

The Kyoto Protocol: *Economically Beneficial or Detrimental?*

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In January 2003, the government of Canada ratified the Kyoto Protocol, committing Canada to reduce its average greenhouse gas (GHG) emissions in the period from 2008 to 2012 by 6 percent below the level emitted in 1990. In other words, the government's goal is to reduce GHG emissions by 270 megatonnes by 2012, which is more than 30 percent lower than the concentration we would have otherwise reached by 2012.

Canada's ratification of the Kyoto Protocol was justified based on three fallacious claims: (i) recent climate patterns are clearly abnormal, and can't be the result of natural forces; (ii) human emission of GHGs will cause catastrophic changes to the climate in the far future; and, (iii) Canada would actually reap massive economic benefits from implementing the protocol through increased efficiencies, job creation in alternative fuels, and the development of new "innovative" technologies that Canada could sell to the world (Government of Canada, 2005).

Living up to the obligations of the Kyoto Protocol will impose major changes on the way that Canadians live and do business. In this article we will examine the third dubious claim: that the protocol could yield massive economic benefits.

Benefits according to the government

Kyoto Protocol proponents argue that implementing the protocol will give Canada a competitive advantage among developed countries (Emerson, 2005). According to Stéphane Dion, the federal Minister of the Environment, achieving our Kyoto commitments will ensure the "long term sustainability of the Canadian economy" and "will position Canada as a world leader in energy efficiency, renewable energy, and the conservation of nature" (Dion, 2005a and 2005b). Government officials not only indicate that the Kyoto Protocol will benefit our economy, but that it will also make our cities more comfortable to live in and improve our quality of living (Government of Canada, 2005). But even with these hypothetical benefits, we do not know what the cost associated with achieving the target will be, nor if all our efforts will benefit the economy, the environment, and ourselves.

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The cost of compliance

Several studies try to answer this question, but all of them employ different models and there is little consensus in their findings. For instance, an Industry Canada study about the sectoral impacts of Kyoto compliance found that the cost associated with the protocol would rely significantly on whether Canada can buy "emission credits" on the international market. If the Kyoto Protocol is implemented with significant international trading, the cost of compliance is estimated to be 0.5 percent of GDP annually. When we translate this number into dollars, it represents about \$6.47 billion current Canadian dollars.¹ If there is little international trading, the cost of compliance for Canada could be up to seven percent of GDP, depending on how the domestic reduction burden is shared among industries.

Van Kooten (2003) says that the protocol will likely fail because it has too many loopholes, inadequate governance structures, and insufficient compliance provisions. In his study, the implementation plans of Canada, Japan, and the Netherlands are examined to determine whether these countries can achieve their emission targets and their associated costs. According to the author, these countries are unlikely to achieve their self-imposed targets, and if they do, the cost of compliance will be very high. His results show that the potential cost to Canada of the current implementation plan (terrestrial carbon sinks; subsidies to transportation, housing and industry; voluntary initiatives; emissions and carbon offset trading; and clean energy exports credit) will be between \$2.9 and \$6.2 billion per year.

Mark Jaccard (2001) concludes that if a GHG cap and trade permit system is implemented, final energy prices would increase between 10 and 100 percent for



electricity, 60 percent for natural gas, and 50 percent for gasoline. The estimated net present value of GHG reduction costs is \$45 billion, which represents a reduction in cumulative economic growth by three percent by the year 2010. This could be the equivalent of one year of recession. Another of this study's findings shows that there could be a net loss of 450,000 jobs.

Khanna (2001), using data for 23 Annex 1 countries (countries that have to comply with the Kyoto commitment) from 1965 to 1999, concludes that Canada will experience a GDP loss between 9.33 percent and 14.7 percent of 2010 baseline, depending on the model used to assess the GDP function. Furthermore, Annex 1 countries will experience, on average, a decrease of GDP between 6.15 percent and 9.45 percent.

There is no consensus on the magnitude of the cost of complying with Kyoto, but there is a consensus that these efforts will significantly compromise the Canadian economy and our standard of living.

Government expenditures on Kyoto

Since the federal government ratified the Kyoto Protocol, its spending has skyrocketed from \$500 million in 2000 to \$10 billion as unveiled in the latest 2005 budget. In *Action Plan 2000 on Climate Change*, Ottawa committed "up to \$500 million on specific actions to reduce GHG emissions" (Government of Canada, 2000). When the last federal budget was presented in February 2005, the government unveiled a five-year plan that would cost \$5 billion. Seven weeks later, Ottawa's Kyoto spending rose 100 percent, and included an estimate that the 7-year cost to meet Canada's Kyoto target was \$10 billion. According to the Canadian Taxpayers Federation, the \$10 billion plan represents

a cost to Canadian families of \$3,000 per household per year by 2010 (CTF, 2005).

Conclusions

Among the Kyoto signatories, Canada may have the most difficulty achieving its Kyoto targets. The Canadian economy uses more energy per dollar of GDP than do other OECD countries. At the same time, Canada relies heavily on hydroelectric power, so our energy sources are already less carbon intensive than those of other countries. Both of these conditions make reducing energy usage, or switching fuel sources, very costly. Meanwhile, Russia, Japan, and other Eastern European countries have experienced economic slowdowns that could make it easier for these economies to reach their Kyoto targets.

Countries can reach their Kyoto Protocol targets in a variety of ways, but all will have adverse effects on their economies and on their citizens' standards of living. If the Canadian government tries to achieve its target by changing the behaviour of the average household, it will need to impose dramatic price changes through taxes, emission permits, and other regulatory measures in order to do so (McKittrick, 2002). Without a detailed plan outlining how the government plans to meet its Kyoto commitments, it is difficult to know what the magnitude of those plans will be for Canadians. In the meantime, there is little doubt that whatever the plan entails, it will be detrimental to the Canadian economy.

Notes

¹2004 GDP at market prices: \$1,293,289 million (Statistics Canada, 2005).

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