

Mark Jaccard . Put a price on pollution

Only by putting a cost on using the atmosphere as a dumping ground will Canada start to reverse the growth in its greenhouse gas emissions

Mark Jaccard

Citizen Special

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Perhaps climate policy is not a uniquely challenging policy arena, but it sure seemed that way as I followed the reactions, through the media, to this week's report of Canada's national round table on the environment and the economy -- an advisory panel to the federal government.

The panelists and staff of the round table worked hard to reduce a complex report to a single, simple message, even getting help from professional writers to ensure clear communication. Yet, depending on their media source, Canadians could have reached diametrically opposite views on what the report actually said. (While I am a member of the round table, the views expressed here are my own. To read the report, go to www.nrtee-trnee.org.)

The simple message of the report? Our climate policies have failed for two decades and will continue to fail if they allow free emissions of greenhouse gases (especially carbon dioxide) into the atmosphere. If today, or in 10 years, I can buy a backyard patio heater, and do not have to pay anything for some of the emissions produced during its production, distribution or operation, Canadian greenhouse gas emissions will continue to rise. To fall, emissions have to be constrained by prices (like a carbon tax) or regulations (like a cap-and-trade system), but even these latter involve a cost on my emissions.

Because most of our politicians and many media commentators have not had the courage to tell Canadians this inconvenient truth, we continue on a policy path that is bound to fail. The round table's report does not indicate that its members, many from the corporate sector, suddenly love taxes and regulations. But it does indicate that its members believe in telling Canadians the truth: If we want to address the climate risk as part of a global success story, we cannot leave the atmosphere as a free dumping ground.

What policies will not work? After former prime minister Jean Chrétien signed the Kyoto Protocol, he committed Canadians to a significant reduction in greenhouse gas emissions while also promising that there would be no carbon taxes (read, no charge on the atmosphere). Instead, he intensified the existing subsidy and information policy approach that had already failed for a decade, starting with Brian Mulroney's Green Plan of 1990. Our politicians have continued with this failing approach for another decade. Subsidies will not work because, by leaving the atmosphere free, they can never keep up with the marketing of new emitting devices, like backyard patio heaters. Experts and policy advisers around the world agree on this.

What policies are essential? A carbon tax starts as a small, but gradually rising, tax on fossil fuels like natural gas and gasoline. The money is used to reduce other taxes. So politicians should be now discussing with Canadians which taxes they would most like to see decreased. Economists agree that a carbon tax is more economically efficient than regulations, so politicians who oppose carbon taxes should also be explaining to Canadians why they oppose economic growth.

If our politicians don't care about economic growth, they could instead opt for a regulated cap with tradable permits. If the cap is absolute, and applies to all emissions in the economy, it can be almost as efficient and effective as carbon taxes.

Finally, we can regulate the carbon content of fuels and electricity or the technologies we allow to power our vehicles and furnish our buildings. This approach is more costly and requires more bureaucracy, which an honest politician would tell Canadians.

How would these policies affect Canadians? Shifting our economy to low- and zero-emission technologies is a multi-decade endeavour that starts with modest "atmosphere valuing signals" but assures people that the effort will be sustained and intensified. This gives people the necessary time to shift their technology choices when it makes sense for them.

A carbon tax will be modest in this decade, having little effect on the price of gasoline. But our children and grandchildren will feel the bite if they still insist on purchasing gasoline-guzzling vehicles even though low- and zero-emission alternatives will have been readily available for decades at reasonable costs -- plug-in hybrid vehicles and battery electric vehicles that recharge from the grid, ethanol and biofuel vehicles, and perhaps hydrogen fuel cell vehicles.

The more one works in the area of climate policy -- seeing what has clearly failed in the past and what works with other environmental goals, like reducing acid emissions -- the more it is obvious that Canadians need politicians who are not afraid to give us the straight goods. So far, we do not have that.

Neither the federal Conservatives, nor the Liberals before them, have been willing to tell Canadians that if they want to reduce greenhouse gas emissions, if they believe that markets are better than more bureaucracy, and if they also favour economic growth, then they should opt for market-based policy that values the atmosphere. No other approach will do this.

