrease emissions, Carr says, Ontario must figure out the correct proportions of wind, gas and nuclear generation. That's a complicated issue in itself; factoring in cost considerations makes it more complicated.

"These questions cannot be answered when technology and investment decisions result from lobbying efforts by advocacy groups or are guided by public popularity," he writes.

In fact, he says electric utilities, regulators and investors face "a bewildering and often contradictory mixture of economic, business and regulatory objectives."

Carr says economics has governed the development of the current power system and should continue to do so.

But that doesn't mean concern for climate change should be abandoned. Instead, he says, Ontario should work at assigning a price for carbon emissions.

Pricing carbon would take the arbitrary guesswork out of picking technologies, he said.

It would put the electricity industry – which produces only 20 per cent of Ontario's carbon emissions – on the same economic footing as the transportation industry, the biggest user of fossil fuels in the province.

"A switch from fossil fuel to electricity will reduce our carbon footprint and we should be doing all we can to expand its supply and use," says Carr.

The best way to do that, he argues, is to "put a price on carbon and refrain from policy initiatives that pick winning and losing technologies."