Unfortunately, the policy proposals of the Conservatives last year -- which were never implemented -- were not much of an improvement over those of the Liberals before them. They proposed to regulate industry (only by emission intensity rather than absolute emissions) and to exempt emissions from the rest of the economy. As a typical Canadian consumer, I would still be able to buy a backyard patio heater and treat the atmosphere like a free waste receptacle.

If our policies continue like this, we can be sure that Canadian emissions will continue to climb. That is the key message from the policy proposals of the round table.

Mark Jaccard is a professor of resource and environmental management at Simon Fraser University. His book, *Hot Air: Meeting Canada's Climate Change Challenge*, is co-authored with Jeffrey Simpson and Nic Rivers.

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Taxes beat red tape

Carbon tax propelled Norway to global leadership

Mark Jaccard, Nic Rivers and david Keith, Financial Post Published: Wednesday, November 21, 2007

In a recent article, Aldyen Donnelly argued that evidence from the United Kingdom and Norway shows that greenhouse-gas taxes (a.k.a. carbon taxes) fail to reduce emissions, hurt the poor and cost manufacturing jobs. Throughout the article, she blames academics ("Mark Jaccard, among others") for promoting carbon taxes when we should instead be explaining the advantages of regulations "like fuel-efficiency standards for automakers and mandates that require electric utilities to buy a certain portion of their total sales from zero-generation sources."

Ms. Donnelly (in *Burning the Poor*, Oct. 31) might wish it were only us academics suggesting that pricing is an effective way to reduce emissions. But the chief executives of Canada's 25 largest corporations and the chief economist of Toronto-Dominion Bank, who have recently come out in favour of pricing emissions, are not academics. In fact, a recent poll by the BBC World Service showed that 57% of Canadians support a carbon tax, rising to 81% if the tax is "offset by other tax breaks so that total taxes remain the same."

Ms. Donnelly suggests that carbon taxes and other regulatory policies cannot coexist. But even we ivory-tower academics know the world is not so simple. Indeed, we have frequently emphasized the potential effectiveness of the very regulatory policies Ms. Donnelly is describing. But the norm among countries that are serious about the risks of climate change is to apply a combination of policies to ensure we can no longer freely emit greenhouse gases.

Ms. Donnelly claims that Norway's carbon tax has had a perverse effect in leading to rising emissions relative to Canada and poor economic performance. She invites the reader to look at official national statistics. So we did. According to the national statistics offices of Norway and Canada, during the period 1990-2005, per-capita greenhouse gas emissions increased 7.5% in Canada but fell 0.4% in Norway. At the same time, Norwegian per-capita economic output grew 47%, compared with Canada's 30%, while Norway's oil and gas production per capita grew at much faster rates than Canada's.

Norway's economy has performed wonderfully, while its carbon taxes have helped propel it into global leadership in emission-reduction technologies. After the imposition of the carbon tax in 1991, the Norwegian company Statoil took the decision to

implement the Sleipner project, in which carbon dioxide is injected into a deep saline aquifer 1,000 metres under the North Sea floor. According to Statoil's Web site, the "decision to inject was taken in 1991 following the introduction of a CO₂ tax."

In the same vein, Norway may soon be the first country to generate near-zero-emission electricity from fossil fuels, with its coastal project to generate electricity in concert with carbon capture and storage. The pressures of the carbon tax, alongside other policies, are helping Norwegian businesses to become world leaders in the emerging field of clean energy.

Ms. Donnelly also claims that carbon taxes hurt the poor, obliging government to provide compensation, as in the United Kingdom. But one of the strengths of the carbon-tax approach is precisely that, unlike regulations, it provides revenue for ensuring low-income groups are not worse off. Technology regulations, on the other hand, force people -- rich and poor -- to acquire low-emission technologies that are more expensive. They do not compensate the poor or anyone else for this extra cost.

If we Canadians don't care that much about economic performance, we can avoid carbon taxes and regulate our way to greenhouse-gas reduction. And, as applied academics, we are willing to help design those regulations in ways that minimize (but cannot eliminate) their negative effect on economic output and on low-income groups. But can Canadians really afford to be so cavalier about economic growth?

Finally, Ms. Donnelly argues that where they have been applied, particularly in the United Kingdom, carbon taxes are now profoundly unpopular. But the same recent BBC poll that showed Canadian support for carbon taxes also showed 54% support in the United Kingdom for an increase in carbon taxes from current levels -- support that rises to 77% if the extra tax is offset by equivalent tax reductions. After years of this policy, support is very strong, which is surprising when one considers that this is public support for being taxed! Indeed, the British Opposition Conservative Party promises to increase the carbon tax if elected.

We agree with Ms. Donnelly that carbon taxes are not the be-all and end-all of climate policy. We just wish she would take a more even-handed, "academic" approach to the evidence.

-Mark Jaccard and Nic Rivers are with the School of Resource and Environmental Management at Simon Fraser University. David Keith directs the Institute for Sustainable Energy, Environment and Economy at the University of Calgary.

Public surprisingly ready to accept a 'carbon tax'

Don Cayo

Vancouver Sun

Tuesday, November 07, 2006

It's a big step from telling a pollster you'd pay the price of a greener planet to actually ponying up without complaint for gas and home heating and all those petroleum-based products you use and never think about.

But it's still remarkable that an Ipsos Reid poll this week found that a small majority of Canadians, 52 per cent, endorse the idea of a carbon tax.

Even more noteworthy is that petroleum-rich Alberta, where political wisdom has it that any carbon tax would be an anathema that would fan Western separation, showed the third-strongest provincial support for the idea. It was 54 per cent, behind only B.C. with 55 per cent and Atlantic Canada with 59.

Darrell Bricker, president of Ipsos Reid, notes that a lot of Canadians -- presumably including many of the 1,003 people his company polled -- don't really know what a carbon tax is. He doesn't think this means these results should be dismissed, but rather taken with a grain of salt.

"It was less an endorsement of a carbon tax than people scrambling around looking for a solution to what they see as a problem that needs solving."

But the surprising result is, he said, an entree to a broad public discussion of this and other potential solutions.

A carbon tax is, in reality, a simple one. It would likely be based on the amount of carbon dioxide a product emits in its manufacture or when it's consumed. It would hit oil, natural gas and coal, and be assessed mainly at the refining plant gate.

Of course, it matters how this tax would be implemented. And some Canadians think they know -- with the loudly stated certainty of true believers -- how good or how awful, depending on your political bias, that would be.

The same view, oddly, is often shared by hardline lefties, who believe big industry deserves to die, and the hard right, for whom it can do no wrong. They seem to think such a tax must be big, fast and ugly, and that it would bring modern commerce to its knees.

In fact, in the places that have implemented carbon taxes, they are much gentler and more sensible than that.

Prof. Mark Jaccard, an energy guru at Simon Fraser University, notes that in the U.K. and other European countries, carbon taxes have started small and a long-term timetable for escalation is spelled out clearly.

The idea, he said, isn't to turn economic progress on a dime, or to force consumers to rethink their spending overnight. Rather, it's to foster incremental change, gradually shifting the focus of research, development and investment -- and thus consumption -- to cleaner technologies.

There's also another myth that needs busting. It's that a new carbon tax, or any new tax for that matter, must be an additional tax.

Not so. A new carbon tax in Canada could be -- and, in my view, most emphatically should be -- a replacement for some existing tax. It's adoption could, in fact, be a springboard for broader tax reform based on fairness and efficiency.

Jaccard noted that other jurisdictions have made a point of ensuring their carbon taxes are revenue neutral, and that the public knows exactly how the tax shift took place. The U.K., for example, lowered some other energy taxes, and Germany cut some job-killing payroll taxes.

Still, even a revenue-neutral, phased-in carbon tax will be a tough sell politically in Canada. Just look at the rhetoric surrounding the Harper government's rescinding of tax-free status for income trusts.

In the Alberta energy patch, John Dielwart, chief executive of ARC Energy Trust and chairman of a coalition of 35 such trusts, was quoted as saying, "We will personally -- myself and other CEOs -- will do everything in our power to see that there is a change in government."

And that vitriol is because his company will be expected, in four years time, to pay normal taxes, not because the energy sector was singled out in any way. What might he or like-minded others might say in response to a tax proposal that targets his products?

I can only imagine. But I don't expect to see many politicians stepping up to this plate any time soon.

Still, if the current level of public interest and attitudes hold -- and Bricker says Ipsos Reid will be asking the question regularly now to see if it does -- our political leaders won't be able for very much longer to avoid a conversation on the issue.

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Little damage from carbon tax, report says

BILL CURRY

Globe and Mail Update

June 20, 2007 at 1:02 AM EST

OTTAWA — An internal report prepared for the Conservative government reveals a carbon tax as high as \$50 per tonne of greenhouse gas emissions would cause little economic damage and would actually provide a small boost down the road.

After securing the report through access to information, Green Party leader Elizabeth May is claiming vindication, as the only party proposing a straight carbon tax as the solution to climate change.

In a statement, Ms. May said Prime Minister Stephen Harper and Environment Minister John Baird “continue to spread fear that a carbon tax will cause economic calamity, but they know this is not true.”

The report, from economist Mark Jaccard, analyzes the potential impacts of various climate change measures on Canada's gross domestic product.

[Enlarge Image](#)

Green Party Leader Elizabeth May released a document Wednesday suggesting a carbon tax as high as \$50 per tonne of greenhouse gas emissions would cause little economic damage. (CP)

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The report was presented to Natural Resources Canada's Office of Energy Efficiency on Jan. 16, 2007.

The report assesses the impact of carbon taxes ranging from \$10 to \$250. The Green Party is focusing on the impact of a \$50 tax as that is the key part of the party's platform – which also calls for the tax revenue to fund separate tax cuts.

At \$50, a carbon tax would shave about \$4.8-billion from Canada's GDP in 2010, which works out to about 0.09 per cent of GDP. However by 2020, the impact would become slightly positive for the economy, working out to a 0.004 per cent increase to the GDP.

The report uses the term carbon tax and carbon trading permit interchangeably. A carbon tax is generally considered to be a fee imposed on business for every tonne of greenhouse gases emitted into the atmosphere. It is named a carbon tax because carbon dioxide is the most prevalent greenhouse gas.

A carbon trading system sells emission permits to companies at a set cost. Companies can reduce the need to purchase credits by reducing their greenhouse gas emissions, or they can buy credits from other companies if emissions exceed government-set targets.

The Conservative government has promised some form of emission trading system and has indicated the cost of permits will start at \$15 per tonne.

The Liberal party has proposed a variation on this called a carbon budget, in which companies that are over a set limit can buy credits starting at \$20 per tonne. Companies can get their money back if they invest in technology that reduces emissions.

While welcomed by the Green Party and the Liberal party, Dr. Jaccard's report also challenges the opposition's claims that Canada's Kyoto targets can be reached by 2012.

“It will be very difficult to attain emission reductions in the 100 megatonne range . . . within the Kyoto time frame,” Dr. Jaccard writes.

The professor of resource and environmental management at Simon Fraser University is the author of *Sustainable Fossil Fuels: An unusual Suspect in the Quest for Clean and Enduring Energy*. The book generated controversy in the environmental movement for its claims that energy sources such as coal and oil could one day become emission-free.

While Dr. Jaccard was initially praised by the Conservative government, Tory MPs have been under fire this month by the opposition for resisting a scheduled appearance by Dr. Jaccard before the House of Commons environment committee.

I still back carbon taxes

Counterpoint

Financial Post Published: Saturday, December 08, 2007

MARK JACCARD

I hate to disappoint Terence Corcoran, of all people, but I must unfortunately say that he is guilty of wishful thinking when he claims I have lost enthusiasm for carbon taxes (*Carbon Tax Looks Like Roadkill*, Nov. 29). Mr. Corcoran's only evidence for this change of heart is my C.D. Howe

Benefactor's Lecture, where I say that a carbon tax is the most economically efficient way of curbing greenhouse gases (GHGs), but that we economists must be ready, if politicians and the public prefer, to design alternative policies not too inferior to carbon taxes in terms of economic efficiency.

Given that other feedback on my article consistently reaches the opposite conclusion to Mr. Corcoran, I invite people to see for themselves at www.cdhowe.org. Readers will find a section entitled A Tax on GHG Emissions: The Best Policy for Economically Efficient Climate Protection. And they will find quotes like: "A better-informed public and a more honest political discourse should be enough to move Canada to a tax on GHG emissions. If it turns out, however, that Canada's politicians lack the confidence to make such a policy switch, then we should at least reform current GHG policies so that they approximate the effect of a GHG emissions tax -- namely, by ensuring that GHG emissions are no longer free and that Canada no longer applies ineffective subsidies." This quote is virtually identical to statements I made five, 10 and 15 years ago in academic articles, books and even opeds for Mr. Corcoran. If anything, my writing today is more pro carbon taxes because of rising support from business leaders, economists, environmentalists, politicians and the public. In spite of this, Mr. Corcoran convinces himself that I am onside, and I'm almost flattered. (Will he soon propose co-authorship of a book?) Indeed, when he explains why carbon taxes are so bad, there is much we agree on.

Mr. Corcoran doesn't think government policy should try to change people's behaviour and carbon taxes won't do this anyway. Twenty years of research leads me to agree. In spite of the wishful thinking of leading environmentalists, society will find economical ways of changing technologies while retaining behaviours like driving personal cars, flying in airplanes and acquiring more stuff with increasing wealth.

Mr. Corcoran does not think that carbon taxes will decrease energy use. Again, years of research has me agreeing with him. But he forgets (although I remind him in each op-ed of mine he publishes) that reducing energy use and reducing emissions are very different.

Many environmentalists, with Mr. Corcoran as their strange bedfellow, it appears, assume that we must decrease energy use in order to decrease GHG emissions. But over the last three decades, we decreased acid emissions and local air pollutants while energy use increased, by using prices and regulations to gradually change technologies, not consumer behaviour. There is strong evidence we can do the same with GHG emissions over the next four decades -- emitting less GHGs while

using more energy and even more fossil fuels. We already have the technological capability to produce electricity and hydrogen from fossil fuels while capturing the carbon and safely sequestering it. We are also likely to produce biofuels, not with today's subsidized corn crops, but in a marketplace where switchgrass, wood waste, algae and other biomass sources compete. At costs not much higher than today's, other renewables and nuclear power can produce the extra electricity needed to fuel plug-in hybrid vehicles. The gradual shift -- over many decades -- to these alternatives to internal-combustion gasoline vehicles does not require the outrageously high gasoline prices that Mr. Corcoran presents because, while the price of GHG-emitting fuels will rise gradually with a tax or regulations, the price of their zero-and low-emission competitors will actually fall as these technologies reach mass production.

But this wide array of zero-and low-emission technology and fuel options is well known. So why does Mr. Corcoran keep conflating energy use and GHG emissions? Why does he keep making scare claims of \$10 per litre gasoline prices in the near future? It seems obvious to me. Mr. Corcoran has never wanted any policies to reduce GHG emissions. But because his market-oriented readership is most likely to prefer carbon taxes, this alternative must be aggressively attacked.

Later, discrediting the alternatives to carbon taxes -- cap-and-trade, technology regulations, fuel regulations and subsidies -- will be easy. Any free marketer can agree that these policies are undesirable from an economic-efficiency and administrative-cost perspective. We've all seen Mr. Corcoran's anti-regulation articles.

For me, this evokes an image of Mr. Corcoran as a noble knight of yore, desperately waging battle against the many-headed hydra of carbon policies. Tirelessly, our courageous Sir Terence slashes his sword at the carbon-tax head of the policy hydra, ready to turn on the next head that pops up to replace it, never relenting, never changing his mind -- no matter the evidence.

What Mr. Corcoran will not tell us, however, is why we should treat the climate risk so differently from all the other risks we face as a society -- terrorism threats that justify counterterrorism, disease risks that justify vaccinations, national security concerns that justify an army, and so on. Like climate change, none of these risks is certain, but lack of certainty does not justify taking no action whatsoever. Instead, we compare the expected cost of taking preventative action against the potential risk reduction.-Mark Jaccard is professor of resource and environmental management at Simon Fraser University.